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## **MACROECONOMIC CONCEPTS AND BASIC IDENTITIES**

**CONSTANTIN CIURLĂU\***

**Abstract:** The paper focuses on macroeconomics understood as a major part of economic science concerned with the whole economic system involving such variables as aggregate (total) production, national income, added value, gross domestic product, gross national product, economic growth, aggregate employment, inflation and so on, and relevant relationships established between these categories. Using definitions borrowed from the National Accounts, the paper shows some identities, which are very important at macroeconomic level. The Keynesian theory of multiplier and employment is also outlined in order to conceive macroeconomic policies against cyclical unemployment and other undesirable phenomenon associated with rapid economic development.

**Key Words:** Aggregate Production, Gross Added Value, Net Added Value, National Income, Gross Domestic Product, Gross National Product, inflation, economic growth, macroeconomic identities, investment, savings, final consumption, the multiplier, the equilibrium value of national income, expenditure of the government, Keynesian Theory.

How can a country become prosperous and raise the living standards of its people? As far as material possessions are concerned, the answer is that the country must increase its production of goods and services in order to make available a greater amount of consumer goods to satisfy people's wants. This is the essential economic problem, which confronts at present Romania and other Eastern European countries in the process of transition to market economy. In order to explain how this increase in production and standard of living generally speaking can be achieved over a period of time we shall focus on **macroeconomics** as a major part of economic science concerned with the whole economic system involving such variables as aggregate production, aggregate employment, general price level and relevant relationships established between these categories.

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The main concepts performed in macroeconomy framework are aggregate output, gross value added, and gross domestic product, gross national product, net national product or national income. Gross domestic product, national income, added value are actual or measured values. Such actual values are sometimes in economics called *ex post* value, *ex post* meaning “after the event”. The opposite of these is planned values (totals) or forecasts (e.g. planned production). These planned values (totals) are called *ex ante* values, *ex ante* meaning “before the event”.

**Aggregate production** comprises all the goods and services achieved during an accounting period, usually a year. The actual and distributed output is included in the input-output table, in the resources side. Three types of output can be distinguished:

- ♦ *market production of goods and services* that is output sold at prices that are economically significant or otherwise disposed of on the market, or intended for sale or disposal on the market. By convention and according to national accounts rules, all the goods are considered to be sold or disposal on the market. The output of market services covers all services which are produced by units for which over 50 per cent of costs are covered by revenue from sales of their own output;
- ♦ *output for own final use* consists of goods and services that are retained for their own final use by the owners of enterprises in which they are produced. As corporations have no final consumption, output for own final consumption is produced only by unincorporated enterprises: for example, agricultural goods produced and consumed by members of the same household. Goods or services used for own gross fixed capital formation can be produced by any kind of enterprise. They include, for example, machine-tools or construction produced for their own use by enterprises, dwellings or extensions to dwellings produced by households;
- ♦ *other non-market output* consists of goods and individual or collected services produced by general government and NPISHs that are supplied free, or at prices that are not economically significant to other institutional units or the community as a whole.

If we multiply the purchase price of a single good (a unit) by the total number of units produced in a year, we obtain the *market value* of the good (which is, of course, relevant only for market output). This is equal to the sum of wages interest rent, value of raw material and components and profit (estimated as difference between purchase price and cost price). Consider motor cars, for example: the combined annual totals of wages paid to workers, interest to shareholders, rent to any landlords, payment to other firms for materials and *profit of the firm* are equal to the market value of the cars produced. In the particular situation, the firm assembles motor cars from material and components, which already have value (this value is expressed by the sum paid for acquiring them). The act of assembly *adds value* to the *original value* and of course, the *new total value* is the market value of the finished motor cars. This *added value*, i.e. the difference between the market value of motor car and the original value of raw materials and components, is termed the *gross added value*. The firms add value by combining the factors of production.

In *National Accounts* approach *gross added value* represents the balancing item of the production account and is defined as the value of outputs less the value of intermediate consumption; it is therefore the value newly created within the production process. *Net added value* represents the difference between gross added value and depreciation meaning the wearing away of fixed capital usage during a period of time (usually one year).

$$\text{NAV} = \text{GAV} - \text{D} \quad (1)$$

In other words, it's known that capital goods suffer wear and tear their use that the stock of capital goods loses value in the course of production. The production or acquisition of capital goods to make up for wear and tear is termed replacement investment, the value of which must be equal to the depreciation.

On the other hand, *national income* is defined as the value of the flow of goods and services becoming available to a nation during a given period of time. The measurement of national income can be approached in three ways: the income approach, the product approach and the expenditure approach. The national income *by the income approach* is the total of all incomes derived by householders from working in the production of goods and services. It is composed of wages, interest, rent and profit. The net national product, the net added value and the national income, by income approach, all have the same value.

Using the indicators of the production and generation of income accounts **the gross domestic product** can be driven on its turn, by the following approaches:

♦ *production approach:*

$$\text{GDP} = \text{GAV} + \text{TP} + \text{CD} - \text{SP} \quad (2)$$

where: GDP – gross domestic product (market price);

GAV – gross added value (basic price);

TP – taxes on products, including value added tax (VAT);

CD – custom duties;

SP – subsidies on product and import.

♦ *income approach:*

$$\text{GDP} = \text{CE} + \text{GOS} + \text{OTP} - \text{OPS} \quad (3)$$

where: CE – compensation of employees;

GOS – gross operating surplus;

OTP – other taxes linked to production;

OPS – other production subsidies.

♦ *expenditure approach:*

$$\text{GDP} = \text{FC} + \text{GFCF} + \text{CI} + (\text{X} - \text{M}) \quad (4)$$

where: FC – final consumption;

GFCF – gross fixed capital formation;  
 CI – change in inventories;  
 X - exports;  
 M – imports.

From this point of view, gross domestic product is defined as the sum of the resources that ensure the final balance of uses of goods and services except imports.

**Gross national product (GNP)** represents total value of final goods and services manufactured by the factors of production in a respective proprietorship country during a given period of time. Gross national product can be estimated starting from gross domestic product: economic results of Romanian enterprises acting in other countries are added while outputs from foreign economic units are subtracted:

$$\text{GNP} = \text{GDP} + \text{RRE} - \text{RFE} = \text{GDP} + \text{BER} \quad (5)$$

where: RRE – results of Romanian enterprises acting in other countries;

RFE – results of foreign enterprises acting in Romania;

BER – balance between economic results (meaning the difference between results obtained by Romanian respectively foreign economic units).

The value of gross national product exceeds the value of gross domestic product when balance between economic performances carried out by national enterprises abroad and those obtained by foreign agents in our country is a positive one. Of course, the value of gross national product is lower than the value of gross domestic product in reverse situations, i.e. when balance between economic results is negative.

Some distinctions must be made in conjunction to gross national product – GNP, namely real GNP is different from nominal GNP; the increase of GNP is also not identical with real and nominal GNP level, like total value of GNP differs from GNP per capita.

Thus, nominal GNP ( $\text{GNP}_n$ ) comprises total value of production expressed on current price basis, while real GNP ( $\text{GNP}_r$ ) measures the same volume of production, but using base period prices (i.e. constant prices). Economists consider that  $\text{GNP}_r$  reflects variation of physical production estimating the whole quantity of goods and services produced during different periods of time in constant prices terms. It is obvious that nominal GNP is easier to calculate than real GNP due to availability of information regarding current prices.

GNP per capita is estimated by dividing GNP to the total number of people living in a country, i.e.:

$$\text{GNP per capita} = \frac{\text{GNP}}{P} \quad (6)$$

$$\text{GNP}_n \text{ per capita} = \frac{\text{GNP}_n}{P} \text{ and } \text{GNP}_r \text{ per capita} = \frac{\text{GNP}_r}{P} \quad (7)$$

The increase of GNP is pointed out by its own growth rate, which is given by the following ratio:

$$r_{GNP} = \frac{GNP_1}{GNP_0}, \text{ or } r_{GNP[\%]} = \frac{GNP_1}{GNP_0} \cdot 100 \quad (8)$$

where:  $GNP_1$  – represents gross national product achieved during current period;

$GNP_0$  – represents gross national product achieved during base period.

In particular, increases of real and nominal GNP are measured by formulas:

$$r_{GNP_n} = \frac{GNP_{n/1}}{GNP_{n/0}} \text{ and } r_{GNP_n[\%]} = \frac{GNP_{n/1}}{GNP_{n/0}} \cdot 100 \quad (9)$$

$$r_{GNP_r} = \frac{GNP_{r/1}}{GNP_{r/0}} \text{ and } r_{GNP_r[\%]} = \frac{GNP_{r/1}}{GNP_{r/0}} \cdot 100 \quad (10)$$

From this point of view, *inflation* represents the difference between  $r_{GNP_n}$  and  $r_{GNP_r}$ , which is generated by general increase of goods and services prices.

Inflation rate represents in fact percentage increase level during a given period. Inflation rate can be estimated as follows:

$$if = \frac{GNP_n - GNP_r}{GNP_n} \cdot 100 \quad (11)$$

*Economic growth* (EG) can be appreciated on its turn in two different ways, such as:

a) *absolute economic growth* described through the following relations:

$$EG = GNP_{r/1} - GNP_{r/0} \quad (12)$$

$$EG = \frac{GNP_r}{P_1} - \frac{GNP_r}{P_0} \quad (13)$$

b) *relativ economic growth* reflected by formulas:

$$EG = \frac{GNP_{r/1}}{GNP_{r/0}} = r_{GNP_r} \quad (14)$$

$$EG = \frac{GNP_{r/P/1}}{GNP_{r/P/0}} = r_{GNP_r} \text{ per.capita} \quad (15)$$

Correlations between macroeconomic variables mentioned above using gross national product are also valid for gross domestic product. However, gross national



product is considered to be the main macroeconomic aggregate because it includes whole economic results achieved by enterprises which belong to a specific country, no matter the place where this economic units carry on their activities (i.e. both between national borders and abroad). Gross domestic product totalizes economic performances for all enterprises acting in a country even if they belong to this specific country or another.

The change in volume of gross domestic product is considered to be a syntetic indicator of variations occurred in the national economy activity, measured based on the prices of the previous year. By comparing the change in volume with that in value of gross domestic product it is possible to calculate the implicit change of the GDP price representing an aggregation for all changes in prices used for compiling the input-output table. Therefore, the implicit index of GDP can be considered as an indicator of the general evolution of prices in economy.

Using definitions borrowed from the national account, we shall introduce some identities, which are very important at macroeconomic level. First, we must say that an identity is an equality that holds by necessity; such situation is different from a simple equality which indicate a hypotesis, not a necessity (for example, since students in a class are either male or female, then some of the two groups *must equal* the total number of students in the class)\*. Second, identities are based upon three major accounting principles: income comes from production; each product finds a specific utilization; saving is equal to investment.

Let us consider, for the beginning a simple economic system including two distinct categories of economic units (households and firms) which involves operations with consumer goods and investment goods; it is in fact a closed economy without government. the households provide the firms with the factors of production to do the work (i.e. labor, capital, land); in return the firms pay money to the households. on their turn, households purchase consumer goods; that's why the money flows in the opposite direction to the stream of production factors. Firms produce goods and services combining production factors; intermediar consumer goods dissapear in production process. Gross domestic product is given by sum of gross added value of firms.

National product will be denoted by  $y$ . Total revenue obtained by the firms ( $R$ ) as a result of selling  $y$  on the market is used for compensation of production factor; the difference which remains represents residual revenue indebted to entrepreneur, i.e. profit. Thus, the whole value of national product is changed one way or another in income. In other words, monetary value of GNP is necessary found again in creditor sides of different agents and sector accounts. Thus, national product is identic to national income as production of goods and services consists of the unique source for revenues generating in closed economies:

$$y \equiv R \quad (16)$$

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\* The semnification for symbol " $\equiv$ " is "identical equal to"

Goods and services produced find their utilizations: final consumption (C) or gross fixed capital formation (GFCF). Changes in inventories and gross fixed capital formation make up *investment* (I). Goods and services find no other utilization in closed economies than C and I, which form together aggregate (total) effective demand. The identity between resources and uses for goods and services market is:

$$y \equiv C + I \quad (17)$$

I.e. the value of national product is equal to the consumer goods, C, produced and sold plus the value of investment. It is an accounting identity, which appears to generate a problem: if total demand equals national product, then firms and households must appropriate their whole-distributed income to consumption or investment exclusively. What happens then when firms do not expend the total amount available and decide to save a certain fraction of their income? *Saving*, S is defined as a component of income subtracted from final consumption, i.e.:

$$S \equiv R - C \quad (18)$$

Since  $y \equiv R$ , we have another identity, namely:

$$y \equiv C + I \Rightarrow y - C \equiv I \Rightarrow S \equiv I \quad (19)$$

In other words, since C has the same value both in equation (17) and in equation (18), S must also be equal to I. The equality between savings and net investment is parrelly a question of definition, i.e. it follows from the meaning we have given to the concepts of savings, investment, national income and gross domestic product. S denotes the amount by which the consumer refrain from buying consumer goods and the goods unsold in this period are taken as investment, i.e. treated as new capital. Equation (16) to (19) are called *macroeconomic identities*.

Let us assume planned consumption as a function of national income while investment does not depend on variations in income (investment is therefore called *autonomus*). The model can be written in the following form:

$$y \equiv C + I \quad (20)$$

$$C = c \cdot y + C_0 \quad (21)$$

$$I = I_0 \quad (22)$$

Equation (20) states that the sum of consumption and investment at equilibrium is equal to the national income. Equation (21) defines consumer behaviour, being assumed that planned consumption depends on national income variations. In the general form of the model, the marginal propensity to consume is denoted by symbol c. The consumption function also includes the term  $C_0$  for the *autonomus* consumption. So we have consumption that is *autonomus*  $C_0$  and consumption related to variations in national income:  $c \cdot y$ . Equation (22) shows that investment is taken to be *autonomus*

( $I_0$ ), i.e. the firms are assumed to invest the same sum, ( $I_0$ ), irrespective of the level of the national income.

In this model,  $c$ ,  $C_0$ , and  $I_0$  are assumed to be given values, but  $y$ ,  $C$  and  $I$  are to be found. The first three are called *exogenous variables* (they are determined by the factor external to the model) and the second three are called *endogenous variables* – they are to be determined within the model. The equations will be solved for  $y$ : since we have  $y \equiv C + I$ , we can substitute ( $c \cdot y + C_0$ ) for  $C$ , and  $I_0$  for  $I$ . Therefore,

$$y \equiv c \cdot y + C_0 + I_0$$

$$y(1 - c) = C_0 + I_0$$

and the value of  $y^*$  (the equilibrium value of the national income will be designated by the symbol  $y^*$ ) is given by the expression:

$$y^* = \frac{C_0 + I_0}{1 - c} = \frac{1}{1 - c} (C_0 + I_0) \quad (23)$$

In the letter  $k$  is *the multiplier*, the formula for  $y^*$  is:

$$y^* = k(C_0 + I_0), \text{ where } k = \frac{1}{1 - c} \quad (24)$$

The multiplier  $k$  is the factor by which autonomous demand (consumption plus investment) is to be multiplied to obtain the equilibrium national income,  $y^*$ . At income equilibrium, the effective demand for goods and services equals the national income, the actual investment is equal to the planned investment, and actual consumption is equal to planned consumption.

It is also known that marginal propensity to consume,  $c$ , is related to the marginal propensity to save,  $s$ , and this relationship is described by formula:

$$s = 1 - c \quad (25)$$

Substituting  $c = 1 - s$  into  $k = \frac{1}{1 - c}$ , we shall obtain:

$$k = \frac{1}{1 - 1 + s} = \frac{1}{s} \quad (26)$$

or, in other words, the multiplier is the reciprocal of the marginal propensity to save. If we introduce **the public sector** into the economy, macroeconomic quantities discussed earlier will appear more complex since we can add real government expenditure ( $G$ ) and taxes ( $T$ ) to variables considered in our model. Real government expenditure does not comprise transfer payments such as social security, benefits and taxes we rate in the net sense, subsidies being deducted. The national product is now

composed not only of consumer goods and capital goods, but also of the production of government:  $G$  represents, on its turn, just another component of aggregate demand. We can therefore consider that output in money terms is equal to the sum of the value of consumer goods produced, investment goods produced and government production:

$$y \equiv C + I + G \quad (27)$$

On the other hand, the national income by the expenditure approach  $R$  now consists not only of money spent on consumption  $C$  and the money saved  $S$ , but also of the taxes  $T$ . In the mixed economy taxes play an essential role in financing the public services; that is why we are now integrating them into macroeconomic theory:

$$R \equiv C + S + T \quad (28)$$

It follows from equation (27) and (28) that the actual (ex post) values of savings and investment now needed to be equal to each other. The identity now looks like the following expression:

$$I + G \equiv S + T \quad (29)$$

Only if real government expenditure equals the level of taxes is ex post investment equal to ex post saving.

Now we can also follow the Keynesian method of computing the equilibrium level of national income for a given period of time (during this period a fixed productive capacity is assumed). First we must make an assumption on consumer's behaviour related to their total income: we shall consider that planned expenditure on consumer goods depends on the disposable income of the consumer, disposable income being understood as the difference between national income  $y$  and taxation  $T$ . The consumption function reads:

$$C = c(y - T) + C_0, \text{ where } 0 < c < 1 \text{ and } C_0 > 0 \quad (30)$$

With respect to  $T$ , we make a rather simple assumption that the level of taxes is proportional to national income, so that it is a constant fraction in relation to  $y$  we shall have:

$$T = t \cdot y, \text{ where } 0 < t < 1 \quad (31)$$

Equation (31) implies that the government collects greater amount of money through taxation as national income  $R$  rises.

Also to be added to the Keynesian analysis is the real expenditure of the government  $G$  that we assume to be autonomous and therefore not related to national income. If  $G_0$  is the symbol for autonomous government expenditure, we arrive at

$$G = G_0 \quad (32)$$

We shall also consider that investment has again an autonomus character, therefore

$$I=I_0 \quad (33)$$

Represents the fourth equation of the Keynesian model in this conception, where  $I_0$  is of course, the symbol for autonomus investment.

In order to close our model, we need an equilibrium condition. If  $y \equiv C + I$  represented equilibrium equation in preceding approach, we assume now that total affective demand should be equal to national income. From this point of view, the sum of consumption, investment and government expenditure equals national income:

$$y \equiv C + I + G \quad (34)$$

Equation (34) represents the condition for equilibrium in our new approach.

If we substitute in equation (34) the expressions we have considered for variables like C, I and G we shall obtain that

$$y = c (y - t \cdot y) + C_0 + I_0 + G_0 \quad (35)$$

Thus, equilibrium value for national income  $y^*$  reads:

$$y^* = \frac{C_0 + I_0 + G_0}{1 - c(1 - t)} \quad (36)$$

The multiplier no longer equals to  $\frac{1}{1 - c}$ , but

$$k = \frac{1}{1 - c(1 - t)} \quad (37)$$

meaning that the levying taxes have made the multiplier smaller.

But **real economies are opened to external exchanges**, meaning a great deal of movements of goods, services and factors across the frontiers carried out in international trade framework. In order to describe such complex economic relationships, we have to introduce two further macroeconomic quantities, namely the stream of exported goods and services (X) and the stream of imported goods and services (M). We shall include exports in the national product since the goods exported were also produced in the country, but we have to subtract the imports, since the goods imported do not belong to the national product of the country. Therefore national product  $y$  plus imports will now equal the value of consumer goods C, plus the value of investment I plus government production of goods G, i.e.:

$$y + M \equiv C + I + G + X \quad (38)$$

It follows from equation (38) that:

$$y \equiv C + I + G + (X - M) \quad (39)$$

If we denote by  $N_x$  the difference  $X - M$  (meaning net exports) equation (39) reads:

$$y \equiv C + I + G + N_x \quad (40)$$

We also know that the national income  $y$  equals consumer spending  $C$ , plus saving  $S$ , plus taxes  $T$ , i.e.

$$y \equiv C + S + T \quad (41)$$

It follows from equation (39) and (41) that the actual (ex post) values of saving and investment are no longer equal to each other. The identity now reads:

$$I + G + (X - M) \equiv S + T \quad (42)$$

The identity between saving and investment now holds in this situation only if:  
a) taxes exactly balance government spending and b) exports are equal to imports in value. Thus, if  $G = T$ , then:

$$(S - I) \equiv (X - M) \quad (43)$$

The Keynesian method of determining the equilibrium value of the national income in an economic system opened to international trade can be worked out. We assume the same as in closed economy that productive capacity is fixed and the national income is determined by effective demand. We shall also assume that investment  $I$  and government spending  $G$  are autonomous; taxation represents a constant fraction  $t$  of the national income  $y$  while total planned consumption again equals the autonomous consumption plus the part which is proportionally related to disposable income. This leads us to the following equations:

$$I = I_0 \quad (44)$$

$$G = G_0 \quad (45)$$

$$T = t \cdot y \quad (46)$$

$$C = c(y - T) + C_0, \quad 0 < c < 1, \quad C_0 > 0 \quad (47)$$

We now introduce into analysis the open character of the economic system. We assume that exports are autonomous (i.e. independent of variations in the national income value) and imports  $M$  are a constant fraction  $m$  of national income:

$$X = X_0 \quad (48)$$

$$M = my, \quad 0 < m < 1 \quad (49)$$

The equilibrium condition follows from the identity between effective demand and national income:

$$y = C + I + G + (X - M) \quad (50)$$

We substitute in equation (50) the expression for categories like C, I, G, X and M (equation (44), (45), (46), (47), (48)). We arrive at:

$$y = c(y - ty) + C_0 + I_0 + G_0 + X_0 - my \quad (51)$$

Expression for the equilibrium value of national income is:

$$y^* = \frac{C_0 + I_0 + G_0 + X_0}{1 - c(1 - t) + m} \quad (52)$$

The multiplier is now  $\frac{1}{1 - c(1 - t) + m}$  because the introduction of international trade, by which people can purchase, imported goods have made the multiplier smaller.

The multiplier effect are increased domestic investment has less impact on an economy opened to foreign trade than in a closed economy. The multiplier therefore decreases as we change from a closed economy without government to one with government (where taxes paid to public administration mean that people have less of their income to spend) and then to the real world situation of an open economy with government.

The great British economist, John Maynard Keynes (1883-1946) proposed the theory of multiplier outlined earlier in the 1930's at the time of Great Depression. Keynes is also known worldwide for his theory of employment argued in his paper *The General Theory of Employment, Interest and Money* published in 1936. In Keynes view the consumption function is fairly stable since consumer habits change slowly and it is therefore difficult to influence consumer demand in this way. In times of depression, the producers have no motive to invest their money in a new factories or new machinery. This is because the main investment's purpose is to enable producers to supply more consumer goods in the future; thus, the lack of great demand for consumer goods may cause investment's inefficiency. Contrary to their normal desire to make a reasonable profit and to remain active in the market, producers can be left under the circumstances, with the stock of unsold goods. In the middle of a slack period when sales are stagnant (or, even worse, falling), entrepreneurs cannot be expected to rise their production capacity by investing; instead, both components of the effective demand consumption and investment – will drop together.

According to Keynes, a macroeconomic system can be put on its feet again only by the government stimulating effective demand, e. g. by embarking on a program of public works, such as building roads, bridges and schools. The multiplier effect is of great importance here: for a public expenditure of, for example, 100.000 \$ will raise the national income by some multiple of 100.000 \$. Indeed, on of the first attempts to

reduce mass unemployment through the multiplier effect of stimulating consumer and investment goods was the building of highways and major waterpower projects in the 1930s New Deal Policy in the USA. Closer in time, the unemployment of the middle 1970s did not stem entirely from insufficient demand (other complicating factors, such as rapid inflation or structural changes, emerged) but this remained one of the main causes in the process. So in recent years several Western governments have attempted to combat cyclical unemployment by stepping up public expenditures.

Therefore, Keynesian theory dealt with determinants of national income within a given period of time at a given productive capacity for the economy. Thus, the main limitation of the theory remains the fact that Keynes gave a short term accounts in which he concentrated exclusively on effective demand. The vital role of technical change on the long-term development of the economy was neglected in Keynesian theory. But technical change can lead to the development of rapid economic growth through the innovation and swift application of new inventions and new work methods. However, the impact of technical change upon the economy can be so rapid that it produces consequences, which may be economically as well as socially undesirable. Structural unemployment and environmental pollution can often coexist. Noise, oil pollution, smoke, fumes, and the destruction of natural beauty are the negative effects of economic growth and technical change. Government policy is again of high importance here, since the state remains the unique factor in position to influence the consequences of technical change and even the direction of economic development.

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## THE TECHNICAL PROGRESS AND SERVICES

IOAN COSMESCU\*

**Abstract:** The technical and scientific revolution had a significant impact on services involving the quantitative and qualitative connection between services and the other elements of the aggregate social system. However, in spite of the fact that there have been massive capital injections in services, productivity earnings remained very low.

**Key Words:** efficiency, productivity, real product, service, technical progress

A process of large changing concerning all economic and social spheres characterizes contemporary economies. This process has an impact on services as well, being called the technical and scientific revolution and it has its own content and a number of certain distinctive characteristics. Its evolution ensures the quantitative and qualitative connection between services and the other elements of the aggregate social system.

In spite of the fact that there have been massive capital injections in services, productivity earnings were very low. As a result, the majority of the theories regarding tertiary development acknowledge the fact that productivity has a slow increase in this area and admit that the rate of growth disparity between services and industries is a major factor in the relative expansion of tertiary jobs.

Furthermore, concerning a great deal of services the real condition of productivity gives a paradoxical feeling for many specialists. For example, how can someone believe that banking and insurance, which experienced in 1970 and 1990 massive investments in information technology, did not register significant progress regarding productivity when this progress has appeared in telecommunication, as well? Thus, this issue became the center of vehement debates in USA where service performances (excepting air transport and telecommunication) were very low.

However, there are some explanations for the paradox mentioned before. One of them concerns the fact that productivity earnings did not reach the expected level even after a massive implementation of information technology, for a number of reasons, such as: inadequate utilization of materials, inferior development of staff,

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underequipping and computer technology overloading given the immediate needs. Today, more than ever before, this explanation is upheld by the fact that commercial services invest 85% from the entire private capital into computer technology.

Moreover, there is an insufficiently exploited explanation, which can justify productivity disparity between services and intensive industries, at least partially. In this regard, productivity represents a qualitative indicator of efficiency, which can establish a relation between efforts and the outcome. But in this area, products present some unseen sides. Therefore, establishing the real product for a service providing activity often represents a source of fundamental hesitations.

For example, in banking the real product can be considered to be the volume of banking operations or the value added in monetary and financial operations by the bank. In risk insurance, the real product refers to the insurance premium and indemnity, to the disparity between them or to the number of insurance policies.

As far as productivity is concerned, it can rapidly increase, stagnate or decrease in accordance with the elements mentioned before as possible real products for a certain service.

Even if their assessments based on technical operational indicators (transactions, files, policies, covered damages) are closer to the traditional meaning of industrial production (operational efficiency), their utilization may be impossible due to the absence of a nomenclature and data insufficiency for the internal structure of a complex product, including a number of less standardized elements.

Productivity is a typical “fordish” concept, well adjusted to performance analysis of mass production, standardized and relatively diversified products. However, it is an unsuitable concept for diversified and less standardized goods and services. If certain tertiary activities, such as transport and telecommunication, need product assessment based on standardized technical data, a lot of other services hold on in an incurable way. The productivity of medical services is another significant example within a context where suppressing the increase of health expenditure appears as an obsessive search.

Thus, the analysis of real economic performances (productivity, efficiency, growth) for many services involves a certain preliminary stage in order to define assessment rules as efficiency criteria, despite of the fact that non-of them are technically required. The product of such services presents a social structure, which implies different authors’ points of view.

Without any doubt, the process of service industrialization relies on technical progress and represents a transitional phase in the history of certain tertiary activities.

A number of service providing activities, especially those that involve a kind of “to do” services (services of material transformation, relatively standardized services, such as: transport, cleaning, trade), have experienced a phase of organizational transformation close to industrialization.

During this phase, certain phenomenon took place, namely: economic concentration, bringing into operation technical systems as source of scale economies, reducing individualized interactions with clients (in form of self-services). Appealing

to the example of selling by retail, this matter refers to the tranzitional process from an independent commerce to a large one (which involves vast areas, chains and networks, as well as home selling).

Secondly, these relatively depersonalized and standardized service industries, involving the growth of productivity earnings given the previous level, have registered some increase in clients' expectations and in the purchasing power, in new decentralized technologies and especially in simultaneous competition concerning price and services. This secondary state determined the tranzition to a third phase materialized into the introduction and extension of personalized services.

Finally, for a number of professional services, such as education and consulting, industrialization does not ensure any future perspective or a tranzitional phase; the professional rationalization of these activities involves other ways than those concerning productivity, standardization, scale economy or self-services, formal method approach, acquisition of individual and collective routine intelligence, result assessment based on multiple criteria, technology utilization as support and not as work substitute.

## TOURISM TRAFFIC MANAGEMENT

IOAN COSMESCU \*

**Abstract:** Tourism traffic must be quantified through four observing units' categories: custom houses; quartering units; internal and external travel agencies on home territory; family budgets. These observing units allow to quantify the statistical observation's object and its cyclicity.

**Key Words:** tourism traffic, travel agency, customs, family budgets, quartering units.

Tourism traffic must be quantified through four observing units' categories: a) custom houses; b) quartering units; c) internal and external travel agencies on home territory; d) family budgets. These observing units allow to quantify the statistical observation's object and its cyclicity, there is:

- A) internal and foreign tourism traffic (monthly): on origin and destination countries, on means of transportation and travel's purposes;
- B) quartering activity (supply and demand): quartered individuals and nights spending by origin countries, incomes and personnel dimension;
- C) travel agencies activity (trimestrial): tourists' number, tourism traffic, internal tourism actions' areas, destination countries for external tourism actions;
- D) population's way of taking part in individual or organized tourism;

Information's sources are specific for every statistical observation's object, such as:

- travellers' customs declaration or customs' documents (for A);
- quartered individuals' book (for B);
- resting and treatment ticket, trip registering note (for C);
- questionnaires filled in by the collaborating family for the tourism actions investigation (for D).

Tourism activity, through its complexity, generates an indicators' system that reflects phenomenon and specific aspects of this field and can be classified as:

- main indicators, for measuring in time and space these values' volume, structure, evolution and change;

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- correlation indicators, between tourism market's constituents, that mediates the knowledge of material base's use degree;
- tourist action indicators, reflecting the interdependence between tourism and national economy;
- rate of work indicators.

These categories of indicators generate the following classes of quantitative-qualitative indicators for tourism sector:

- indicators of internal and external global tourism demand;
- indicators of natural and artificial tourism supply;
- indicators of supply-demand relationship;
- indicators of economic actions with tourism specific;
- indicators of tourism density;
- indicators of markets' tourism potential;
- indicators of work attraction and use.

According to specialists opinion, estimating tourism traffic and its main characteristics involves certain indicators, such as: tourists' number, daily average tourists' number, tourist-day number, average size of the journey, tourism returns, tourism traffic density and tourists' relative preference.

Tourists' number ( $N_T$ ), quantitative indicator can be estimated through totalizing the tourists in a certain period:

$$N_T = \sum_{i=1}^n t_i \quad (1)$$

where:  $N_T$  – tourists' number;  
 $t_i$  – tourist individual.

Daily average tourists' number ( $\overline{N}_{TZ}$ ) is evaluated by the proportion between tourists' number in the analyzed period and the number of days in the same period of time:

$$\overline{N}_{TZ} = \frac{N_T}{N_Z} \quad (2)$$

where:  $\overline{N}_{TZ}$  – daily average tourists' number;  
 $N_T$  – tourists' number in the analyzed period;  
 $N_Z$  – days' number in the analyzed period.

Average size of the journey ( $\overline{D}_S$ ) qualitative indicator, is calculated as a proportion between tourist-day number and tourists' number:

$$\overline{D}_S = \frac{\sum nzt}{N_T} \quad (3)$$

where:  $\overline{N}_{TZ}$  – average size of the journey;  
 $3_{nz}$  – tourist-day number;  
 $N_T$  – tourists' number.

Tourism traffic density ( $D_t$ ) is calculated as a proportion between tourists' number and populations' number:

$$D_t = \frac{N_T}{N_P} \quad (4)$$

where:  $D_t$  – tourism traffic density;  
 $N_T$  – tourists' number in the analyzed period;  
 $N_P$  – population's number.

Tourists' relative preference ( $P_r$ ), indicator that provides information regarding tourism flows' geographical orientation. It can be estimated as percentage proportion between tourists' number .... a certain destination and population's number of the supplying area:

$$P_{r1} = \frac{N_{Ti}}{N_T} \cdot 100 > P_{r2} = \frac{N_{Ti}}{N_P} \cdot 100 \quad (5)$$

where:  $P_r$  – tourists' relative preference;  
 $N_{Ti}$  – tourists' number with a certain destination;  
 $N_T$  – tourists' total number in a supplying area;  
 $N_P$  – population's number of the supplying area.

Tourists' relative preference allows tourist's flows limitation and establishes the orientation of tourism development policy and supply measuring according to demand's structure.

Information's gathering and grouping can be differentiated in the two main parts of tourism traffic: internal and international, observation uniots being either the same (quartering or transportation capacities) or specific (custom points for international tourism or distribution channels and quartering units for internal tourism).

The main indicators used in tourism traffic estimation are:

A – Internal tourism:

- the number of tourists at rest and treatment and taking part to internal trip's circuits;
- the number of tourists in health and holiday resorts;
- tourist-day number;
- incomes from internal tourism, on actions (restreatment and internal trips);
- quartered individuals number on quartering forms (hotels, inns, campings).

B – International tourism:

1. Tourism traffic global indicators, such as:

- foreign tourists' number, on origin countries, custom points and means of transportation;
- the number of romanian tourists abroad on destination countries, custom points and means of transportation.

2. Indicators of international tourism flow mouvement inside the country, such as:

- tourists' number;
- tourist-day number, retailed on origin countries, tourism forms and areas (mountain, seaside, health and holiday resorts) and on quartering forms (hotels, inns, campings).

3. Exchange payments and receipts indicators:

- exchange receipts and origins;
- exchange payments and destinations;
- exchange payments for promotional actions and commercial travels abroad;
- exchange receipts from export trading.

Informational system in our country, according to touristm's statistical monitoring methodology has to provide statistic data gathering for tourism traffic analysis and formulating the best conclusions to substantiate romanian tourism development policy on regional and national level.

## CONSIDERATIONS CONCERNING COSUMER BEHAVIOUR THEORY

IOAN CUCU, CODRUȚA DURA\*

**Abstract:** The consumer's scale of preference, which is the starting point of the theory of consumer behaviour can be illustrated very clearly by indifference curves. The point where budget line meets the highest possible indifference curve compatible with the consumer's income and prices represents the state of equilibrium for the consumer. Consumer behaviour theory gains still more practical importance if consumer preferences are subjected to detailed psychological and sociological analysis.

**Key words:** indifference curve, marginal utility, budget line, consumer's equilibrium, individual demand curve, Engel curve, market demand curve, psychological and social factors of consumer behaviour.

Consumer behaviour refers to the buying behaviour of ultimate consumers, those persons who purchase products for personal or household use, and not for business purposes. First, buyers' reactions to a firm's marketing strategy have a great impact on the firm's success. Second, the marketing concept stresses that a firm should create a marketing mix that satisfies customers. To find out what satisfies consumers, marketers must examine the main influences on what, where, when and how consumers buy. Third, by gaining a better understanding of factors that affect buying behaviour, marketers can better predict how consumers will respond to marketing strategies.

Consumer behaviour theory was first initiated by Italian economist Pareto. As Pareto pointed out, utility cannot be measured, merely ranked. Gossen's first law of diminishing marginal rate of satisfaction defines the shape of the *indifference curves*. Gossen, who lived in the middle of the nineteenth century, was a forerunner of the *marginal utility school*, which was founded around 1870 and included Menger, Jevons and Walras, and concentrated on the role of the consumer in economic life. This was a reaction to the earlier classical school of Smith, Ricardo and Malthus, which focused

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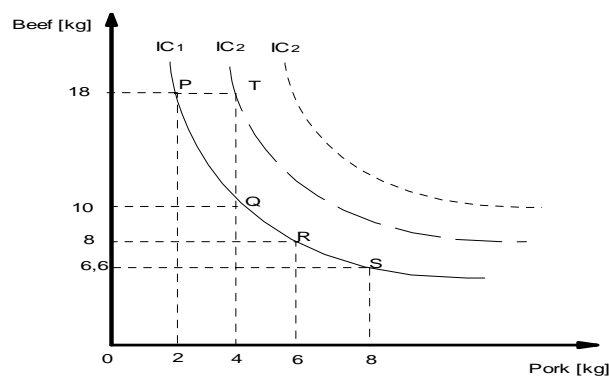
attention on the production side of the economy, particularly on free enterprise production at national and international levels.

The marginal utility school, or 'marginalism', had three branches: the Austrian, the Cambridge and the Lausanne schools. The first one counted Menger, Wieser and Bohm-Bawerk among its members, and Schumpeter was a later supporter of its views. The Cambridge school was founded by Marshall, who researched developments, on production in the macroeconomy, shown by the advocates of the classical school, and also strongly developed consumer and producer marginal theory. Finally, the Lausanne school was founded by Walras and included Pareto among its members. Walras and his followers also made extensive use of mathematical methods.

They considered that consumers consciously or subconsciously compare various possible purchases and finally express a preference for one article by buying it. The theory of consumer behaviour is based on the finding that consumers can, in fact, express their preference not by telling how much greater the *utility* (i.e. consumer satisfaction) of one good was than that of another (for utility was proved to be unmeasurable) but by putting goods in order of preference or priority. In other words, consumers could only say whether he values a certain combination of articles more or less than another combination without putting numerical figures on his valuations. If consumers can express preferences, they are also able to express indifference.

***Expression of Consumers' Indifference between Combinations of Goods.***

To understand consumer behavior we start first by establishing which combinations of products give the same satisfaction. For example, we can show beef—pork combinations that are equally acceptable to the consumer, by plotting the amount of pork along the horizontal axis and the amount of beef along the vertical axis, obtaining curves of the type shown in Figure 1.



***Figure 1 : Consumer indifference pattern***

Here a combination of 18 kg of beef and 2 kg of pork, represented by point P, has exactly the same utility for a given consumer as the combination of 10 kg of apples and 4 kg of pears, represented by point Q. Such graphical presentations are called

**indifference curves**, because the consumer is indifferent as to which combination lying along a particular curve he chooses, i.e. he is indifferent as to whether he consumes 18 kg beef + 2 kg pork or 10 kg beef + 4 kg pork. A combination of 18 kg beef and 4 kg pork, represented by point T, gives the consumer more utility than the combination represented by point P. Point T therefore lies on a higher indifference curve, together with all the other combinations of the same higher utility, for the consumer. It is possible to construct an infinite series of indifference curves, each being further from the origin and representing a higher utility, in the way that indifference curve 3 in Figure 1 represents a higher utility than indifference curve 2. Of course, to simplify the situation only three such curves, representing only three different levels of satisfaction, are drawn in here.

**Marginal Utility.** In general, the fewer units of a certain good one consumer consumes, the more extra utility - **marginal utility** - he attributes to an extra unit of the good in question. Conversely, he finds less utility in extra quantities of pork as his stock of beef increases. In general, the marginal utility of a good decreases as the stock of this good held by the user increases. Figure 1 shows the consumer is less willing to give up beef for one kilogram of pork as his consumption of pork in relation to beef increases. The number of beef kilograms given up for one pork reflects the **rate of substitution** between apples and pears. As we follow the indifference curve from left to right, we see that the rate of substitution is diminishing. This also refers to small changes, i.e. marginal changes, and therefore we can also say that the marginal rate of substitution is diminishing. This law of **diminishing marginal rate of substitution** therefore explains why indifference curves are convex to the origin, as in Figure 1.

**Maximum satisfaction of wants and consumers' equilibrium.** Consumers want to maximize the satisfaction of their wants, i.e. utility, and will therefore choose combinations of goods that lie on the highest indifference curves compatible with their income. The question is therefore which combinations of goods maximize the consumer's utility, or, to use the alternative term, his satisfaction at a given income and given price of goods.

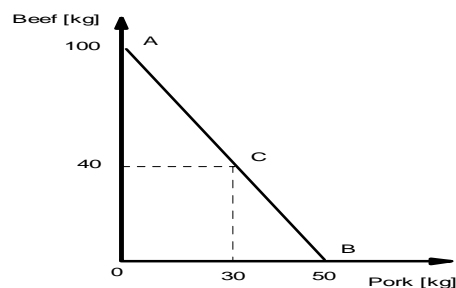


Figure 2: Budget line.

**Budget Line.** Let us assume a consumer with an income of 100 \$ who spends it all on beef and pears costing 1\$ and 2\$ per kg, respectively, and suppose that these prices remain the same irrespective of the amounts purchased, so that the consumer does not get a discount. In this situation, the consumer can adjust only the quantities of his purchases. Our consumer can buy either 100 kg of beef or 50 kg of pork if he spends his whole income either on beef or on pork. These extreme cases are represented by points A and B in Figure 2. He could also buy any combination of apples and pears that lies on the line between points A and B, which is called the budget line. At point C he can therefore buy 40 kg of apples and 30 kg of pears, thus spending his total income of 100 \$. This line is the boundary between combinations the consumer can afford and those he cannot afford. He can afford those combinations to the left of the budget line but cannot afford those to the right of the budget line. This line is a straight line because we have assumed the prices of beef and pork do not change if the consumer demands more beef and pork. The slope of the budget line is determined by the price ratio of beef and pork: the lower the price of beef relative to the price of pork, the steeper the slope of the budget line.

**Consumer Maximization of Satisfaction of Wants.** To discover which combination of goods lying on the budget line offers the consumer the highest utility (satisfaction), we construct a number of indifference curves, as shown in Figure 3. The first curve represents combinations of goods having the same utility (i.e. satisfaction), including points P and Q on that curve.

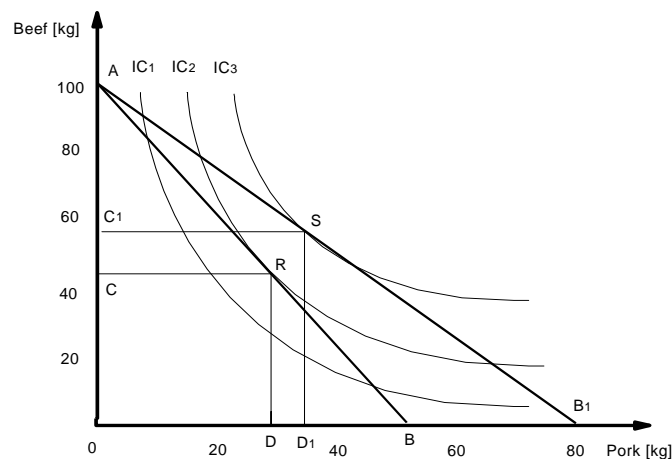


Figure 3 : Consumer maximization of satisfaction.

The budget line meets the second indifference curve at point R, which represents a greater utility (i.e. satisfaction) than any point on the first indifference curve, since the second curve is placed further from the origin. R therefore also represents the maximum utility available to him, given his income and the current prices. The consumer will therefore choose the combination of goods represented by

point R, since this is where the budget line meets at a tangent the highest indifference curve compatible with his present income and prices. This point, which corresponds to a combination of 50 kg of beef at C and 25 kg of pork at D, represents an equilibrium state for the consumer : any other combination lying on the budget line would offer him less utility, so that he will not want to change the situation represented by point R. If, for example, he substituted 1\$ of beef for 1\$ of pork, or vice versa, and moved therefore a small way up or down the budget line, he would in both cases arrive at a point on the same lower indifference curve. Thus at point R we can say that the marginal utility (or extra satisfaction) from consuming 1\$ worth of beef or of pork is the same.

Now R lies on both an indifference curve and a budget line, the slopes of which will be identical at R. The slope of this indifference curve measures the marginal rate of substitution of beef for pork. At this equilibrium point the ratio of the price of apples to pears, i.e. the slope of the budget line equals the marginal rate of substitution of apples for pears, which is the slope of the indifference curve at R. Since the ratio of the marginal utilities of beef and pork equals the marginal rate of substitution of beef for pork, it must also equal the price ratio of beef to pork at point R.

$$\text{Therefore } \frac{P_a}{P_p} = \frac{M_{ua}}{M_{up}}$$

So for maximum satisfaction the marginal utility of apples divided by its price equals the marginal utility of pears divided by its price, i.e.

$$\frac{M_{up}}{P_a} = \frac{M_{up}}{P_p}$$

We have seen so far how many beef and pork kilograms are demanded by the consumer when the prices of beef and pork and his income are known and fixed. Let us now examine how these quantities of beef and pork demanded will change when firstly prices and secondly income after.

**Changes in Price.** If, for some reason such as a glut of beef, the price of pork drops from 2\$ kg to 1.25 \$ kg, the consumer could buy as many as 80 kg of pork if he spent all his income on them. This situation, too, can be seen in Figure 3. The point of intersection of the budget line AB with the horizontal axis shifts from B to B<sub>1</sub>; since the consumer can now purchase a maximum quantity of pears of OB<sub>1</sub> instead of OB. The point of intersection of the budget line with the vertical axis remains the same, because the maximum quantity of beef the consumer can purchase is still 100 kg. The budget line is still a straight line because we maintain the assumption that both prices are constant, and this line now runs from A on the vertical axis to B<sub>1</sub> on the horizontal axis.

The indifference curves remain the same, and using the new budget line, AB<sub>1</sub>, we see that the consumer has a new equilibrium point, S, on indifference curve 3 in Figure 3. This point S represents a combination of 56 kg (OC<sub>1</sub>) of beef, and 35 kg

( $OD_1$ ) of pork. We note that the drop in the price of pork has led to an increase in the demand for them of 10 kg, and also to an increase in the demand for beef of 6kg. Therefore, the change in the price of pork has not only altered the consumers' demand for them; it has also changed his demand for beef. This is a very important element in the theory of consumer behaviour: the demand for a good depends not simply on its own price but also on the prices charged for all other goods. Therefore, any price change will also alter the real income of the consumer. This real income is represented by the basket of goods that can be purchased with his money income. If his money income were to be unchanged, and prices then went up, his real income would decline, because he could not buy as large a basket of goods at the new higher prices. When money income remains unchanged and the price of pork falls, the consumer's real income increases. He can therefore buy a larger basket of goods at the new lower price, and he demands both more pork and more beef. Figure 3 describes these changes.

**Changes in Income.** Let us now examine the effects on consumer demand of a change in monetary income when the prices of beef and pork remain constant. If the consumer's monetary income per week rises from 100 \$ to 150 \$, a new budget line ( $A_1B_1$ ) parallel to the old budget line ( $AB$ ) is attained. There has been no change in the price ratio of the apples and pears, so the slope of the budget line remains the same, and it is therefore parallel to the old budget line. If the consumer were to spend all his new higher money income on beef, he would buy 150 kg of them, and if he were to spend it all on pork, he would buy 75 kg of those. The new point of intersection of the budget line with the horizontal axis is at  $B_1$ , and with the vertical axis at  $A_1$ . The consumer in this new situation is able to reach a higher indifference curve ( $IC_4$ ), and the optimal combination of beef and pork, where he maximizes utility, is point  $T$  on Figure 4. At this point he consumes 75 kg of beef and 40 kg of pork. We can see that the rise in income has led to an increase in demand for beef of 25 kg, and an increase in demand for pears of 15 kg. The demand for both goods is therefore changed by a rise in income.

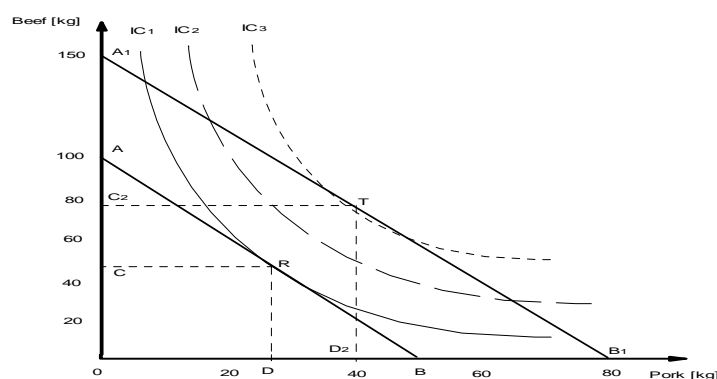


Figure 4 : Income changes.

**The demand curve for the individual and the market demand curve.**

**Individual's Demand Curve.** The matters we have discussed so far in this chapter lead us to an important conclusion: the individual's demand for each good depends on all prices of all goods and on the individual's income - as long as we assume that the individual's preferences are given and fixed. We shall refer to this relationship as the individual demand function. We denote the individual's demand for quantity of goods as  $Q$ , the prices of goods as  $P$  (for article 1),  $P_2$  (for article 2),  $P_3$  (for article 3), etc., and income as  $i$ . Therefore the individual's demand function is:

$$Q = f(P_1; P_2, P_3, \dots, P_n, i)$$

This demand function follows immediately from the theory of consumer behaviour which we have discussed in the earlier sections of this chapter. It is common practice to study the relationship between the individual's demand for a good and the price of the good, assuming that all other prices, consumer income and consumer preferences remain given and fixed. In this situation, we are making use of the *ceteris paribus* principle, i.e. that all other things remain given and fixed, whilst we study the behaviour of two variables, in this case the individual's demand for pork and the price of pork. In Figure 5 a demand curve,  $DD$ , is drawn which depicts the individual demand function. If the price of pork is increased, in this example, from  $OP$  to  $OP_1$ , the quantity of pork the individual will demand is reduced from  $OQ$  to  $OQ_1$ .

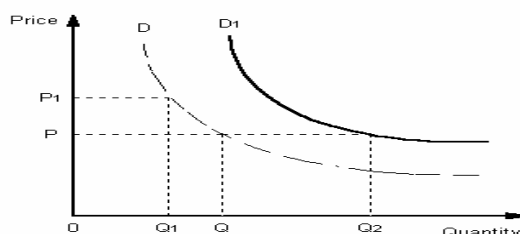


Figure 5: Individual demand curve.

The demand curve for the individual will shift to the right if there is a fall in the prices of other goods (income and preferences are constant and fixed). In this case we obtain a new demand curve,  $D_1D_1$ , and at the same price of pork,  $OP$ , the demand for pork increases to  $OQ_2$ . We should distinguish between a shift in the demand curve as in the latter case, and a movement along the demand curve as in the former case.

**Engel Curve.** We can also study the relationship between the quantity of pork demanded and income, leaving all prices and preferences given and fixed. In this case a curve, as in Figure 6, can be drawn: this is called an Engel curve after the nineteenth-century German statistician of that name. Engel argued that the consumer initially increases his demand for the good more than in direct proportion to the increase in income, but that after a certain level of income is achieved his consumption of the good increases less than in proportion to further increases in income (see Fig. 6).

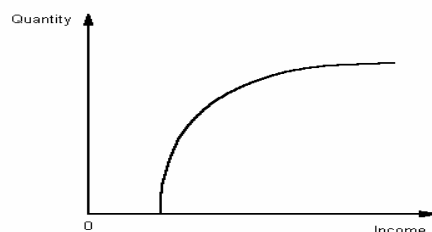


Figure 6 : Engel curve.

**Market Demand Curve.** As well as constructing the individual demand function, we can also construct a market demand function. The market demand function accounts for the demand for a good in terms of the prices of all goods and the income of all consumers - as long as we assume that the preferences of consumers are given and fixed. In order to obtain the market demand function some kind of aggregation procedure is required, and in a simplified form this can mean aggregating the individual demand functions. We can construct this simplified market demand function by adding up the demand functions for all individuals, and in Figure 7 we do this for two individual demand functions.

It is not only the prices of goods and incomes which influence the market demand function, however; changes in size of population and income distribution also have their effects. If population rises there are more consumers and therefore the demand for goods will rise, as long as these form a basic part of people's wants, as do meat in most countries. When there is a redistribution of income which favours lower-income groups, who tend to spend more of their incomes than do those with higher incomes, more meat will be bought — as long as it forms part of people's basic wants.

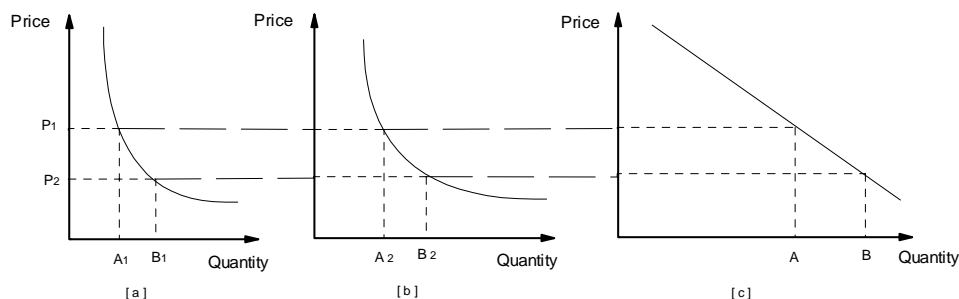


Figure 7 : Market demand curve.

**Market Demand Curve and Macroeconomic Consumption Function.** The market demand functions are necessary complements of the macroeconomic consumption function, because they tell us the composition of total spending and indicate the factors that influence it. The macroeconomic consumption curve shows

how much is spent at various levels of the national income, but it does not give us details of how much is spent on particular goods. Analysis of consumer behaviour has now shown that the detailed pattern of consumption depends in particular on prices. At given consumer preferences, changes in relative prices lead to a change in the combination of goods consumed and thus in the structure of consumption. When the price of a product falls for some reason such as technical development, the consumers use this as a signal urging them to change their market position. A certain 'communication' thus arises between different parts of the economy. The market demand curve derived for a certain good from the theory of consumer behaviour does not tell us the price that will actually emerge on the market, only how much the consumers would buy at various prices.

***Psychological and social aspects of the consumer behaviour.*** The consumer behaviour theory discussed here is based on the adoption of a consumer preference pattern, including consumers' tastes, which has been given to us by non-economic forces. Once the preferences are given, the total demand for goods is determined by the incomes, income distribution, prices and the number of consumers, and we now have a fairly large body of information on how these factors affect the market situations. For example, market research uses various statistical techniques for predicting the effects of changes in prices and incomes. However, more and more economists want to know why a consumer makes a certain purchase - a question which, involving as it does the preference pattern, lies outside economics. To analyse the purchasing motives, we must turn to areas like psychology or sociology. This reveals the involvement of a great variety of partly subconscious motives which can vary in the course of time.

In fact, three major influences are believed to affect consumer buying decision process: personal, psychological, and social factors. A personal factor is one that is unique to a particular person. Personal factors include demographic factors, situational factors, and level of involvement. Demographic factors are individual characteristics such as age, sex, race, ethnicity, income, family life cycle, and occupation. Situational factors are the external circumstances or conditions that exist when a consumer is making a purchase decision. The time available to make a decision is a situational factor that strongly influences consumer buying decision. An individual's situational level of involvement / the importance and intensity of interest in a product in a particular situation / also affects the buying decision process. Enduring involvement is an ongoing interest in a product class because of personal relevance. Situational involvement is a temporary interest resulting from the particular circumstance or environment in which buyers find themselves.

Psychological factors operating within individuals partly determine people's general behaviour and thus influence their behaviour as consumers. The primary psychological influences on consumer behaviour are perception and knowledge, motives, attitudes and personality. Consumers' *perception and ability to learn* are perhaps the most important factors in consumer behaviour. The first determines how they will view the virtually infinite variety of goods and distinguish between them. Will they, in fact, accept the claimed difference between detergent A and detergent B



in terms of cleansing power? Or will they simply buy detergent A because it is in a red packet? The consumers' ability to learn will determine the extent, quality and frequency of information which, through advertising, needs to be presented. *Knowledge* is made up of two components: familiarity with the product and expertise/ the individual's ability to apply the product. Although the investigation of these two characteristics is still in its infancy, it is here that we can expect a further refinement in the analysis of purchasing behaviour. A *motive* is an internal energizing force that orients a person's activities toward satisfying a need or achieving a goal. To analyze major motives that influence consumers to buy or to avoid their products, marketers conduct motivation research, using depth interviews, group interviews or projective techniques. *Attitudes* refers to knowledge and positive or negative feelings about an object or activity. Consumers' attitudes toward a firm and its products greatly influence the success or failure of the firm's marketing strategy. Marketers measure consumers' attitudes with projective techniques and attitude scales. *Personality* comprises all the internal traits and behaviours that make a person unique. Personalities typically are described as having one or more characteristics, such as compulsiveness, aggressiveness, gregariousness, dogmatism, authoritarianism, extroversion, ambitiousness, competitiveness. Marketing researchers attempt to find relationships among such characteristics and buying behaviour (for example, type of clothing, jewelry, or automobile that a consumer buys reflects one or more personality characteristics).

The forces that other people exert on buying behaviour are generally called *social factors*. Social factors include the influence of roles and family, reference groups, social classes, and culture and subcultures. A *group* is a reference group when an individual identifies with the group so much that he or she takes on many of the values, attitudes, or behaviours of group members. The consumer is a member of several distinct social groups (e.g. business or profession, and sports club), and his purchasing behaviour is further influenced by the interaction with the other members of these groups. The commercial value of detailed classification is illustrated by the case of 'consumer first-purchasers', those who are the first to buy a new product. They share particular character traits and also exhibit a clearly definable group behaviour. A *social class* is an open group of individuals who have similar social rank. *Culture* is everything in our surroundings that is made by human beings. A culture can be divided into *subcultures* on the basis of geographic regions or human characteristics, such as age or ethnic background.

If we take into account major factors influencing the buying decision process on their whole, it becomes obvious why the traditional consumer behaviour theory has recently come under serious criticism, partly because it ignores the effect of personal characteristics on consumer behaviour, and partly because it adopts consumer preference as fixed and not susceptible to change. The most significant direction to adopt in the interest of improving traditional pattern is those of refining research methods which will yield more information about consumer behaviour and will spur marketers to seek fuller understanding of consumer decision process.

## **INVOLVING OF STAKEHOLDERS IN ELABORATION OF FIRM'S STRATEGY**

**IOAN CONSTANTIN DIMA\***

**Abstract:** The stakeholders is a person or a group which has an interest, or a personal implication into a firm and his performances. The studies made in developed countries show that the satisfaction of clients desires is more important than the satisfaction of stockholders desires. Increasing the responsibility of strategic management, from the attending to the financial obligation to the stockholder up to the accomplishment of the desideratum of diverse investments is a process of increasing the activity of superior management.

**Key Words :** stakeholder, stakeholder, firm's strategy, management, desideratum, creditors .

The stakeholders is a person or a group which has an interest, or a personal implication into a firm and his performances. The studies made in developed countries show that the satisfaction of clients desires is more important than the satisfaction of stockholders desires. These studies highlight the importance of governmental agencies, communities and trade unions in elaboration of firm's structures. Lately, the specialized literature gives more importance to these groups of influence about their influence on the strategic management.

The stakeholder groups who are relevant for a Romanian firm include stockholders, customers, suppliers, trade unions, creditors, investors, and political parties.

Increasing the responsibility of strategic management, from the attending to the financial obligation to the stockholder up to the accomplishment of the desideratum of diverse investments is a process of increasing the activity of superior management. Traditionally, the goal of the superior management is to maximize the stockholders' wealth, this because the stockholders are the most important stakeholders and when the mission of firm is defined, the strategy is formed and, of course, in its implementation, the desire of the stockholders must be taken into account, as a preponderant factor of the stakeholders.

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When an approach to the activity of the stakeholders is made, a clear distinction must also be made between management and leadership because the major difference is that the success leaders have a vision, whereas the managers, on the other hand, may have a plan.

Another more convincing consideration for adopting an orientation toward the stakeholders in strategic management is the fact that the strategies must be implemented and insatisfaction of a major desideratum of the stakeholders groups may slow down or even block its implementations.

A very powerfully stakeholders group can blocked even an industry and can imposed to the staff an extraordinary obstacle. Thought the restructuring can be face with resistance from the stakeholders groups from the majority of industries a few have and interest to take such methods.

This is why it's recommended that the firm's strategy to be formulated with consulting of stakeholders. This not means that the superior management must abandon to his decisional authority but it must take in consideration the necessities of stakeholders. It is also possible that some stakeholder groups play a powerful role in providing of details about the best way to implement some part to the global strategy.

The level of participation to the different stakeholders group in the process of strategically management must to alter. In some case, the process of strategically management must have only a reasonable knowledge to the desideratum of the stakeholders and in another case, a group of stakeholders can be implicated direct in process.

The pragmatic finally justification for the incorporated to the problems of stakeholders in the strategic management is that the efficiency of this process can be a competitive advantage.

When it is take notice to the multiplication and the importance of stakeholders interested to the firm's activity, the superior management must respects their desideratum. So, it's claim the coordination of the relations with this to the strategic management.

The incorporation to the stakeholders activity in the management process involve more steps:

- the identifying of the stakeholders groups;
- the estimate the prospects of the stakeholders given the firm;
- the evaluation and priority of the interest and of power of stakeholders;
- the determination of the probable actions in accordance with the different strategically scenarios;
- the taking decision about a general attitude to the every stakeholders group who encourage the global strategy of firms.

For every firm is necessary to establish sphere of stakeholders who are implicated: customers, managers, stakeholders, trade unions, suppliers, performers.

The next step is finding the desideratum of every stakeholder. The appreciation of desideratum involves knowledge of the situation, reasons and abilities of the

different groups. May be this is require a combination between research and information of the involve circumstances.

Many firms have serious troubles because they can't research another stakeholders involve in firm's activity. It is very easy that managers say what they believe about wishes groups. Missing a systematic scientific effort, the experience shows that the superior managers for many times is estranging by the majority stakeholders groups. So many Romanian firms with productive activities have difficulties in express their objectives and therefore communication between managers with the majority important stakeholders groups.

But not all stakeholders groups are so important. One of this groups are more critical that another because their waiting can be often in conflict with the firm's managers, the strategic manager must try to reconcile just this desideratum.

It is important in firm's management to not estimate or underestimate the potential benefit that is brought by the every stakeholders group for firm. This is because the stakeholders groups can made unexpected coalition for stopping the actions and the intentions of firm. If the action of stakeholders were more visible, the stakeholders groups leading is more important

Knowing the real desideratum to the stakeholders group to the firm, it is important to know and to anticipate which stakeholders can be first. Although stockholders have initially more power, in many firms stocks are so much dispersed, that the managers must not be afraid of the stockholders' intervention, unless the performance deteriorates very much. The firms who are bankrupt can be confronted with the aggressive intention of creditors to dismember the firm and to sell the patrimony.

It is important to know for the current strategy of firm and for the potential alternatives what are the impact and the reaction of the groups of stakeholders. When it is estimate the alternative strategies is essential to estimate the size of the probability that every firm to touch his objectives for to create competitive advantages. It is essential that a good analysis to the stakeholders group to provide this evaluation.

When the strategy is chosen the firm must know what attitude will be adopted, in generally, in relation with every group of stakeholders. This attitude must conceive in detail, but in generally must superpose to the different approaches with conflictual character. In the less important groups, the purpose is to assure that this groups are not removed needlessly because it isn't know what stakeholders will be precious ally to the manager's firm in the future.

## **SOME CONSIDERATIONS REGARDING THE COMPARED MANAGEMENT STUDIES' CLASSIFICATION**

**IOAN CONSTANTIN DIMA, CLAUDIA ISAC\***

**Abstract:** H. Schollhammer classified the compared management studies for the first time in 1969 when he identified the following types of directions: social-economic direction, ecological direction, behavioural direction, empirical direction.

**Key Words:** economic development approach, environmental approach, behavioural approach, open systems approach, cultural approach .

H.Schollhammer classified the compared management studies for the first time in 1969 when he identified the following types of directions:

- Social-economic direction, reflecting management importance in economic development;
- Ecological direction, revealing external factors importance on managers' behaviour. This orientation's specialists identify some environmental variables that influence managerial practice and organisation's results and efficiency. There are emphasized the following environment limitations with an impact on the organization's efficiency: environment's sociological characteristics, society's training characteristics, national economy structure;
- Behavioural direction based on managers' and workers behaviour in various countries and cultures. Problems concerning management style, motivation and labour attitude, managerial values, labour satisfaction, are used in compared management conceptualization through this orientation;
- Empirical direction, grouping empirical researches on theories and models with no connection, leading to some comparative analysis impossibility.

Another classification of the compared management approach was made by E.Miller and involves:

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- Economical development and environment direction, representing a combination between H.Schollhammer's first two classifications;
- Behavioural direction, based on individual and groups behaviour in various organizations, cultures or countries;
- Contingency direction based on explaining the similarities and differences through the relationships between organization, management and environment in various national or cultural circumstances.

Another compared management directions classification was made by R.Uath, who identified the following five approaches:

- *economic development approach*

Initiated in the '50, this compared management direction was influenced by F.Harbinson's paper as a macroeconomic approach that outlines management's influence on economic development. Analysing the papers concerning this direction it can be emphasized some limitations, such as: one sided management approach, neglecting almost entirely the firm's management; low degree of compared management knowledge applicability. There are, also, contributions: the importance of this compared management new science in society's development and in extending the states relationships.

- *environmental approach*

This approach's main characteristic consists on considering managerial efficiency as a result of external factors influence. This approach, developed especially in the '60 is represented by R. Farmer's paper.

It's main limitations is pointing out the management's external factors role, that it will confer a passive position of influences reception, not corresponding to reality. However, this approach has main contributions to compared management development, because environment approach offers a larger analysis frame for international management phenomenons, than previous school.

- *behavioural approach*

This approach is the first one with an orientation to microeconomical level, to firms and organizations. All the papers included in this direction take into consideration the influence of variables as attitudes, values systems, behavioural models, and management philosophy on managerial practice and on management efficiency. Most of behavioural researches were achieved in USA. The authors concentrated on various aspects such as: national characters profiles and organizational behavioural variables relationships; managers attitudes and opinions regarding management processes and concepts; values systems and hierarchy needs description in a certain society.

This approach presents some limitations: ignoring firm's efficiency aspects; insufficient adaptation and validation of the research instruments on transnational investigations. There are some behavioural directions contributions, such as: emphasizing human's factor major role in management phenomenons in transnational approach.

- *open systems approach*

This type of approach is based on considering the organization as an open system connected to the environment. In these researches the organization is part of the environment and, as a consequence, its efficiency depends on environment's variables and organizations' activities relationships.

Negamdhi (1983) describes three types of environment: organizational, firms and society's environment. Organizational environment represents the whole internal variables, such as: size, technology, capital and other resources. This environment is controlled mostly by the managers.

Firms' environment includes suppliers, beneficiaries, distributors, shareholders, community, and government with influence on organization's efficiency. Society's environment includes the variables identified by R.Farmer and B.Richman of economic, technical, educational nature. These researches present as main deficiency variables insufficient description, which confers to the results a low degree of credibility.

- *cultural approach*

M.Ajiferuke and J.Boddeyn considered, in many studies, the culture as an independent variable to explain the differences between various nations managerial practice. Few authors belonging to this direction tried to describe the notion of culture until recently as a consequence of compared management development. As an example, G.Hofstede characterizes culture through four dimensions: individualism/collectivism; great/small power distance; uncertainty avoidance intense/low; masculinity/femininity. In one of the most complex, analitical and known compared management research, L.Kelly and R.Worthlly try to separate cultures' effects from other environmental factors.

Although the national content of culture is different from an author to another, approaches' essence is the same, considering the compared management in connection with culture's elements, which different dimensions from a country to another and inside the same national area, explain the differences between involved management systems.

Recently, cultural school's approach is based on firm and cultural phenomenon direction. As an example J.Collins and J.Porras, in a very interesting study, are dealing with organizational view's concept and practice, that reflects specifical firm's culture. Organizational view involves two major elements: guiding philosophy and material image.

Compared management school's main contributions consist on obtaining a large amount of information regarding various countries' management, which different characteristics are related to their "cultural differences", seldom in a very suggestive way. Compared management school, based on culture, holds in present a central position that generates it's knowledge necessity and importance and its applying possibility in management's theory and practice.

## **MAJOR MODELS USED IN COMPARATIVE MANAGEMENT**

**IOAN CONSTANTIN DIMA, CODRUȚA DURA\***

**Abstract:** Comparative management literature emphasizes the following models: Farmer-Richman Model (based on the assumption that environment represents the main factor whom influence upon management is decisive); Rosalie Tung Model (using the following variables: environment, or extra-organisational variables, intra-organisational variables, personal and result variables); Child Model (including the three determinative domains-contingency, culture and economic system-threatened as items objectively connected); Geert Hofstede Model (the main feature for the most popular comparative management model is represented by the five sides taken into account in this conception: individualism/colectivism, great/small power distance, intense/low uncertainty avoidance, masculinity/femininity, short/long term approach).

**Key Words:** comparative management model, environment, organisational climate, contingency, individualism/colectivism, great/small power distance, intense/low uncertainty avoidance, masculinity/femininity, short/long term approach.

Comparative management literature emphasizes the following themes, namely:

**Farmer-Richman Model.** As a typical product of environment school, Farmer Richman model can be considered the first formalized expression of comparative management, which is recognized and used by a large number of searchers, professors, and specialists in management domain.

The model is based upon four concepts: *relative managerial efficiency* related to firm's activities coordination (generally speaking); *internal management* concerning the process of human and material resources coordination; *exogenous constraints* relate to environment (these includes economic, educational, juridical, sociological variables); *absolute managerial efficiency*.

Considering that the environment represents the main factor that influence upon management is decisive, Farmer and Richman substantiate their model on the methodological assumption, which treats management such an environment dependent

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variable. According to Farmer and Richman, environment represents the independent variable; thus the other elements evolution depends on the environment changes. This hypothesis is evidently confirmed by the influences' directions exclusively orientated from environment towards firm's efficiency. Management's feed-back is totally ignored in this model. Without a doubt, such construction and functionality of the model denotes an unilateral view on the examined phenomenon which subestimates management role. It is this deficiency that made Scholhammer to be in right classifying the model "ecologist, a passive creature of external constraints".

In spite of the limits, Farmer and Richman's model utility cannot be denied, because the model is considered to be the first coherent construction upon methodological basis of comparative management which was largely diffused by the specialists in management area and played a catalyser role for their efforts. Besides, Farmer and Richman model has contributed to the general reconsideration of the major role played by the environment both in the process of management and knowledge worldwide.

**Negandhi-Prasad Model.** In order to elaborate their model, Negandhi and Prasad used the same group of variables as Farmer and Richman; however their goal was to eliminate the limits caused by a passive approach of management viewed such a dependent variable exclusively related to environmental transformations.

This model is based upon following methodological hypothesis: management plays an active role in economic and social background; management philosophy represents an independent variable possessing the same power of influence as the environment; in environment framework, the organization plays a central role, requiring a special concern (taking multiples interactions with the environment into account); differentiate approach of environment (the complexity of this variable makes the global approach inutilisable) which leads us to the following types of environment: *organisational* (including organisation's characteristic components-treated as input variables in comparison with comparative management-size, technology, organisational climate, human, material and financial resources of the organisation and so other elements which marks organisation's management); *instrumental* (including part of environment factors such as employees, suppliers, distributors, consumers, stakeholders, and other which appear as economical and political agenda with solid positions whom relations with management and organisation specialized on specific elements can be easily identified and estimated); *social* (indicating macrosocial environment of the country which includes the same general factors-political, economical, juridical and so on mentioned by Farmer and Richman).

Using this elements, Negandhi and Prasad projected a new model which shows a lot of advantages compared with Farmer and Richman model, such as: allows a realistic perspective upon the relation between management and environment; the model also fulfills conditions for a well-balanced and different approach of comparative management issues, mainly as a result of organisation's role reconsideration; the process of implementation materializes, as a rule, in higher results concerning profits, market share and so on.

**Rosalie Tung Model.** Rosalie Tung elaborates her own comparative model as a result of a throughgoing study of the most significant approach of this kind constructed by predecessors. Tung model stand out two of the major limits associated with preceding models: outbiding of certain type of variables practiced by every model or school-for example Harbison and Myers overbit economic development; Farmer and Richman-macroenvironment, and Hofstede and Porter-managerial attitude; failing in the process of profound examining of relationships between dependent and independent variables because majority of the models presents block variables, with no disclosure of causative links i.e. interdependence links.

R. Tung bases her model upon four categories of variables concomitant classified beyond two criterions: operation domain and nature of the variable. The variables included in the model are: environment or extra-organisational variables, intra-organisational variables, personal and result variables; between variables used in Tung model *organisational climate* is all-important because is related to perceived or experienced qualities appertaining to total configured environment, i.e. composed by intra and extra-organisational variables and managerial attitudes.

Taking into consideration the determination criterion for variables included in the model-*influence's nature*-it is possible to distinguish both a *direct influence* concerning the variables which affect majority organisational insider's behaviour but exerts a lower or even null influence on other individuals activating in the same environment.

Analysis of Tung model marks out the following aspects: perception formed by the organisation's components regarding the climate which they belong to as a result of intra-organisational variables and personal characteristics (influenced, on their turn, by extra-organisational variable); organisation climate modelling as a consequence of relationships between intra-organisational and result variable; influence exerted by organisational climate on the relationships between environment variables and result variables which are modeled.

Therefore, in this model, organisational climate represents an output variable or, in other words, a result variable marked by the other variable's evolution, which registered dissimilar parameters from one country to another. Organisational climate exerts, on its turn, a mighty and direct influence on result variables playing at the same time a key role in the process of economic activities' and managerial systems' functioning. Tung model pays a special attention to efficiency and as non-quantifiable efficiency related to management finality. The model in debate can be classified as a superior basis in theoretical and pragmatic approach of management issue facilitating trans-national knowledge transfer.

**Child Model.** In 1981, Britisher specialist John Child initiated a comprehensive analysis in that day –comparative management literature and identified six major problems in cultural approach: culture has generally an evasive definition; culture's boundaries do not necessarily coincide with national borders although frequently they consider that the reality; cultural factors are considered usually as explicable variables for managerial situations; organisational relevant culture

components have insufficient specifications (it is a fact that obstructs the process of identifying influenced organisational and managerial elements); conceptual and operational problems keep culture's evaluation as an unsolved issue; culture as an explicative variable for organisational and cultural evolutions competes with "a cultural contingency theory" (the affirmation is valid only for several contingency theories) and also with mode of production based economic theory.

As a result of analysis he had made and taking also into account specifications mentioned earlier, John Child proposed a model that Gordon Redding considered "more stringent than preceding approaches", being able to include the three determinative domains-contingency, culture and economic system- which were treated as aspects objectively connected.

Essential elements of the model can be hereby synthesized: culture is perceived as a set of normative and preferential conditions; avoidance culture reconsidering in the shape of a simple "black box" requires "aprioric" identification of each country's cultural characteristics (it is considered generally that cultural characteristics explain managerial and organisational differences and coincide either with national borders or with determined groups of people); a profound understanding of cultural influence on society is necessary in order to establish and persist in stimulating cultural "transmission"; industrialization/modernisation processes are argued by reference to nation's tradition and can manifest in multiple manners; advances in "society framework" approach of organisations must take into consideration especially two theoretical issues that guide comparative comprehensive of organisations' behaviour, i.e. social understanding of authority and cooperation senses and epistemologic issue that separates social culture and structure as distinct domains for thinking and acting, issue that, on the other hand, means no progress in clarifying role played by culture variable in the process of explaining phenomenon either through itself or as a social structure product.

Child's model was well-appreciated by the specialists comparative to precedent constructions, because of superior optic and complexity.

**Harold Koontz Model.** According to Harold Koontz, firm's activities can be divided in two distinct categories namely managerial activities and nonmanagerial activities; each one affecting one way or another organisation's efficiency. Management science, management functions, human and financial resources influence managerial practices, while firm's functions and environment constraints affects nonmanagerial practices. Both managerial and nonmanagerial practices influence organisation's efficiency due to managerial and nonmanagerial factors. Basically, Koontz model do not include managerial philosophy (managers' attitude in relation with employees, partners and so on), as an independent variable judged by other authors.

**Geert Hofstede Model.** Although Dutch specialist-Geert Hofstede's conception wasn't set into a formalized shape model, all the same it is obvious a high degree of specificity for the author which uses proper concepts (this principles constitute basis for his own research) quasiadmitted by the specialists. This essence of

Hofstede's comparative management model is represented by its tetradimension namely *individualism/ collectivism, great/small power distance, uncertainty avoidance intense/low, masculinity/femininity*. Together with Michael Bond, Hofstede completed later the four dimensions with the fifth one representing *short/long term approach*.

Studying individuals relationship intensity, Hofstede concluded that the richer is a country, more individualistic is its` citizen mentality or, in other words, the poor is a country, more developed is community spirit.

In individualistic societies, Hofstede revealed the following features: human relationships are limited (each individual is taking care of himself and his family); individual initiatives and achievements are major elements which confer strenghtness; each individual is in right to live a private life; being chief is an ideal situation and so on. A communitary culture is characterized, on its turn, by the following features: peoples cooperate one with each other focusing on group interests; each individual is born to keep his family alive and to support his clan to whom manifests great fidelity; group's identity, status and beliefs come first; group's member are differently treated compared with outsiders.

Fight for equity represents a constant effort in humanity's history as well as disparities between individuals in Platon's or Jean Jacques Rousseau's opinion. Culture can be divided and determined taking into account the attention paid to inequality issue in economic and social functioning framework.

Societies which try to reduce rich and power inequities show a small power distance while the other ones which institutes rich and power differences are so called great power distance society.

Uncertainty control represents cultural dimensions measuring tolerance degree to future events. The greater tolerance degree, the lower uncertainty control (affirmation is valid, of course, in reverse sense too). When uncertainty control is an intense one, people are stimulated to fight for influencing and controlling the future.

Roles` distribution related to sex criterion isn't the same in every culture. The more differentiated are roles, culture can be classified as masculin and more changeable are roles, culture is given femininity atribute. Thus, in masculin countries, "people lives for working" while in feminin countries "peoples works for living".

Hofstede's researches spread in 72 countries using a sample which contains over 116000 subjects revealed management's stringent cultural determination, which exerts a great impact on know-how successful transfer in management field from one country to another.

Recent comparative management model leads us, sometimes to paradoxical conclusions. Among the results obtained through comparative management studies implementation the following must be mentioned: Di Maggio and Powell achievements (1991); Whitley's paper discussing affair's solutions (1992), Europe Industrial Democracy Study Program (International Research Group-1981) which tries to join two disciplines-organisational behaviour and industrial relations. The study proved that "a cross-national interdisciplinary team composed by individuals having

different goals, political philosophies and research tradition is able to deliver a product which contribute to theoretical and public policy advanced“.

Two major projects, which incorporate different approaches from fields, like history, economics, organisation theory, philosophy, society and political sciences in order to survey economic boom in East Asia with to be also mentioned in the context. A connection between society's value systems, organisations and national achievements is supposed to exist. Project's basis were in American Art and Science Academy (1981) and Est-Vest Center (Dernberger, 1989).

According to Redding, lack of notable progress in the past 30 years is due to the following factors: absence of a common observation language and inevitable character of relativism; economic imperialism; mechanic causal model weakness and false assumptions used by his authors; causal complexity implications and reciprocal determination; special nature of comparative method and compromises involved. Redding demonstrates that using comparative method was simplist for the majority of researches registered.

In order to increase comparative management studies' efficiency is necessary to create a new model or to modify present models. New initiatives, such as those which belong to Burrell or Morgan worth to be supported. The authors mentioned had identified four important models for organisational analysis (radical humanist, radical structuralist, interpretative and functionalist) and said: “We strongly believe that each of these models can assert itself at organisational analysis level, if it is true“.

Redding proposals can be synthetized as follows: to improve comparative method through studying groups of phenomena or types; to survey general model types; to use new average theories emerging in domains like inter-cultural relations, to advance in the field, and perfect models, to improve present Hofstede theory by analysing social origins of his value groups and, concerning results, to present in an explicit mode, their organisational consequences; to end enclosed system based on positivistic report; to stimulate complex construction models as Child's type; to avoid culture consideration as unique cause and to judge culture as a necessary but not sufficient determinant of social effects; to make efforts in ethnology field concerning crucial links between mental component of culture and organisational behavioral elements, emphasizing on processes and meanings.

## **SOME CONSIDERATIONS REGARDING THE COMPARED MANAGEMENT STUDIES CONTENT**

**IOAN CONSTANTIN DIMA, LILIANA IVĂNUȘ\***

**Abstract:** A compared management study involves the following stages: establishing the research's goals; specifying the themes; sampling; translating the materials; measuring and instrumenting the management processes; conducting the study to get answers to similar situations in different cultures; information analysis and interpretation; applying the research's results.

**Key Words:** parish studies, ethnocentric studies, geocentric studies, synergic studies, theoretic and empirical studies

Every compared management study presents some characteristics which it differentiate from a general management study, such as: higher complexity, involving management elements from different cultures; using equivalence elements in conceiving and working out the study; high and diverse volume of work, for subjects' teritorial dispersion; high level of costs generated by the work volume and the investigated geographical zone size; studies' difficulty, which can be counteracted only by a rigorous planning and organization of the research.

In order to work the compared management study out, Nancy Adler identified the following stages: establishing the research's goals; specifying the themes, at this stage it will be answered the questions: "Is there the study theme common to all the cultures?", "Does it have the same meaning for all the investigated cultures?", "Does it have the same importance for each culture?"; sampling, which involves establishing the investigated cultures number, cultures selection, illustrative sample option and ensuring cultures independence as part of the sample; translating the materials; measuring and instrumenting the management processes, at this stage it must consider the cultural variables equivalence; conducting the study to get answers to similar situations and stimuli, in different cultures; information analysis and interpretation; applying the research's results.

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The methods and techniques used in working the compared management studies out, although their diversity as the issues that involve them, can be divided in two categories: regular management studies methods and techniques; specific compared management methods and techniques, characterized by high complexity and specificity, such as: non-metrical techniques (S.Ronen and O.Schenkar show that the most popular are ALSCAL, created by Takane, Young and DeLeeuw and SSA, Smallest Space Analysis formulated by Gutman and Lingoes) and pluri-cultural evaluation test (TEMPLATE).

Regarding the methods and techniques involved in working the compared management studies out, we can identify the following categories:

#### **Parish studies**

This kind of research represents a study created and achieved into a culture by a research worker belonging to the same culture, ignoring the other cultures. Working this type of study out starts from the premise of all industrialized countries managerial similarity. Most of the parish studies authors think that their internal researchers' results have universal validity. In reality, those results can be used only in the culture they are part of applying in different cultures involves conclusions' verification.

Because these studies won't present any comparability, many specialists don't include them among compared management studies. However, as R. Farner and B. Richman mentioned, most of the studies were worked out under the management studies generical title without taking the environmental conditions into consideration. These studies are limited both theoretical and practical, limits, which are less, accepted by the management research workers.

#### **Ethnocentric studies**

Like the parish studies, the ethnocentric studies were worked out at most in the USA and then were repeated in other cultures. Their main characteristics consists on the fact that original researches that had been carried out into a culture by research workers belonging to the same culture were reproduced into a second culture.

The research workers are interested in extending to other cultures theories applicables in their own culture, in testing the assumptions from a culture to another and, in this way, to extend conclusions' validity.

In H.Triandis opinion, culture is used to enrich research because: the second culture represents a non-existent analysis frame in research workers' own culture; the second culture may present different behavioural models.

The ethnocentric studies are the first to examine the similarity between the cultures, extending their theoretical researches into a second culture.

Standardization intends to maintain identically every aspect of the research except language. As possible, the researchers are led to the same way, using the same instruments and methods in both cultures, ideally these researches representing versions of the same project, expressed in two languages: one spoken in culture A, in which the initial study is in progress and the other in culture B, in which the study replied. Working out ethnocentric studies starts from the premise that standardization is synonymous with equivalence, which is wrong.

The similarities revealed by these studies are considered proofs of the studied phenomenon universality, because the mistake to believe that two cultures represent a sufficient sample to prove the universality is made, but the differences are based on study's managing deficiency in the two cultures or on the second culture's inferiority. However, the ethnocentric studies can be considered as the first inter-cultural management researches. But they have to represent only one of the ways to know the cultural impact on the organizations.

#### **Policentric studies**

The main characteristic of the policentric studies consists on describing managerial and organizational practice in different cultures. Their goal is to answer the question: "How are the managers leading and how are the subordinates behaving in the X country?". These studies are leading to theories applicable only to a certain studied culture, without looking for managerial processes and systems compatibility to find similarities and differences. Known as "Malinowski's dilemma", a transculturally comparison of different institutions is a wrong attempt, because the research worker would try to compare incomparable things.

A.Negandhi describes cultural oneness like equifinality, as there is not only a way to do certain things, which applied to management leads to the idea that managers can achieve same goals by using different methods. So, as part of these studies, the accent is set on specificity and not on similarity.

From research workers' point of view, the methodology used in working policentric studies out involves: a more inductive than deductive approach; the tendency to minimize research worker's impact on the studied culture.

The policentric researches are often criticized for being more descriptive than estimative. These kinds of studies' authors are frequently criticized for equifinality and cultural relativity. As far as cultural relativity is concerned, meaning that there are many ways to achieve certain managerial goals, it is accepted by the majority management specialists. Concerning cultural relativity, according to which no cultural specific way is superior to another, this premise is not accepted by all the specialists. The policentric studies represent a counterweight for ethnocentric studies.

#### **Comparative studies**

The most representative for compared management, the comparative studies emphasize as well the differences as the similarities between two or more cultures management processes.

The comparative studies answer the following type of questions: "Which are the differences between culture A and culture B?" or "Which are the areas with similar organizations' politics and strategies in all the cultures and in which there have to be different?". As part of these studies some processes and methods universality is taken into consideration only when these processes, methods, theories are verified in all the cultures from the research sample.

Comparative researches must elucidate the following dilemmas: What is culture?, Is the studied phenomenon specific or universal?, How can the research worker not to influence the research by belonging to a certain culture?, Which



research's methodological parts have to be identical and which are equivalent in different studied cultures?

Comparative researches must go through all specific stages for working a complex comparative management study out, such as: goals aiming, theme selecting, sampling, translating, measuring and instrumenting, research managing, data analysis and conclusions drawing.

### **Geocentric studies**

Geocentric studies contain researches of the multinational companies' leadership, without the intention to compare some national organizations from different cultures. Working these studies out starts from the hypothesis of organizing and managing models' universality. Also, the geocentric studies refer to multinational organization management problems and in special to the aspects of companies components' territorial dispersion. The methodology is the same as that used for the general management studies from every culture, except the distance between the branches.

Most of the case, geocentric studies are researches with deep applicable character which have in view to set methodologies for improving managers work at the disposal of those who ordered them.

### **Sinergic studies**

The main issue of sinergic studies is to understand the models of relationships and theories applicable to multicultural colectivities, which have the same goals. Sinergic studies evidentiate the behaviour of: multinational companies' personel; international work persons from national companies; different cultures' persons from national companies.

These researches look up to understand how and where: to use cultural specific models of management and organizational; to use management and organizational models common to all involved cultures; to create universal managerial and organizational models based on identical similarities and differences which applied in all the cultures, to rise managerial efficiency.

If other types of studies are describing the cultures, sinergic studies are based on cultures' interactions understanding. Also, these studies look up to create new management and organizational models and to assure the best balance between management's specific and universal approaches.

Changing the accent from describing and comparison to cultural interactions represents a novelty into management problems' intercultural approach.

Lately, many studies are based rather on political than managerial elements. Thus, organizations and companies from all the countries are getting more and more similar and personel behaviour has the mark of cultural specific. It has been estimated that sinergic studies importance will rise in the future.

### **Theoretic and empirical studies**

Compared management approaches, as Hans Schollhammer says, can be divided, from a methodological point of view, in two categories:

➤ *theoretic studies* which contain concepts, models, conceptual structures or types and can be used to develop certain hypothesis through two types of methodological approaches: one of them based on conceptualization and deduction materialized in compared management models, structures or types (these elements are used to discover, to explicitate and to estimate systematically the others based on synthetizing the collected information concerning managerial processes and relationships in international comparative prospect (are based on systematizing and grouping the outpointed information to outline this field's study knowledge into a comprehensive and generalized view);

➤ *empirical studies* deal with fact information which describes, analyses and estimates managerial phenomenon by using the unidimensional techniques, in a restricted field and approaching a small number of problems and the multidimensional techniques, approaching many fields and related problems.

Theoretic and empirical studies can be backed in the following concepts: describable, based on presenting primary data and empirical verified facts, without paying too much attention to interdependences and cause-effect analysis; analytic-interpretative, which takes into consideration information's estimation and interpretation; normative-generalizing, based on essential information used to generalize or formulate normative or general prescriptions.

#### **L.Sechrest studies**

L.Sechrest (1977) identifies three types of researches: type I. studies the general impact of the culture on organizational behaviour; type II. Studies the specific aspects of the culture with varied effects using the psychological processes as main research's issue; type III. tends to study the culture itself and not to concentrate on its organizational effects.

The author shows that most studies are type II. studies. Type I. studies have to compete with alternative theories, demanding different primary determinants. Using these types, Bhagat and McKuiad (1982) advise to start with type I. for achieving certain prospectives, then, for a better knowledge, to pass to the type III. and after that to type II. for a penetrating understanding of cause and effect.

The issue of such an approach is to separate the studied fields because each of them has its own research criterion that the results should be based on some own methodologies and disciplinary characteristics.

## THE COMPARATIVE CULTURE OF ORGANIZATION

IOAN CONSTANTIN DIMA, MARIANA MAN \*

**Abstract:** Culture is always considered as a collective phenomenon and all individuals living in the same social environment accept it, at least partially. Culture as collective programming of mind distinguishes the members of a group from another. Corporate culture must be in accordance with national culture in order to insure a proper functioning for the organization.

**Key Words:** individual mental programmes, collective programming of mind, cultural believes, corporate culture.

The globalization of the business world gives special opportunities for firms all over the world. However, co-operation between firms from different countries or different cultures did not always lead to the anticipated results because differences concerning partners' way of thinking were neglected. Knowing the variety of thinking structures facilitates mutual understanding between persons involved in activities that outrun the borders of a country or the limits of a culture.

During his or her life each individual gains a certain way of thinking, feeling and behaving. Geert Hofstede defines these models of thinking, feeling and behaving as individual mental programmes with roots in the social environment where the individual was brought up and gained life experience. Programming begins within the family and continues in his or her environment, at school, in youth groups, at work and in life community.

The word culture is the common term that defines this programming and it may have more meanings; therefore we need to define it. In most languages culture generally refers to civilization or refinement of the mind and, particularly, to the outcome of this refinement represented by education, art and literature. This is the limited meaning of the term. In the view of anthropologists the word culture has a larger sense, including activities presumed to polish the mind as well as behaviours and

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attitudes that characterize every day life, such as: the way of greeting, eating, expressing emotions and keeping a certain distance between each other.

Secondly, culture is always considered as a collective phenomenon and all individuals who live in the same social environment accept it, at least partially. Thus, Geert Hostede describes culture as a collective programming of mind which distinguishes the members of a group from another.

Basically, social environment means an adjustment to the surrounding physical and biological environment. Customs and traditions that ensured the survival and evolution of mankind were handed down from one generation to another. Over the years, people forgot about the source of folk wisdom and accepted it in the form of general principles of life. In this way, taboos and cultural values appeared providing information to people about the accepted behaviours in the society they live in. Individuals are influenced by the principles of their community and tend to ignore or reject everything that is against their cultural beliefs.

When a person finds himself in the front of a changing process, culture remains in the shadow of new discoveries and realities. For example, scientific and technical development exceeded by far the common cultural baggage. One effect of the accelerated changing process is represented by the appearance of cultural void. However, culture facilitates our day-to-day existence, offering standard solutions to different problems, establishing models of interperson relationships and methods of maintaining cohesion and consensus within the group.

In order to analyse and classify different types of culture, various modalities of approach based on the ten characteristics of culture may be adopted. We must emphasize the fact that the classification of different types of culture is based on an unlimited number of variables.

These characteristics are:

- perception of identity and space, meaning appreciation and self confidence, may take diverse forms in different cultures and it can materialize into a humble conduct in certain regions or into an exultant behaviour in other regions;
- communication and language is materialized into a system of communication, verbal or non-verbal and it differs from a group to another;
- clothes and appearance, namely: cloth and jewelry, the lack of them, as well as tattoos, depend on the type of culture they belong;
- eating customs are praised by the way food is selected;
- time and its perception also differ from a culture to another; for some people time is a precise matter, for others it is relative;
- the system of interperson relationships indicates that each culture has the mission of establishing human and organizational relations depending on age, status, fortune, power and wisdom; family unity is the best expression of these characteristics and its organizing may have different forms, from large to reduced forms;
- cultural values and standards are differently divided from a type of culture to another, alike the system of priorities;

- believes and attitudes are materialized into the main themes of human superstitions and in the way they influence individuals' attitudes regarding other persons and themselves or events from the world they live in;
- mental processes are the result of the fact that some types of culture increase the development of certain mental abilities neglecting others; therefore, there are huge differences concerning thinking and learning abilities among individuals;
- customs and working processes are other methods of analysing the culture of a group and they are represented by the attitude a person has towards work, ruling working style, division of labour, working customs and procedures as well as work stimulating and encouraging methods.

The ten general characteristics of culture are just elementary models of evaluating a certain culture. They do not take into consideration all cultural aspects and do not represent the only method of analysing a culture. However, these characteristics enable the study of cultural communities systematically, including the research of certain subcultures within a national culture. All aspects of a culture are interdependent; any change suffered by an element has an impact on the entire system. This is the risk of dividing a complex notion like culture, even if the general perspective remains unmodified.

As far as the characteristics of culture are concerned, specialists have defined a number of systems that enables culture analysis. As a result, it is obvious that techniques of an organizational development must take into account local cultures in order to be effective (Preston-1987; Tainio, Santalainen-1984; Jaeger-1990; Blunt-1988; Feldman-1986; Hayes, Prakasam-1989; Rigby-1987). Their American origin do not deny their utility in other cultures as well, but a certain adjustment is necessary (Jaeger-1990). Models that make possible the understanding of such adjustments are available (Berry-1980; Harris, Moran-1979; Zeira, Adler-1980) but empiric testing and the improvement of these models still are in the highlights.

The same conclusion can be obtained by using the term corporate culture. There are some powerful arguments underlining the idea that corporate culture must be in accordance with national culture in order to insure a proper functioning for the organization (Schneider-1988; Jelinek-1986; Soeter, Schreuder-1988); there are also certain evidences that provide empiric support for these arguments (Lincoln, Hamada, Olsen-1981; Ferris, Wagner-1985; Misumi-1984). Moreover, there are some significant studies concerning the culture of the organization (Ouchi's and Jaeger's studies regarding the Z type as an adjustment for other types-1978).

In order to improve the concordance between national cultures and corporate cultures some issues must be settled so as to encourage practical activities. Cooke and Rousseau (1988) and Hofstede (1990) had a major contribution in this area. Research carried out by specialists concerning the theory of cross-cultural behaviour of the organization came up with a number of different middle theories better explained and only one universal theory reaching an extended empiric stage. However, the studies form this area need some theoretical improvements, such as: increasing the middle level; developing an alternative theory and improving it.

## GUARANTEE TYPES FOR BANK CREDITS

OANA DOBRE-BARON\*

**Abstract:** The paper presents an overview of the main guarantee types, which could be accepted by a bank, for credits given to economic agents that apply for those in view of covering their financial deficits.

**Key Words:** bank credit, credit guarantee, mortgage, security.

An important moment in the process of making a decision by a bank to credit is the identification and verification of the guarantees presented by the applying economic agent. The guarantees are an additional assurance for the reimbursement of the credit given to the economic agent in due term and for the payment of the afferent interests along with the current cashing resulting from production sales. It is to be mentioned that the minimum value of the guarantees accepted by commercial banks, that make investments in credits, will be in all cases at least equal to, or higher than the largest liabilities of the person indebted, liabilities made up of the credit plus the interests owed, up to the first installment of the reimbursement from the credit.

### TYPES OF GUARANTEES

The guarantees that can be accepted by a bank for credits allotted fall into three large categories:

#### 1. - Real Guarantees

Real guarantees are those guarantees, which involve individualized assets to guarantee the credit. They are in the form of *mortgages* and *securities*. The *mortgage* is a real guarantee that does not involve dispossession of the person constituting it; the mortgage operated by the bank in relation with its clients is a *conventional mortgage*, because it is based on the agreement concluded between the bank and the constitutor of the mortgage, which could be the debtor or a guarantor, natural or legal person. The object of a mortgage is only present real estate, not future one, being in the possession of the constitutors and in civil circuit. According to the Romanian Civil Code, only

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immovable property could form the object of a mortgage, that is buildings of any kind and lands.

The mortgaged asset is calculated in the guarantee of the credit, function of its insurance value registered in the financial bodies, for assets belonging to natural persons, or function of the value registered in the accountancy records, in case of real assets belonging to legal persons. When the constitutor, natural person, appreciates that the value of the mortgaged asset is higher than the value registered in the accountancy records, he may request a reassessment of the asset. This may be done by an authorized technical body of specialty, which establishes the real value, corresponding to an insurance for the new value.

When accepting real chattels as guarantee, considering their low immediate liquidity degree, and their long-term validity, the bank should take into account the following: investments in property market are risky, and the long-term market value of a real property is determined by the *expected net operational income* and the *profitability rate*. These can be expressed by the equation:

$$K = K_f + K_m + K_p \quad (1)$$

Where:  $K_f$  – is the vouched rate (no risk);

$K_m$  – is the “charge” for business risk;

$K_p$  – is the charge for inflation risk.

For a better documentation on real estate guarantees, the “financial flux analysis” afferent to this type of guarantee should not be neglected, since these assets (real property) of certain economic agents generate two potential sources of financial flux: *annual operational flux* (FFa), equal to the brut income from rents, out of which the operating and financing costs are deducted, before or after taxes are levied and the *potential flux resulting from the sale of the asset* (FFB), equal to the market value of the respective asset.

For the mortgaged assets to be accepted as guarantees, they should meet the following conditions:

- they should be in the property of the constitutor, in civil circuit, and they should be the object to selling - buying;
- the mortgaged chattels should have a safe market;
- they should be placed in areas of interest for an as large as possible category of potential buyers;
- the building should be liable to be equipped and adaptable for multiple use;
- they should be insured in an insurance company all along the duration of the loan contract, and the right of damage compensations should be transferred to the bank.

The following conditions should be met for the legal constitution of a mortgage:

- existence of a document(contract) certified by the Notary Office of State;
- the mortgage should be registered in the special register of transactions and inscriptions, which preserves the mortgage right for a 15 year period from the registration;

- the person constituting the mortgage should have a full capacity of exercise, that is the natural person should be at least 18 years old, and the legal person should be legally constituted and should have in its possession the mortgaged asset.

*Security* is a contract accessory to credit contracts whereby the debtor or the guarantor, as applicable, delivers the bank an immovable asset, to guarantee the loan. In accordance with the Romanian Civil Code and Commercial Code, only immovable assets, either substantial (products, merchandise), or insubstantial (liabilities, deeds of liabilities, shares etc.) can be subject to security.

For these assets to be accepted as guarantees by the bank, they should be in civil circuit, that is they should be subject to selling – buying. Securities can be of two types:

*Security with dispossession* – also called “*pawn*”, involves dispossession of the movable asset of the constitutor with its deposition in the bank; this type of security is materialized by a contract concluded between the bank and the constitutor. The object of this type of security can be a movable asset of high value and small volume (precious metal and stones, paintings, sculptures, jewels).

*Security without dispossession* – it does not involve dispossession of the assets delivered as guarantee by the constitutor. This type of security is only applicable to products of the soil, rooted or harvested already (cereals, technical plants, oleaginous, leguminous, beans, vegetables, potatoes, melons, fruit and fodder). These products can only be taken as guarantees when the following conditions are met: a real possibility to obtain them and an assured market.

Security without dispossession is materialized in a contract concluded between the bank and the constitutor. This contract will be registered in the registers of a Notary Office of State within the area of the secured asset.

The two forms of securities shall meet the following conditions in order to be valid:

- the constitutor, natural or legal person, the person credited or the guarantor, will be the owner of the secured asset, and will have full capacity of exercise;
- the secured assets will be in civil circuit, being subject to selling – buying;
- the secured assets will be insured in an insurance company all along the duration of the loan contract, and the right of damage compensations will be transferred to the bank;
- the security contract will mention the amount for which the security is constituted, the type and nature of assets secured and other identification elements.

## **2. – Personal Guarantees**

Personal guarantee means an engagement assumed by a natural or legal person whereby it binds itself to execute the obligation of the debtor (borrower), in case this is not executed by the borrower; this guarantee is also called *bail bond*.

This type of condition is valid in the following conditions:

- existence of a contract, distinct from the loan contract whereby a natural or legal person – as applicable – assumes to guarantee the obligations of the borrower with its entire patrimony;



- the bailer will be a person with full capacity, solvable, with a sufficient patrimony, having its premises or domicile in the area of the county where the bank unit giving the loan operates.

This guarantee is important because along with the debtor an other person's liability is involved with its entire patrimony. In this it is absolutely necessary to verify the situation of the guarantor's patrimony. According to the Romanian Civil code this type of guarantee allows the bank to directly sue the bailer, without prior suing of the principal debtor being required. Natural or legal persons falling into the categories given below cannot be accepted as bailers:

- no full capacity of exercise( natural persons younger than 18 years old and legal persons illegally constituted);
- their patrimony assessed by specialists does not cover at least 10% of the guaranteed credit;
- their patrimony is affected by other obligations.

A specific way of materialization of the bail bond is the *bank certificate of guarantee*, representing in fact the guarantee given by the bank in favor of a natural or legal person for the credit contracted.

### 3. – Other Guarantees

The following fall into this category:

General security is the most general guarantee, being in the same time a *common security at the disposal of all the creditors*, all having an equal position as to the assets of the debtor upon which distress was levied. This type of security does not confer the creditor bank any privileges (priority) conferred by real guarantees, this being the reason why the risks of the bank do not protect the bank against the risk of insolvency of its debtor. General security includes all movable and immovable assets within the patrimony of the borrower, including the monetary availability achieved by any activity; to be mentioned that the latter, even if brought up as guarantee, can be given away by the borrower.

Deposits in Lei or foreign currency represent the monetary availability in the accounts of the borrower or of other natural/legal persons with accounts in the bank. They may constitute guarantees when credits are applied for by customers if this availability is constituted in distinct deposits, created in view of exclusively guarantee loans. Deposits created in view of guaranteeing a credit may be constituted by both the borrower and a third party guaranteeing the borrower. Deposits for guarantees are constituted based on contracts of security with dispossession, the object of guarantee being monetary availability in Lei or foreign currency of the borrower or the endorser.

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## **LE MILIEU THERMIQUE-FACTEUR DE LA CONDITION DU TRAVAIL**

**SABINA IRIMIE**<sup>1</sup>

**Résumé:** L'ergonomie a trouvé des champs d'application à des domaines autres que le travail professionnel : ainsi se développent une ergonomie des bâtiments et progressivement, par l'élargissement de l'ergonomie du poste de travail, une ergonomie des systèmes. Elle concerne alors les interactions des différents éléments humains, matériels et d'ambiance. Elle tente aussi de définir la répartition des tâches entre l'homme, machines et les conditions de fonctionnement optima de cet ensemble d'éléments et la charge de travail pour opérateur. L'apport de l'ergonomie se situe, aussi, dans le domaine des méthodes d'analyse d'un système. Dans cet ouvrage on présente quelques éléments relatifs de milieu thermique - composant de la condition du travail.

**Mots clé:** l'ergonomie, le milieu ambiant, les milieux physiques, le milieu thermique, les moyens de protection .

### **1. INTRODUCTION**

L'ergonomie marque l'irruption, dans l'industrie, de la science de l'homme, avec tout ce que le mot science comporte de rigueur méthodologiques et, quand il s'agit de sciences humaines, d'exigences déontologiques. Pendant deux siècles, l'entreprise fut le domaine réservé de la science de l'ingénieur. Mais, voici que dans le système du travail, l'intérêt se déplace, maintenant de la machine vers l'homme, vers ses exigences et ses aspirations. Cette science apporte un éclairage original aux problèmes humains et sociaux du travail contemporain, qu'il s'agisse des conditions du travail, de la fatigue professionnelle, des incidences sur le travailleur du progrès des techniques.

L'ergonomie est une étude multidisciplinaire du travail humain entreprise pour remédier à l'inadaptation industrielle. Trois notions sont essentielles : le travail humain, l'inadaptation industrielle et la multidisciplinergie ergonomique.

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## **2. LES MILIEUX PHYSIQUES AMBIANTS**

L'homme vit et travaille dans un environnement qu'on peut caractériser par des mesures physiques : milieu thermique, milieu sonore, milieu lumineux, milieu chromatique.

Il ne peut conserver l'intégrité de son organisme que si ces milieux physiques ne dépassent pas certaines limites, et l'ergonomie, dans sa perspective d'hygiène industrielle, s'est attachée à préciser les niveaux dangereux : niveau d'intensité sonore qui entraîne une lésion de l'appareil auditif, températures qui provoquent des lésions locales, des troubles généraux. Les relations entre l'homme et son travail peuvent être perturbées par ces milieux physiques: un bruit élevé qui n'a pas d'incidence sur l'appareil auditif gêne un travail d'attention; une température de l'air élevée provoque une charge supplémentaire pour un organisme en activité physique.

L'ergonomie s'est alors attachée à déterminer les caractéristiques optimales de ces milieux suivant les types de tâches exécutées. Enfin, le milieu physique est source d'informations pour l'homme au travail: un bruit peut renseigner sur l'état de fonctionnement d'une machine, un éclairage peut déformer, masquer ou faire apparaître un détail d'un objet. L'ergonomie tente alors de définir ces ambiances physiques en tant que sources d'informations ou facteur favorisant la détection d'informations.

Les mesures des ambiances physiques en ergonomie sont interprétées dans ces trois perspectives. Elles préparent alors l'utilisation de technologies qui s'occupent de maîtriser ces ambiances: insonorisation, éclairagisme, climatisation. Le choix des moyens matériels à mettre en oeuvre dépend ainsi directement des études ergonomiques préalables.

## **3. MILIEU THERMIQUE**

Il existe de nombreux postes de travail soumis à des contraintes thermiques importantes : travail à l'extérieur, en zones climatiques froides ou chaudes, travail dans des locaux non climatisés en fonction d'exigences techniques –textile, alimentation. Leurs effets sur l'homme au travail ne sont pas négligeables. Deux objectifs essentiels sont alors poursuivis par l'ergonomie : définir les limites extrêmes à ne pas dépasser et déterminer les caractéristiques d'une ambiance dite <de confort>.

### **3.1. Thermorégulation de l'organisme**

L'organisme est producteur de chaleur et pour se maintenir à une température à peu près constante il doit échanger de la chaleur avec le milieu ambiant. Les échanges de chaleur se réalisent dans le suivant quatre modalités :

-par conduction : l'organisme est en contact avec un milieu immobile : les vêtements serrés, les chaussures, les outils ou objets manipulés provoquent des échanges par conduction ;

-par convection : l'organisme est en contact avec un fluide en mouvement : l'air libre, la couche d'air entre les vêtements et la peau, l'eau, participent aux échanges par convection ;

-par radiation : ce sont les échanges par radiations électromagnétiques ; tous les corps émettent et absorbent de l'énergie sous cette forme. La peau humaine a un très fort pouvoir d'émission et d'absorption dans les zones du spectre des infrarouges ;

-par évaporation : en s'évaporant, l'eau absorbe une certaine quantité d'énergie (580kcal/l évaporé). La sueur qui ruisselle, qui reste à l'état liquide, ne provoque pratiquement pas de perte de chaleur pour le corps humain ; au contraire, par l'évaporation de la sueur, l'organisme échange une quantité importante de chaleur avec le milieu ambiant.

L'organisme dispose d'un système de thermorégulation qui lui permet de conserver une température constante de sa partie interne et des centres nerveux, lorsque sa production de chaleur et les conditions d'ambiance varient entre certaines limites. A l'aide d'informations données par des récepteurs, au chaud et au froid, de la peau et très probablement du cerveau et d'un centre régulateur hypothalamique, l'organisme peut, soit augmenter sa production de chaleur pour compenser des pertes trop importantes (milieu froid), soit augmenter ou diminuer ses pertes de chaleur (milieu froid et chaud).

Dans la zone de froid, l'organisme diminue le transport de chaleur des parties profondes à la peau par vaso-constriction dans les territoires périphériques : la peau et les tissus sous-jacents se refroidissent, la température cutanée peut ainsi descendre à 28°C ; il augmente sa production de chaleur par des contractions musculaires, soit volontaires, soit réflexes (frissons thermiques). Dans la zone de chaud, l'organisme accélère le transport de chaleur des parties profondes vers la peau, par accroissement de débit sanguin et vaso-dilatation des vaisseaux périphériques. Il accroît ses échanges de chaleur avec le milieu ambiant par augmentation de la sudation.

En zone tempérée, le simple jeu de la vaso-dilatation ou de la vaso-constriction périphérique suffit à maintenir la température du noyau constante, en modifiant les conditions d'échanges par convection et conduction entre la peau et le milieu ambiant.

### **3.2. Limites des activités en ambiance chaude**

Le travail physique augmente la production de chaleur de l'organisme ; en ambiance chaude la déperdition de chaleur est limitée, l'organisme doit alors satisfaire des besoins accrus d'irrigation sanguine dans les territoires musculaires actifs, mais aussi dans la peau et les tissus sous-jacents. Les effets cardio-circulatoires sont plus précoces et plus importants qu'au repos lorsque l'ambiance thermique s'élève. La sudation est augmentée mais elle n'est efficace que si la sueur peut s'évaporer (condition liée à la température, au degré d'humidité et à la vitesse de l'air).

On constate dans le travail physique à la chaleur : une augmentation du débit sanguin et donc de la fréquence cardiaque, une augmentation de la sudation et donc de la perte de poids (celle-ci pouvant atteindre 5 à 6 % du poids du corps lorsque les

conditions sont extrêmes) et de sel, une augmentation de la température de la peau qui tend à être égale à celle des parties internes et une augmentation de la température centrale. Aussi, la capacité de travail musculaire est diminuée, le rendement décroît, l'activité mentale est perturbée : trouble de coordinations sensori-motrices, temps de décision allongé, vigilance abaissée.

Evaluation de la contrainte thermique chaude par la détermination de l'indice empirique W.B.G.T.(norme AFNOR X35-201) est facile à déterminer dans le milieu industriel et elle est représentatif de la contrainte thermique à laquelle un homme est soumis.

Les limites tolérables, sans risque grave d'accident pour l'organisme, sont fonction de l'état de la personne : de sa santé, de son âge, de son acclimatement. Celles actuellement admises par différents auteurs, pour des personnes en bonne santé, peuvent être définies par des valeurs maximales :

- de sudation : 1kg/h, pas plus de 5 l par jour ;
- de température rectale : augmentation maximale : 1,2°C ;
- de fréquence cardiaque : 35 à 40 pulsations au-dessus du niveau de repos en ambiance tempérée, cinq minutes après l'arrêt du travail (Metz). Au-delà, des accidents peuvent apparaître(coup de chaleur).

#### **4. LES MESURES**

La mesure des paramètres physiques qui définissent une ambiance thermique permet d'en prévoir les effets sur les travailleurs et de proposer les moyens de les atténuer. La mesure de paramètres physiologiques permet de mesurer la charge réelle pour le travailleur et de contrôler les effets des aménagements sur celle-ci.

##### **4.1. Mesure de l'ambiance thermique**

Quatre paramètres la définissent :

- la température sèche, elle est mesurée à l'aide de thermomètres classiques ;
- la température humide, dont on peut déduire la pression partielle de vapeur d'eau dans l'air ; elle est mesurée à l'aide de psychromètres ou d'hygromètres ;
- la vitesse de l'air, mesurée à l'aide d'anémomètres ;
- la température de rayonnement qui caractérise le flux de chaleur radiante ; elle est mesurée à l'aide de thermomètres à globe noir ou de stéradiomètres.

Des cartes d'ambiance thermique sont établies par des mesures à différents endroits du lieu de travail. Les modifications dans le temps sont contrôlées par des mesures successives.

##### **4.2. Mesure de la charge thermique**

La mesure de la fréquence cardiaque rend compte de manière cumulée de la charge physique et de la charge thermique. On peut séparer ces deux effets en

pratiquant des mesures en ambiance tempérée. Les facteurs interindividuels de variation sont essentiellement : l'âge qui limite la charge de travail physique admissible mais aussi la charge thermique ; le sexe – le système circulatoire du petit bassin et des membres inférieurs de la femme supporte difficilement des augmentations de débit sanguin ; l'état de santé et l'acclimatement : celui-ci est un processus physiologique d'adaptation très important qui accroît la tolérance aux ambiances chaudes. Il se manifeste par une capacité de sudation augmentée (mise en jeu plus précoce, débit plus élevé, durée plus élevée et teneur en sel plus basse), une température centrale et une fréquence cardiaque moins élevées pour des mêmes conditions de travail et d'ambiance. Par une exposition contrôlée et temporaire mais répétée, l'acclimatation progresse rapidement (vingt premiers jours) puis, plus lentement. Mais elle est fragile et se perd en quatre semaines si elle n'est pas entretenue.

## 5. LES MOYENS DE PROTECTION

Ils se situent à deux niveaux :

♦ soit utilisation de moyens individuels de protection ou organisation adaptée du travail, si les conditions thermiques ne peuvent être changées ; les moyens de protection individuels sont de nature différente suivant les caractéristiques de l'ambiance :

-combinaison complète pouvant être réfrigérée par circulation d'air, gants et chaussures isolants dans le cas de contact avec des objets chauds. Il est sûr que ces moyens entraînent des gênes et des limitations dans l'exercice du travail, dont il faut tenir compte ;

-organisation du travail avec pauses courtes et répétées (plus nombreuses après le repas de midi du fait de la digestion et en fin de journée de travail), salles de repos climatisées, atténuation de la charge et des cadences de travail, possibilité de boissons abondantes permettant de récupérer l'eau perdue par la sudation.

Les mesures et les moyens de protection, en Roumanie sont établis de Loi 90/1996 - de la protection du travail et d'Ordonnance 99/2000.

♦ soit changement des conditions thermiques par isolement des sources de chaleur et climatisation ; dans le deuxième cas la climatisation des locaux tend à rendre l'ambiance ~~très~~ confortable.

La notion d'ambiance de confort repose sur un critère subjectif ; il a été proposé plusieurs échelles de températures qui rendent compte de l'ensemble des caractéristiques physiques d'une ambiance thermique ; il a été ainsi construit une échelle de température sèche résultante (Missenard) en relation avec un modèle physique des échanges du corps humain, une échelle de température opérative (Gogge) en relation avec des critères physiologiques, une échelle de température effective (Yaglov) en relation avec des critères subjectifs de sensation (Fanger). Les imperfections de ces échelles sont liées à la complexité des phénomènes qui participent à la sensation subjective d'une ambiance : même si ces échelles intègrent plus ou moins

les différents paramètres physiques, elles ne peuvent intégrer que très imparfaitement l'ensemble des effets physiologiques et psychologiques. Celles-ci varieront d'ailleurs suivant l'intensité du travail physique, mais aussi suivant l'âge et le sexe.

La climatisation tendra donc à amener une ambiance thermique à des valeurs correspondant à ces zones de confort. Cette climatisation pourra s'effectuer soit en jouant sur une des caractéristiques de l'ambiance (vitesse de l'air, humidification de l'air), soit sur l'ensemble. Les moyens mis en oeuvre sont variés (différents types de chauffage ou de refroidissement) et parfois entraînent des gênes importantes, tant objectives (bruit d'écoulement d'air ou de ventilateur), que subjectives (sensation de confinement).

Dans ces problèmes de climatisation, l'architecture et les matériaux de construction utilisés jouent un grand rôle.

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## **CONSIDERATIONS REGARDING THE DEVELOPMENT OF THE ELECTRONIC TRADE IN ROMANIA**

**ALIN ISAC, CLAUDIA ISAC\***

**Abstract:** The computer is the most sophisticated but - at the same time - the most adaptable and the most powerful tool; the increase of the power of calculus generating the expanding of the horizon of applicability. Today it is used in the most varied fields: engineering, administration, trade, art, scientific research, services.

**Key Words:** communications technologies, electronic trade, Internet

### **COMPUTERS DEVELOPMENT AND ELECTRONIC TRADE**

Our whole life is marked by the existence of some improved instruments and tools which should make easier our work and more agreeable our spare time. Among them, the computer is the most sophisticated but - at the same time - the most adaptable and the most powerful tool; the increase of the power of calculus generating the expanding of the horizon of applicability. Today it is used in the most varied fields: engineering, administration, trade, art, scientific research, services. Their application has developed from the data and information processing to the knowledge and even the intelligence processing.

The new information and communications technologies have led to changes in the information structure of the firms and in the way of running business through Internet. The statistics show that the enterprises of the future cannot go without using Internet for carrying out their main activities, such as: supply, sale, research-development, personnel recruitment, relations with the central and local administration.

The certain dynamics of the business environment and the information zone has determined fast changes in the field of trades and the appearance of electronic trade. Even if so far the electronic trade has been an activity carried out in the framework of some private electronic networks between firms, it is developing fast in

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the shape of many commercial activities where the transactions take place on global scale, through Internet, among a more increasing number of participants.

The electronic trade refers to the carrying out of the activities characteristic to business environment, by means of electronic computers linked through an automated system that underlie the exchange of economic information. In the electronic trade, the information circulates directly among different partners, as: the vendor, the customer, the transport company, the bank institutions etc. without using documents written on paper any more. If in the past the market was a limited place from the physical-geographic point of view, it becomes gradually a global network where man is endowed with advanced electronic aids that help him to increase the efficiency of the trades because he owes a more larger package of information, he carries out the exchange of goods in a more better period of time, at advantageous prices and the adaptation to the changes of market is more faster and much more efficient than in the classic trade (Table no.1). The electronic trade includes various activities, such as: the electronic exchange of goods and services, the electronic fund transfer, the stock transaction, commercial auctions, direct marketing, post-sale services etc. and it refers both to the goods, stocks and the different types of services.

Table no.1

**Comparison between the modern and traditional electronic trade**

<b>THE MODERN ELECTRONIC TRADE</b>	<b>THE TRADITIONAL ELECTRONIC TRADE</b>
- the market is an open, usually unprotected network	- the market is a closed circuit
- the number of partners is not limited	- limited number of partners
- the partners are known and unknown	- the partners are known and reliable
- the transactions are carried out between different partners: firms-final consumers; firms-firms, firms-public administration	- the transactions are carried out only between firms
- it is carried out online, without documents on paper	- it is carried out on the basis of documents written on paper

In principle, the electronic trade can be divided into two categories:

- indirect electronic trade carried out by electronic orders of tangible goods that are to be physically delivered through the traditional channels;
- direct electronic trade where the order, payment and delivery of the intangible goods are carried out online, so that the trade is entirely electronic.

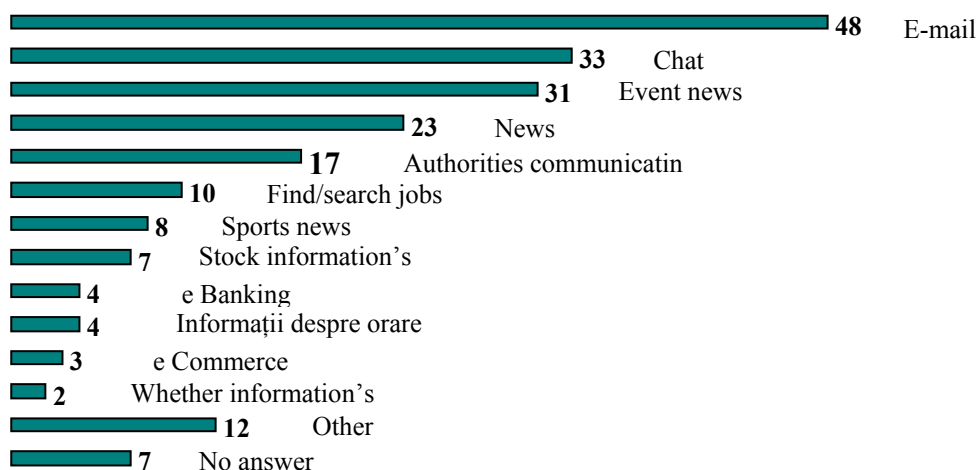
The electronic trade is not limited only to the using of the Internet facilities, but includes many applications in television, too, as teleshoppings, in off-line environments through the catalogues from the CD-ROM-s and also network with user authentication based access, especially in the field of bank. At the same time many different hybrid forms of electronic trade have also occurred, as for example the

commercial catalogues from the CD-ROM-s with connections on Internet or the commercial websites with the extensions on CD-ROM.

## THE ELECTRONIC TRADE IN ROMANIA

On one hand in Romania a package of legislative programs for promoting the information technology is necessary to be endorsed and, on the other hand, the development of an infrastructure of telecommunications and equipments comparable with those from the developed countries. A study on 60 countries regarding the extent in which they are ready to turn to the electronic trade situates the countries from the Central and Eastern Europe in the second part of the classification. In accordance with figure no.1, on the top of the classification are the U.S.A., Sweden, Finland; Romania being rated on the 43rd place among the 60 countries.

### INTERNET SERVICES USED



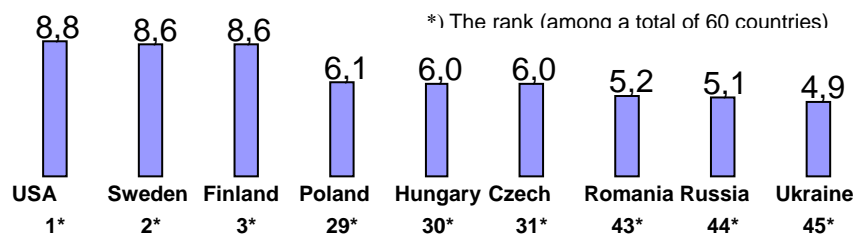
The studies carried out in September 2000 on the Internet users by a specialized firm, show that about 90% from Romanian people have become users of this facility, the time allocated to it being on an average of 4 hours per week. They use the Internet for the following aims: electronic mail – about half of the users; chat - 33%; other types of Web facilities (for example: news reading, communication with the authorities; calls and tenders for jobs, exchange information, bank services, electronic trade etc.) – 30% (Figure no.2).

The main issues that have to be overcome in order to develop the electronic trade:

- **setting up a global consensus.** Every transaction in the electronic trade has to take into consideration the commitments of the World Trade Organization, so that the possible cyber crimes as: unauthorized access to the files, breaking the laws of copyright, electronic money laundering, etc. should be eliminated;

- **setting up easy-to-access commercial services.** For an easy utilization the diminution of the technologic obstacles is necessary in order to getting simple solutions for carrying out the trades;

**PREPARATION FOR THE ELECTRONIC TRADE  
(FROM 1 TO 10)**



- **operationalization of some standardized measures of implementation of the electronic trade.** If the current development of the electronic trade is not based on safe technologies that should create trust between users regarding the security of their information, both the offeror and the users will be defavourized;
- **adopting an appropriate legislation that should allow the real development of the trade on Internet.** The lack of a legislative framework referring to the crimes on Internet has led to the increase of the number of Romanian youth who commit crimes and who cannot be punished. At present the figure of them is higher than of the firms that run legal electronic trade, that involves the restraint of the development of a real trade on Internet because the firms from Occident stop every transaction that leaves Romania (even if it comes from a serious firm) because a higher period of time is required for checking the thoroughness of the partners and usually this operation is even impossible.
- **acceptance of the modern ways of payment through the electronic money.** The utilization of the usual ways of payment in Occident by the users is burdened by the Romanian bank system, only a few banks from our country pay using this system.

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## INVESTMENTS RISK

LILIANA IVĂNUȘ\*

**Abstract:** The main characteristic of investments is risk assumption, because investments are related to coming evolutions and the future is uncertain. Investment decision under risk circumstances involves two separate stages in approaching the risk, there are: risks identification and registration in economic-financial calculus.

**Key Words:** risk, feed-back mechanism, financial investments, financial market

The main characteristic of investments is risk assumption, because investments are related to coming evolutions and the future is uncertain. In this way, can be emphasized two types of leading mechanisms associated with two kinds of connections:

- feed-back mechanism, based on statistic records concerning economic past to emphasize phenomenon evolution, to establish changes' frequency and trends extrapolation;
- feed-before mechanism, based on anticipated actions to avoid some undesirable trends and phenomenon.

Investment decision under risk circumstances involves two separate stages in approaching the risk, there are: risks identification and registration in economic-financial calculus. Investment risks in market economy can be **grouped** in following ways:

- a) depending on damage sizes can be emphasized five risk levels: minimum level risk, attributed to financial investments in bonds or in long-term loans with invariable rate of interest; low level risk, characterizing the investment with reduced consequences on industrial run (replacing investments); medium level risk, generated by productivity investments in production modernization and working places rationalization; high level risk generated by the research-development investments;
- b) depending on the firm's condition influence can be emphasized: failure risk, insolvency risk, autonomy losing risk, decreasing the rate of return risk;

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- c) depending on investments' moment: carrying out a real investment risks (expense exceeding, running delays, accidents) and penetrating the financial market risks for financial investments; operating and closing down a real investment risks (product's impact on the market, unrecouping investment expenses, unreturning the loans) and operating financial market anticipations risks being reflected in the assets portfolio structure.

Estimating the investments' risk involves specific methods and techniques such as data subject to risk correction, that is their adaptation to the new circumstances. This correction refers to:

- investment's expenses, which modifying possibility requires a flexible investment plan tolerating postponements and redirections;
- project's serviceable life, in a decreasing way under the equipments depreciation and obsolescence influence specially in the fields with a fast technological evolution;
- forecasted cash-flows, which have to reflect risks' influence;
- investments' scrap value, in the way of neglecting it, because this value can be precisely determined only in projects' last year length of service.

Regarding financial investments, there are two categories of risks that can be identified: specific risks and systematic risks. This limitation is based on the efficient portfolio notion, which refers to all the securities owned by an investor, with minimum risk structure.

Systematic risks can be considered as external risks, because their dependence on the main economic ratios (gross internal product, rate of interest, rate of inflation, currency rate of exchange) as a result of firms' performance and economic environment's relationships. This kind of risks show up on different portfolio's structures and cannot be eliminated by diversification.

Specific risks are portfolio's internal risks, a consequence of every constituents' risk, depending on portfolio's structure and can be reduced by diversification. Specific risk can be: specific to each security, generated by the firm's characteristics and behaviour; specific to the branch which the firm is apart.

Thus, a securities' portfolio risk depends, in essence, on two elements: each constituent's risk and interdependence between securities and portfolio's size. The size of this kind of risk dues to all the posible combinations between each security profitability (that is its variation) and the weight of each portfolio's security. Portfolio's risk analyzis emphasizes the fact that specific risk is decreasing as a result of increasing securities' number and the systematic risk represent 30 -35% of total risk, so there is a limit in diversification for risk reduction .

Registering investment's decision risks in economic-financial calculus can be made by using one of the following methods: compounding ration risk adjustment, certain aquivalence method, decision tree method, sensitivity analysis, simulation method. One of most frecquently used is the sensitivity anaysis, both in the case of real and financial investments. This method is based on emphasizing three risk categories (economic, financial, failure) depending on the investment decision circumstances.

Thus, economic risk is estimated through the flexibility and volatility coefficients, which are under the influence of firm's framework and its human and technical potential. A high level of these coefficients reflects a high ability of the firm to deal with conjuncture situations with bad consequences on the turnover.

Financial risk estimation must take into account the leverage, which reflects firm's ability to rise its performance through gearing or, on the contrary, to jeopardize its economic and financial condition. For generating positive effects it's necessary that loans interest rate is lower than the economic profitability.

Failure or insolvency risk to bad consequences both economic (some suppliers break off their collaboration with the firm bring temporary in straits) and financial (the firm is forced to resort to unfavorable loans). To estimate this kind of risk are used the solvency ratios, but especially the score method which has a dynamic content, much more appropriate to firms' activity and performances permanent evolution.

Risk dimension is one of the base elements to estimate investments risk size, along with the discounted value as a mathematical probability. Estimating this value starts from past economical information materialised in statistical data which are adapted to the present and future circumstances. Finally, it will obtain a probabilities distribution with an extension between certainly and uncertainly condition.

The decision tree method allows future events projection and induces a set of results for each decision alternative. To draw the decision 'tree chart, two categories of indicators are needed: certain indicators, with known value or with a value that can be estimated with a low level of error (project costs, serviceable life, compounding coefficients) and uncertain or probable indicators, that cannot be exactly estimated at the decision moment (turnover, profit, scrap value).

Working this method out involves the following stages:

1. settling the decision problem and establishing the circumstances concerning each alternative;
2. drawing the decision points and events as a tree, in which the ramification represent the decision alternatives;
3. emphasizing the consequences of each decision alternative;
4. establishing the probabilities of the events with influence on each alternative;
5. establishing the discounted value to each alternative's consequence;
6. choosing the optimum alternative as the one with the highest discounted value.

In the case of choosing between two alternatives (low initial investment with further development opportunities and high initial investment without further development), the decision tree chart can be revealed as in figure no. 1.

Each branch from the decision tree is characterized by three indicators: I (initial investment), P (expected profit), and E (decision alternative's efficiency as a proportion between the expected profit and initial investment, adjusted with their appearance probabilities).

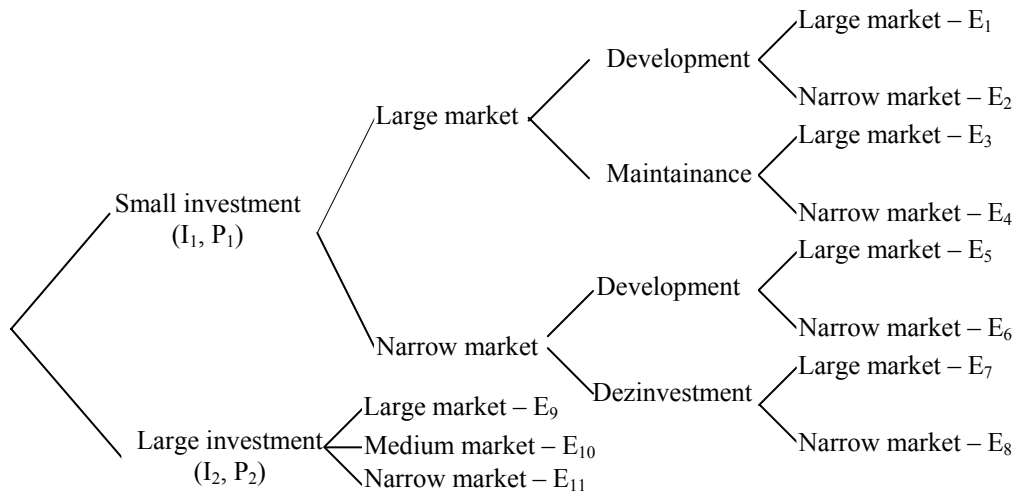


Figure no.1 Decision tree

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## **TYPES OF TRADITIONAL INVESTMENT ALTERNATIVES AVAILABLE TO PERSONAL INVESTORS**

**IMOLA KOVÁCS, GABRIELA SLUSARIUC\***

**Abstract:** There are many investment opportunities available to individual investors today. In order to select the right investment alternative investors must take into consideration realistic and measurable investment objectives and must develop a valid investment program. The process of investment planning begins with the establishment of a number of specific and realistic investment goals.

**Key Words:** bank accounts, common stock, preferred stock, corporate bonds, government bonds, mutual funds, real estate

Personal investment is the use of funds for the purpose of earning a financial return in the form of interest, dividend or profit and it consists of all those activities that are concerned with earning money with money and efficient use of funds.

Effective investment involves careful planning and goal setting and it begins with the determination of the individual's particular financial circumstances and needs. In order to develop a valid investment program every investor must take into consideration realistic and measurable investment objectives and he or she must be aware of the fact that certain economic conditions could alter these goals. Today, there are many investment opportunities available that makes even more difficult to select the right investment alternative requiring expert advice and financial consulting.

The process of investment planning begins with the establishment of a number of specific and realistic investment goals, then investment planners must determine the amount of money needed to accomplish those objectives and finally they have to identify the investment opportunities available at a certain period of time. After the investment plan has been developed, it must be reevaluated continually to ensure that it actually fulfills the investor's objectives and it must be modified if necessary.

In order to develop a successful investment program the individual investor or his or her investment counselor has to match potential investment choices with

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investment goals in terms of some significant factors that could affect the investing decision, namely: risk, income and liquidity. In determining which investment alternative is right for them, investors must keep in mind that different types of investments offer different combinations of these factors.

*The risk factor.* Any potential investment involves a certain level of risk that is the possibility of loss. The assumed risk should generally be directly related to the potential return. The greater the risk, the greater the potential monetary reward should be.

*The income factor.* Income is the main goal of any investment process and it depends on how much risk the investor is willing to assume. The monetary rewards differ from a type of investment to another. Usually, long-term investments can lead to larger earnings but they are also quite risky because the longer investment period involves a great deal of uncertainty so risks are higher.

*The liquidity factor.* Liquidity means the possibility of converting an asset into cash quickly. Liquid investments are investments that can be easily changed into money. However, there are certain market or economic conditions that make it impossible to regain the invested amount of money even for such types of investments.

Investors must build their investment plans around these factors that should be considered in any potential investment in order to find the most adequate investment alternative for accomplishing their goals.

There are several types of investments divided into two categories, namely: traditional investment alternatives (including bank accounts, stocks, bonds, mutual funds, real estate) and speculative investment techniques involving more risk than traditional investments but offering the possibility of earning large profits in short time. These methods refer to buying on margin, selling short, trading in options and trading in commodities.

**Bank accounts.** Bank accounts represents the most conservative means of investing funds because they provide income with less risk than any other investment alternative. Bank accounts include savings accounts, term accounts and certificates of deposit. Savings accounts are medium or long-term deposit accounts providing a safe place to store money as laws and government restrictions usually insure them. Savings accounts are sight accounts close to current accounts; depositors can withdraw money whenever they wish to. Therefore, liquidity is another facility this investment alternative presents beside safety and income.

Term accounts are a category of deposit that presents the advantage of a higher interest rate, but they are less liquid because term accounts are not payable at any time. That is why they offer higher return for investors than savings accounts.

Certificates of deposit are documents stating that the bank will pay the depositor a certain interest rate for money left on deposit for a specified period of time. In this way, an investor who is willing to leave his or her funds with a bank for a set period of time can earn a higher interest rate. Certificates of deposit usually require a small amount of money and they can be changed into cash at any time involving a high

liquidity. But in case of early withdrawal of funds invested in certificates of deposit depositors are penalized. As a result they lose part of interest consequently.

**Stocks.** Investments in stocks represent another type of traditional investment alternatives available to investors that involve a higher risk than investments in bank accounts because their value may fluctuate on the market. Stocks are issued by corporations and stockholders who buy shares in the firm in order to obtain a certain return purchase them. There are two basic types of stock: common and preferred. Each type has advantages and disadvantages and entitles the owner to a different set of rights.

Investors in stocks receive a certain income in form of dividends paid to stockholders as a distribution of profits earned by a corporation. Stocks of stable corporations are therefore purchased by investors primarily for the dividends they pay. However, dividends are not paid automatically. If a company has a bad year the board of directors can vote against dividend distributions, as they are not under any legal obligation to pay dividends to stockholders each year. In this case, earnings are retained in order to finance business operations. Consequently, investors do not receive cash dividend income but the corporation may pay stock dividends in place of cash dividends. Moreover, stockholders can make money by selling the shares they own when their market value increases as the corporation prospers and grows.

Beside dividend payments stockholders have a number of other important rights, such as: pre-emptive rights meaning the right of purchasing any new stock issued by the corporation before it is sold to the general public, the right of voting on corporate matters, examining corporate records, attending the annual stockholders' meeting where they may approve or disapprove major corporate actions.

As mentioned before, there are two kinds of stock: common stock and preferred stock. A share of common stock represents the most basic form of corporate ownership. Owners of such stocks may vote on corporate matters, but their claims on profit and assets are subordinate to those of preferred-stock holders. Generally, an owner of common stock has one vote for each share owned.

Owners of preferred stock usually do not have voting rights, but their claims on profit and assets precede those of common-stock holders and must be paid before common-stock owners receive any dividends. If the firm is dissolved they have first claim on the assets of the issuing corporation after creditors.

Preferred stocks provide safety and a predictable income to their owners unlike common stocks which are risky investments and the owner of such stocks doesn't know exactly how much income he or she will receive each year. In conclusion, preferred stocks involve lower risks but common stocks offer the possibility of earning greater speculative gain if the market value of the stock increases.

**Corporate and government bonds.** Investors can also purchase bonds issued by corporations in order to obtain financial sources or issued by governments for the same reason. Generally, bonds can be defined as written pledge that the issuer will repay a certain amount of money with interest at the maturity date. The maturity date is the date on which the borrowed funds are repaid.

The income produced for the bond owners by this type of investment is represented by interest paid by the issuer between the time of purchase and the maturity date at the stated rate. In addition, bondholders can realize some profit through the growth of their investments by selling the bonds when interest rates in the economy decline causing the increase of their market value.

As far as the safety of a certain bond is concerned, it depends on the financial situation of the issuer. If the issuer of a corporate bond becomes insolvent, bondholders won't collect the interest but they may have claims on the assets of the issuing firm, which precede those of preferred or common stockholders. Thus, bonds are considered a more conservative investment alternative than stocks, but they are less conservative than bank accounts.

**Mutual funds.** Mutual funds are professionally managed investment techniques that blends and invests the funds attracted from many individual investors in order to obtain a certain return. They are characterized by the fact that investments are made in a variety of securities, which ensure portfolio diversification.

There are many categories of mutual funds investing in different types of securities and being designed so as to meet any valid investment goal. Therefore, an individual investor must determine which one is able to ensure that his or her financial objectives are met.

This investment alternative is generally conservative and safe. However, there are some speculative mutual funds, which involves a higher risk but also provide a high return for the investor and offer substantial growth possibilities.

**Real estate.** Real estate is an investment choice that may offer substantial growth possibilities. At the same time, real estate represents the best means of hedging against inflation. However, before taking any investment decision, investors should take into consideration a number of factors that could affect the value of the property, such as: location, competition, type of financing, taxes, installment payments.

Moreover, there are no guarantees that the property increases in value or that the owner can sell it at a higher price than the purchasing price. Thus, an investment in real estate can provide either a profit or a loss. The degree of investors' success depends on how well they evaluate investment alternatives.

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## THE CASH-FLOW ANALYSIS OF THE FIRM

MARIANA MAN\*

**Abstract:** The analysis of economic and financial indicators of the firm regards the profit and loss account analysis and the balance sheet analysis. The cash-flow from operating activities represents the amount of cash obtained by a firm from selling goods and services after deducting the costs involved by raw materials, materials and processenig operations.

**Key Words:** cash-flow, cash-flow analysis, cash-flow statement, financial reports, operating activities

The analysis of economic and financial indicators of the firm regards the profit and loss account analysis (especially the profit rate analysis) and the balance sheet analysis (especially assets rotation and capital multiplier analysis). However, the policies promoted by corporations, concerning operational and investment activities, are more likely to be understood by examining the cash-flow, which also allows us to have a certain opinion about the quality of information included in the financial reports of the company, such as: the profit and loss account and the balance sheet.

Firms can be requested to comprise in their financial reports the state of the firm's cash-flow. Thus, a cash-flow statement developed by any corporation should include the following information: the cash-flow from operating activities, the cash-flow from investment activities and the cash-flow from financing activities.

- The cash-flow from operating activities represents the amount of cash obtained by a firm from selling goods and services after deducting the costs involved by raw materials, materials and processenig operations.

- The cash-flow from investment activities indicates the amount of money paid for investments in securities, acquisitions and also the funds received from selling tangible and intangible assets.

- The cash-flow from financing activities concerns the amount of money assigned by shareholders and creditors, but it also refers to the funds paid to them.

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In order to elaborate a cash-flow statement concerning the cash-flow from operating activities, firms can use two modes, namely: a direct and an indirect mode. The difference between them consists in the way the cash-flows from operating activities are presented.

The direct mode, utilized by a small number of firms, enables the determination of the cash-flow from operating activities through the difference between received and paid money resulting from operating activities.

In the indirect mode, the cash-flow from operating activities can be determined through net profit adjustment. Because the indirect mode enables a correlation among the cash-flow, the profit and loss account and the balance sheet, many specialists and managers consider this mode a more useful one.

The net profit differs from the cash-flow from operating activities because it incorporates two types of accounting elements, which do not involve cash-flows. The first type refers to income and expenditure registered in advance, such as: the revenue from selling on credit and the expenses for acquisitions on credit accordingly; these elements are found in accounts even if there has been no payment yet. Those income and expenditure that do not involve cash are reflected by the change of current assets accounts (debts, inventory and accrued expenses) and of short-term liabilities (the debt to suppliers and other short-term liabilities).

The second type of accounting element, which doesn't involve cash-flows but it is incorporated in the profit and loss account, contains: the value of depreciation, postponed taxes and the revenues of independent branches. In order to determine the value of the cash-flow from operating activities, starting from the value of net profit, we must adjust the value of net profit with the value of these accounting elements, which do not involve cash-flows. Moreover, the adjustment must also take into consideration the earnings/losses from operating activities, which are also included in the net profit (revenues from selling assets).

The information analysis provided by the cash-flow gives certain answers to a variety of questions concerning the evolution of cash-flow. Some of these questions are: How powerful is the firm's ability to generate cash-flows? How is the cash-flow from operating activities: positive or negative? Which are the reasons that determine a negative cash-flow? Is negative cash-flow due to the fact that the firm is going through a developing phase or it is due to the fact that the firm has an unprofitable activity? Does the inefficient management of working capital determine it? Is the company able to honour its short-term liabilities (interest paid for owed money) from the firm's cash-flow from operating activities? Is the firm able to honour its further obligations without reducing its operational flexibility? How much cash does the corporation invest for its development? Does these investments concord with the adopted strategy? What type of resources is used in order to finance corporate investments: the cash of the firm or external finances? Is the firm able to obtain a positive cash-flow after making capital investments? Can this situation be maintained on long-run? What plans does the company have concerning the available cash-flow? What kind of resources is used for paying dividends: the cash-flow of the firm or external resources? If the company is

paying dividends from external resources, is it possible that this policy will be maintained in the future? What type of external financing can be used: stock issue, short-term credits or long-term credits?

Although, normally, the cash-flow statement included in the financial reports should facilitate getting the answers to these questions, this is not always the real situation.

In order to facilitate systematic analysis and firm comparison, the primary information is processed and the cash-flow statement is remade as a personal model.

Another aspect that should be taken into consideration in cash-flow analysis refers to the fact that the cash-flow from operating activities also includes interest expenditures and interest revenues

However, these two elements are not strictly in connection with operating activities. These expenditures depends on the leverage of the firm and the interest revenues are the result of financial assets management and not of operation assets management. Therefore, we must take into account this aspect when the cash-flow statement is processed.

One of the most utilized models refers to the total cash-flow analysis which presents, in a primary phase, the cash-flow from operating activities before investments in working capital are made. In order to determine this cash-flow, the model does not take into account interest expenditures and interest revenues. Any firm should generate a positive cash-flow from operating activities.

Most of the companies use a part of this cash-flow to make investments in working capital (debts, clients, inventory, and debt to suppliers). The net investment in working capital is depending on the lending policy of the corporation, on the debt paying policy and on the assessments regarding income increase. Thus, in order to interpret the cash-flow from operating activities obtained after investments in working capital are carried out, it is essential to take into consideration the developing strategy of the firm, the characteristics of the industry and the lending policy of the company.

The next step in total cash-flow analysis consists of the comparison between the cash-flow from operating activities and the value of interest that should be paid.

If the cash-flow from operating activities is smaller than the payable interest, the company must liquidate a part of its assets or it must appeal to external funds in order to honour its obligations towards creditors.

Further on, the cash-flow is compared with long-term investments. These investments are represented by capital expenditures, investments in securities, mergers and acquisitions. If the cash-flow from operating activities remains positive after interest is paid, the firm is able to make investments from its own funds.

But in the situation the cash-flow from operating activities remained after interest is paid isn't sufficient to make long-term investments, the company must appeal to external financing in order to implement a development project.

However, firms that appeals to external financing has a smaller flexibility in establishing and developing long-term investment projects alike those firms that are using for achieving this goal internal financing.

The use of internal resources has both advantages and disadvantages for the corporation. The main disadvantage consists in the fact that managers could utilize available funds in unprofitable investment alternatives. Inefficient capital expenses are less frequent in case of using external financing. However, in this situation the company cannot be involved in high risk investment projects without the consent of fund suppliers.

After long-term investments are made, any cash-flow represents an available cash-flow for dividend payments. It isn't cautious to a firm to make dividend payments unless it has an available cash-flow. This model of total cash-flow analysis compare the cash-flow obtained after long-term investments are made, with the value of payable dividends. After dividend payments, a negative cash-flow means that the dividend policy of the firm should be changed. But, if the company registers a positive cash-flow after dividends are paid, this surplus can be used for returning a loan or in order to rebuy a certain amount of stocks.

The structure of the model points out some aspects of the cash-flow, such as: the cash-flow from operating activities before investing in working capital and before making interest payments shows if the firm is able to obtain an surplus of cash-flow from operating activities; the cash-flow from operating activities after investing in working capital and before making interest payments enables the analysis of working capital management; the cash-flow from operating activities after investing in working capital and after making interest payments allows the determination of the company's ability to fulfill its obligation regarding interest payments; the cash-flow from operating activities before paying the dividends shows the ability of the firm to finance from internal resources its long-term investments; the cash-flow available after paying the dividends makes possible to establish if the dividend policy can be maintained on long-run; the net cash-flow after attracting external resources enables the evaluation of the firm's financial policy. All these aspects must be assessed from the perspective of the developing strategy of the company and its financial policies.

The cash-flow variation from a year to another gives to specialists the opportunity of establishing its stability. Moreover, cash-flow analysis can be useful in verifying the accuracy of the reporting profit: Are there any significant differences between the net profit of the firm and its cash-flow from operating activities? Is it possible to identify the sources of these differences? What accounting methods contribute to these differences? Are these differences representing an exceptional situation or a permanent one? Is the relation between the cash-flow and the net profit going to change in time? What could be the cause? Is that due to the fact that the firm's external environment is changing or is it determined by the change occurred in the use of certain accounting and assessing methods? How long is the time between income and expenditure accounting and their actual collection or payment? Is the change of debts, inventory and debt to suppliers normal? If not, how can this be justified?

## **THE ORGANIZATIONAL FACTORS OF MANAGEMENT AND COST ACCOUNTING IN COAL MINING INDUSTRY**

**MARIANA MAN\***

**Abstract:** Management and cost accounting assumes the previous study of influencers and their implications in this area. Based on these facts one can determine management and cost accounting procedures that satisfy the managerial needs of a business. These factors are dynamic forces that cause the occurrence and change of a phenomenon or economic outcome. They do not operate independently, but mutually influence each other.

**Key-words:** the nature of technology process, the organizing of production process the organizational structure the size of coal mining, the managerial methods and techniques

The main factors of management and cost accounting in coal mining industry are the following:

**1. The nature of technology process** is an important factor with significant implications on management and cost accounting.

In coal mining, management and cost accounting is strongly influenced by the specific features of production such as: simple and homogeneous production meaning a uniform production without work in progress or half-finished products (in simple and homogeneous production the number of production phases is lower than in complex production which leads to budgeting and to a simplified production expenses statement compared with other industries as well as to a classical costing method); unitary production composed of several partial processes that are part of a single production cycle.

The coal production cycle includes two type of processes: a basic process that is a technology process, directly related to coal extraction (stope) performed with mining equipments; several auxiliary processes which enable the functioning of the basic process. The number of auxiliary processes depends on the size of extraction and on the other hand on the organizational level reached by the extraction.

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In coal mining each of the processes, previously mentioned, is composed of numerous operations carried out at work by one or more performers (team or brigade) which induce material expenses, expenses for payment of salaries and depreciation of fixed assets. Every operation or group of operations lasts for a standard period. Thus, the operation is the starting point of labour division within the framework of a mine and it becomes the subject of working standardization.

Both in rational management of production and in every techno-operative activities of coal mining, the division of production cycles into a basic technology process and into several partial processes has a major practical significance. The number and type of processes have an important role in production organizing. They determine the systematization and degree of detail of the accounting equations and accurate work rate-settings and cost center fixing in cost accounting.

By determining the type of partial processes based on their features, in coal extraction the accounting process is highly facilitated because it shows the best way of preparing the source documents and setting a rational document circulation. To enable an appropriate functioning of source documents, of the accounting process and costing, an activity division concerning space and functioning is necessary. Each of these criteria determines a certain division in order to cover technical, economic and accounting needs.

In management and cost accounting the nature of technology process is essential in deciding which type of costing must be used. In respect of type of costing the following aspects are determined: product, production unit, period and moment of costing, adequate documents. Thus, in case of line production, costing refers to the homogeneous product unit (pitcoal) obtained within a month. The period of costing differ from the production period.

The nature of the technology process leaves its mark especially on the number and type of documents that register the production process, the production expenses and the output. Therefore, in case of a product like pitcoal that requires a simple technology process, the number and nomenclature of documents is lower than in case of a product that needs a complex technology process.

Generally, the content, form and circulation of documents are determined by the nature of production. There are four categories of documents concerning costs and production: preparing, launching, extraction and controlling of coal production.

The documents regarding the technological preparing of coal production provide the conditions necessary for a continuous production and for respecting the technological standards and working hours. In accordance with this the production, technical and development department and the geology and topography department have elaborated a series of documents such as: Resource Statement, Insurance Degree, geological researches financed from investment funds and from budgetary funds, programmed labour productivity and wage funds statement, programmed subventions from the state budget, specific material usage statement.

Production launching consists in determining the production that will be obtained during a certain period and in defining material, labour and equipment

requirements. Thus, the production, technical and development department, the geology and topography department, and the transport-supply department have elaborated the following: Internal Production Programme, Technological Equipment Utilization Programme, etc.

The extraction and controlling stage of production enables to achieve the scheduled coal production and to properly use labour and technical assets. The head of production department and the head of organizing, rate-setting, planning and payment departments elaborate the following documents: Daily Work Report, Equipment Functioning Report, Production and Payment Report.

Documents like Production and Coal Weight Report are used in the stage of supervising and product delivery to coal storehouses and afterwards to coal processing sector.

The nature of technology process also conditions the cost determination technique for the product (pitcoal). Therefore, in case of a simple production like coal extraction, costing is established in each production stage until the finished product is produced. This factor determines the production unit that has to be chosen in order to suit the physical features as well as in what order costing activities should be carried out (recording the expenses determined by the activity of each sector of production; attributing the expenses of auxiliary activities, overhead costs and managerial expenses to the expenses of the basic activity; recording the extracted amount of coal at a pre-established price, etc.)

**2. The organizing of production process** is another factor that has an important impact on management and cost accounting, especially on the organizing manner of the documents, which record data provided by cost centres. In fact, there is a close relationship of interdependency between this factor and the nature of technology process. Phase costing is applied in coal extraction because the production is simple and the finished product is obtained after processing of raw materials in successive stages. This method is also used in other industries: metallurgy, food industry, etc.

As far as the dividing of production into different work stages is concerned, in coal extraction several partial processes form the basic process of production and they are known as extraction phases. Their number depends on the size and organizational level of coal extraction.

Thus, the process of coal extraction includes the following stages:

- preparation of working (digging drifts in order to open and prepare the exploitation field, water evacuation and ventilation, material transportation);
- coal extraction (extraction of the prepared coal reserves through stopes, coking the exploited field of stopes, coal transport to gathering drifts, transport of wood and other materials);
- underground transport in principal drifts (transport by electric railway engines, conveyors, cables and manual transport);
- maintenance and repair of drifts (transportation and ventilation drifts, transversal drifts, shaft pits, landings);
- general ventilation of mine (exfoliation, sprinkling, whitewashing activities);

- loading coal on the surface;
- surface transport (unloading coal from trucks, transporting coal from shaft pits to storehouses and waste dumps);
- other activities necessary for the production process (maintenance and repair of lamp rooms and underground lighting network, transport of materials from shaft pits to sections);
- transport of materials from the storehouse to the mine and shaft pits (transport of materials and equipments from storehouses to shaft pits, unloading, depositing and guarding of materials);
- loading of coal in trucks (maintenance of coal storehouses, loading coal in trucks).

Every production stage requires consumption of human labour and material and their value is reflected by the cost of coal production and by the amount of coal extracted. In accordance with this, an adequate costing and accounting procedure compatible with the nature of coal extraction process is necessary.

In management and cost accounting the most difficult problem is to establish correctly the production phases, which may contain several operations and may or may not differ from the production section. Phases established from technical point of view cannot always be taken under consideration as cost centres from the point of view of accounting. In coal extraction the costing phases differ from the production sections. A section may include one or more costing phases based on the dimension of the activity and the needs of economic management.

The organizing of production process in mining also influences the nature of costing meaning that cost accounting has a cyclical characteristic in case of product line, and by contrast, in case of specialty products it has a noncyclical characteristic.

**3. The organizational structure** of coal mining is also a factor with a significant impact on management and cost accounting. Therefore, coal mining is divided into production sections, auxiliary sections, annexed sections and functional sections.

In production sections division consists of brigades, teams and working centers and its task is to ensure the possibility of expenditure control and to consolidate the responsibility for the activity of each cost centre.

Coal extraction, which represents in fact the object of mining industry, is performed in basic production sections. In coal extraction there are several work stages such as: waste (mechanized, hydraulic, pneumatic, mechanic, etc.); underground transport; transport through shaft pits; maintenance of shaft pits, drifts and raising shafts; maintenance of machines, equipments and underground installations; ventilation. Besides coal extraction, there are other activities that deal with coal processing, briquette fabrication and low-temperature carbonisation.

Auxiliary sections are secondary production centres and their goal is to provide basic sections with: electric power (power station), water (water station), steam (thermic station) or to carry out certain activities (mechanic workshop, joinery workshop). Auxiliary sections also include: motorised transport, vulcanisation

workshops and storehouses, pump stations, lamp rooms, compressor stations, personnel training centres.

The activity of annexed sections isn't directly connected with the activity of basic sections. Annexed sections do not have an industrial nature, their purpose is only to meet some of employees' living needs. These sections include the administration of workers' dwellings that belong to the mine, rest homes, nurseries.

In coal mining industry, the division of activities into basic, auxiliary and annexed sections has an important role in both budgetary activities, assigning responsibility to properly perform these tasks, and in management and cost accounting.

Beside the production sections mentioned before, the organizational structure of coal mining includes a series of functional departments such as: technical-production department, mechano-power department, financial-accounting department, labour protection department, topography and geology department, organizing, rate-setting and payment department, personnel-education office, supply-transport department, law office, etc.

Production and management structure lies at the basis of establishing production expenditure and costing from organizational and functional point of view. Thus, in cost accounting, basic, auxiliary and annexed sections have the meaning of structural units depending on which products and production overheads are grouped and controlled. Accounting is separately kept for each production section and workshop, both for direct and indirect production expenses. Consequently, by means of current cost accounting, budgeting and cost accounting can be widened till the level of working centres and other departments.

In order to perform a reasonable cost accounting, an adequate number of cost centres is necessary, defined on the basis of thorough research concerning the structure of coal mining. This matter is essential for choosing the best techniques of gathering expenses from each cost centre and of distributing them on products.

The organizational structure of coal mining directly influences current cost accounting. Thus, accounts specific to management accounting, especially costing accounts are divided into analytic accounts on production sections, workshops, mining administration, and within the framework of these they are divided into categories and types of expenses. Therefore, as far as production is concerned, current cost accounting is kept for each production section and for each working stage (coal processing, frontal stope, horizontal and vertical transport), as well as for each type of expenses (material expenditure, expenses for payment of salaries, contribution to social insurance and to unemployment fund, electric power expenses).

Regarding auxiliary activity, current cost accounting is kept for each type of workshop (mechanic workshop, joinery workshop, pump workshop) and for each type of expenses (material expenditure, expenses for payment of salaries, contribution to social insurance and social protection, depreciation, reparation expenses).

Overhead expenditure is recorded in every production section and is divided into several types of expenses (equipment maintenance and functioning expenses, depreciation of fixed assets, office workers' wages). In coal mining, accounting of

administrative expenditure is kept for each type of expenses (subscriptions, official trips, postal expenses, office workers' wages, etc.).

**4. The size of coal mining** is also an important factor for cost accounting. Thus, costing is centralised at financial and accounting departments, which function as separate subdivisions in coal mining. This type of management and cost accounting requires a low number of speciality staff, but consequently the efficiency of control and effective analysis of expenditure is smaller due to the more complicated circuit of documents and to their processing until cost is established.

**5. The managerial methods and techniques** performed in coal mining may also influence management and cost accounting, especially regarding the choice of a classical costing method (phase costing) that requires to perform costing twice and afterwards to determine price variance or the choice of a modern costing method (standard costing), which has to emphasize the predictable feature of costing and the promptness of informations and cost control.

The substitution of phase costing with standard costing needs to organize management and cost accounting based on the requirements of the latter, such as:

- the three items of costing specific to this method: direct materials, direct labour, overhead expenses;
- specific accounts: standard material usage variance, standard payment tariff variance, standard clearing account;
- specific blanks: standard material price variance report, standard labour price variance statement, production expenditure budget.

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## **UNEMPLOYMENT – A CONSEQUENCE OF RESTRUCTURING MINES IN THE JIU VALLEY**

**DORINA MAGDA\***

**Abstract:** The paper briefly points out one of the consequences of restructuring mines in the Jiu Valley, i.e. unemployment; its consequences on the standard of living of the people made voluntarily redundant and implicitly on the living standard of all those who live in this region. The way authorities have tried to solve this problem for almost three years is also shown.

**Key Words:** restructuring, people made voluntarily redundant, unemployment, mitigation and control of unemployment.

Unemployment is a negative aspect of economic development affecting in different degrees all the states of the world, and especially those in transition towards market economy – the case of Romania. The process of transition to market economy raises serious difficulties for our country, regarding the introduction and application of mechanisms specific to free market in its entire configuration, including the labor market. If under the communist regime there was no true labor market in Romania, the transition to market economy marked the beginning of a process of constitution of the latter, based on new criteria, a process that proved to be awkward and generating unfavorable effects regarding the occupation and effective use of human resources. Passing to the partial occupation of the work force from a model of economic raise based on a total occupation of work force led to a new phenomenon: unemployment. Privatization of economy, restructuring and re-equipping the units still in state property, firm application of the principle of economic efficiency generated at the level of the entire country large dismissals of work force leading to severe unemployment.

The analysis of the current unemployment confirms the very complex character of this phenomenon, pointing out meanwhile many particularities by region, county, sex, environment (urban or rural) and short periods of time. According to the data delivered by the National Agency for Occupation and Training at the level of the national economy, the rate of unemployment recorded values much higher than the

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average values per country in the following counties: Botoșani (16.9%), Neamț (16.8%), Brăila (15.6%), Hunedoara (15.1%), Gorj (14.8%) etc. The data were taken from the article “Unemployment rate – August 2000” published in *Tribuna economică* No. 40 / 2000. Unemployment affects mainly the less industrialized areas and the mono-industrial areas. The Jiu Valley is such a mono-industrial area (mining being the main occupation); an area that had been declared “*disfavored*”. This statute had been given following the results of an analysis made by local and central authorities, since the economic restructuring of the mines did not offer regional viable alternatives. An important effect was a large number of people made voluntarily redundant, no real opportunities of employment having been given to them in the period between the first dismissal (September 1997) and September 2000.

Economic restructuring of the Jiu Valley mines was thought of by the central authorities as a way of cutting down budgetary deficit by diminishing budgetary expenses occasioned by intense subsidizing of the so-called “black holes of economy”. The idea was good – reorientation of funds that were used from one year to another to preserve the activity of mines by profit bearing activities, having in view the diversification of the economic activity in the area, cutting down the overstaffing, leading thus to diminishing the expenses connected with the workforce, to an increase of the productivity of labor and economic efficiency of the respective mines – but the implementation was chaotic (at the first dismissal – September 1977 – all those enrolled on the lists drawn up at each mine were dismissed. Thus the staff of the Autonomous Régie of Bituminous Coal was reduced by 19,796 people, that is by 49.6% compared to the 45,141 staff employed in the Régie on the 1<sup>st</sup> of January 1997. Subsequently, in 1999 the staff went down to less than 20,000 employees in the National Company of Bituminous Coal. The effect was that the labor market was flooded by a large offer without the possibility of providing a suitable demand. The promises made by the authorities before the dismissals regarding “creation of alternative jobs” were late to be fulfilled, this leading to an increase of the social tensions in the area.

The Government, in an attempt to mitigate the problems of the Jiu Valley – more and more often associated with the phrase “Valley of Tears” – assigned the area the status of *disfavored area* for a period of 10 years. Disfavored areas, in the spirit of the law and norms of application, is a strictly delimited geographic area, meeting one or several of the following conditions:

- mono-industrial productive structure, in a visible decline, which in the area involves more than 50% of the employed people, therefore requiring conversion to new activities;
- mining areas where, due to restructuring programs the personnel were collectively dismissed;
- areas where due to restructuring or privatization of economic agents collective dismissals take place affecting more than 25% of the number of employees residing in that area;
- unemployment rate higher than the national average value by 25%;

- no means of communication and poor infrastructure.

It is obvious that the Jiu Valley meets all the requirements.

The theory of disfavored areas is tempting and it is meant to stimulate the entrepreneurs to start a business in the region. Despite the facilities that could be taken advantage of, once an investment is done in the area (entire reimbursement of the customs fees for machines, tools, installations, equipment etc. imported for investments in the area, as well as for raw materials, spare parts and other components required for own production in the area, profit tax exemption for the entire period of existence of the disfavored area, priority in granting funds to stimulate exports, external credits, financing special programs, tax exemption for modification of the destination of lands necessary for investments or their being removed from agricultural use etc.), even though two years have passed since the enforcement of the law, no signs of improvement are noticeable in the area, on the contrary, the standard of living is continually falling leading to ever increasing social tensions. When local authorities are accused of indifference and incompetence, the typical answer is “The Government does not create jobs, it adopts politics favoring the creation of those”.

Other “efforts” made by the authorities to counteract the social and economic effects of unemployment due to dismissals in mining, besides declaring the Jiu Valley a disfavored area, are given below. Although accused that redundancy programs were first applied and only then ways of employment for the ex – miners were thought of, the authorities applied measures for the occupation of the work force dismissed in this area at an acceptable level. These are:

- training and refreshment training courses, re-orientation of work force to the ever-decreasing offers of the labor market. The voluntarily made redundant people are often accused of the lack of interest for these courses. The excuses of the latter relate to the lack of efficiency of these programs and to the fact that, courses or no courses they can not still find employment;
- jobs for limited periods(6 months). The reason why these “temporary community jobs” were turned down was not so much that they were temporary but because of the low wages. In spite of the efforts made by the authorities to convince the unemployed that it is difficult to create jobs paid at a level close to salaries in mining, the unemployed prefer to stay unemployed instead of getting occupied.
- establishment of a body specialized in regional development – the National Agency for Regional Development – one of its objectives being finding strategic alternatives for regional development based on a thorough knowledge of the technical and human potential and on the experience gained at regional level and at the level of the specialty involved, as well as the enforcement of the these strategic alternatives in the form of viable regional and specialty plans.
- promotion of programs financially supported by international bodies(such as PHARE), programs focused on local initiatives of occupying the workforce. The access to such a financing is unfortunately delayed by certain conditions to be met by the applicants and in reality the effect of the application of such programs is hardly noticeable.



As it is noticed, there are programs and measures of mitigation and control of unemployment, but what is missing are the investment projects that would meet the eligibility requirements of these programs.

The failure of the correlation between the labor demand and offer is not specific to the Jiu Valley and it can be generalized at the level of the entire country. This is a perfectly normal thing considering that unemployment is a negative phenomenon, which accompanies an unfavorable evolution of the social and economic activities.

The correlation of the labor demand and offer in Romania's economy, so that a certain balance would be reached between the two elements of the ratio, is one of the most complex and difficult problems of the transition to market economy. The following directions shall be pursued simultaneously in order to balance the ratio between the labor demand and offer.

- strict determination of the necessary labor force by each economic agent, having in mind the efficient use of the all resources in economy, including labor resources;
- creation of new jobs both by the extending activities in certain neglected industrial domains (especially in fields producing goods for consume), and especially by rapid development of services.
- restructuring education so that the labor offer would be adapted to the evolution of the labor demand;
- increasing occupational mobility by creating an efficient system viewing reorientation, qualification in a new job and employment of the dismissed labor force;
- international relations to use in other countries part of the work force made available from our industry.

Government programs in the field of occupation of workforce and protection of the unemployed has in view, especially in the period 1996 – 2000, measures such as:

- stimulation of economic agents too create new jobs, especially for the young;
- legislation for occupational training and improvement;
- stimulation of S.M.E. creation and development based on lucrative credits from unemployment funds;
- replacing current administrative structures currently providing services in the field of occupation of workforce with tripartite structures reuniting all social partners, in accordance with the standards of the EU member countries.

Direct interventions by the State were made to stabilize the labor market to stimulate the workforce demand. Nevertheless, the effects on reducing unemployment were not remarkable. Unemployment is still very high considering the production capacities and the resources available in Romania's economy (see Table No.1).

Table No.1

**Rate of Unemployment in the Period 1991 – 1999**

<b>Years</b>	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>%</b>	3.0	8.2	10.4	10.9	9.5	6.6	8.9	10.3	12.8

The existence of a more than 8% unemployment rate in the active population (according to the data delivered by the National Agency for Professional Occupation and Training at the level of national economy: in August 2000 the rate of unemployment was 10.1% - *Tribuna economică No.40/2000*), indicating a chronic unemployment, has as an impact an immense loss of workforce, productive potential, economic increase; being a well known fact that labor has an active impact on other production factors and labor, as a feature of human personality can not be stored, and as years go by the “quality of work is poorer”. Persistence of unemployment is a factor of pressure on the employed. The later will have to work harder to provide an increase of national production, more so than if the dismissed were employed. For the unemployed, unemployment means less income for the family, facing material difficulties as well as the need to be supported by the public authorities and society.

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## INTRODUCING FINANCIAL MANAGEMENT

MIRELA POPESCU\*

**Abstract:** Financial management has developed as a separate area of study, being very important for both the small or large companies. Financial management has a role in investment decisions, financing decisions and controlling resources. The responsibility of the financial manager is to monitor actual performance of the company.

**Key Words:** financial management, financial information, investment, financing decisions

Financial management has developed as a separate area of study in recent years for three main reasons:

- recognition by business and public bodies, large and small, of the importance of continuous assessment of their need for finance; an awareness of the sources of finance and to ensure the optimum use of resources provided by that finance;
- the increasing number of specialist finance managers appointed by larger companies and public bodies;
- continuing development and application of analytical techniques in financial decision-making.

**The role of financial management.** Any enterprise having a profit objective or not needs money to acquire resources to operate. Resources include the skills and expertise of people, raw materials and land, each of which is limited by ownership and supply, and therefore commands a price. Money for investment is referred to as finance and it is available only because it has been withheld from consumption. Finance may have been accumulated and contributed by the owners of an enterprise, or it may be borrowed from outsiders. Whatever its source, the responsibility for its acquisition, allocation and conservation is largely the province of financial management.

Strategic planning concerns decisions about what product or service is to be supplied, and to what group of customers. The resources required to achieve these plans will involve further decisions regarding investment and financing, followed by

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an efficient monitoring process to ensure that the acquired resources are being used as planned.

The role of financial management therefore embraces:

- Investment decisions (allocating finance);
- Financing decisions (acquiring finance);
- Controlling resources (conserving finance).

**Investment decisions.** To many the word “investment” suggests matters worlds apart from their daily lives. Most people take out some form of insurance policy to cover risks to life or property. The premiums we pay are then invested by insurance companies in government and industrial securities to ensure that the fund out of which they will ultimately have to pay claims is maintained. Indirectly, therefore, most of us are investors in stocks and shares through our insurance policies.

Whichever way we choose to invest, we expect the original sum invested to be recovered after a period of time, together with an additional sum, in the form of interest, rent or profit, to compensate for the risk and waiting involved. The element of risk is losing our original investment or in receiving high or low incomes from our investment, will govern whether we put our money into, say, relatively risky shares or into the “safe” National Bank. Individuals with limited resources will, therefore, appraise alternative investments very carefully, with the aim of maximising their potential wealth, whilst keeping risk at the level acceptable to them.

Business firms behave in much the same way. Whether considering expanding or replacing production facilities, the purchase of another business or investment in the shares of other concerns the trade-off between risk and rate of return is paramount in the decision-making process, and calls for the application of the most sophisticated investment appraisal techniques.

**Financing decisions.** Financing concerns the acquisition of money necessary to help achieve objectives, and that the approach to financing decisions is, in essence, the same for everyone. Individuals, small groups and limited companies must:

- assess how much finance they need for long and short-term purposes;
- have knowledge of, and make efficient choice from, the various sources of finance available.

The main sources of finance are:

- internal sources: a) arising from the efforts and resources of parents and boys; b) sale of existing surplus assets.
- external sources: a) loan from the bank; b) grant from the country council.

To sum up: we finance activities by using either our own money or someone else's. The shareholders of a limited company will either agree to a restrained dividend policy which provides for the reinvestment of profit, or they will subscribe further cash themselves.

Funds from external sources come essentially from new shareholders, lenders and government grants, and the financial manager will consult outside advisers regarding the most suitable types and sources of finance. The small businessman would probably approach his local bank manager, whilst the corporate Treasurer would deal

with a merchant bank conversant with the wider capital markets. In both cases the package of finance ultimately agreed will be tailored to the requirement: short-term funds for short-term needs, or long-term finance for long-term needs. Timing an approach to the market for finance is important both to reduce its cost, and to ensure that it is available when required.

**Effective Control of Resources.** Control problems apply no less to business organisations, any differences being ones of scale and environment. It is not enough to acquire finance and convert it into the resources necessary to carry out investment plans. Control is a continuing process. For example, effective control of resources by a manufacturing company would include:

- Checks to discover whether the forecast benefits of past investment decisions have actually materialised.
- Assessing whether continuing investment projects should be phased out and replaced by more profitable new ones.
- Maintaining debtors, stocks, cash and creditors at their most efficient levels, including provision for inflation.
- Ensuring that foreign currency dealings are protected by available market operations, and overseas investments managed efficiently.

The responsibility of the financial manager is to monitor actual performance against planned goals and targets, and for this purpose he will rely on the information revealed by periodic financial reports produced by the accounting system.

One question is what range of information is required and can be deduced from a study of financial statements. Given that the three main functions of financial management concern investing, financing and controlling resources, we ought to ask questions to discover whether these functions are being effectively carried out. Four main questions may be asked, shown in Figure 1, linked with their respective function.

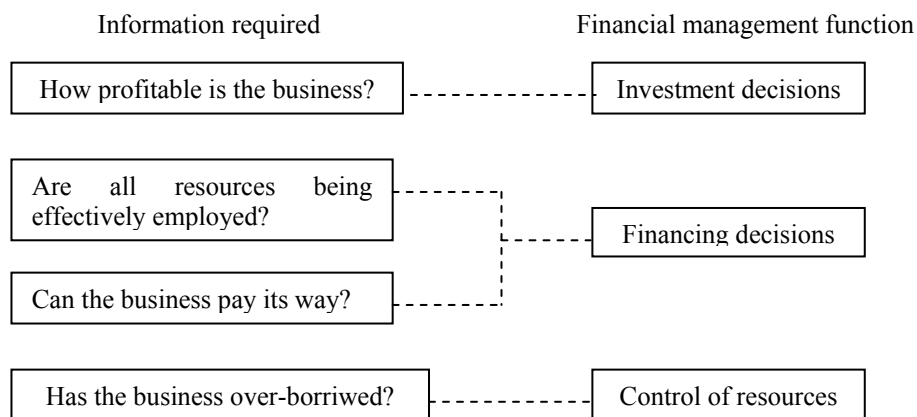


Figure 1. Information needed for financial management

We search out interrelated figures in the financial statement, which, when combined and presented as ratios or indices, help most to answer these questions.

## **CONSIDERATION EN CE QUI CONCERNE LA RELATION PRIX MOYEN – PRIX MARGINAL DANS L’ACTIVITE D’EXTRACTION DE LA HOUILLE**

**ILIE RĂSCOLEAN\***

**Abstract:** For distinguish the relation bet-ween medium and margin cost for determination of the physical volume of the pitcoal production for which the medium cost is minimum, the production costs were divided in fixes and variables depending on their behaviour face to the variation of the production. Starting from the Mellerovicz relation, more possibilities have been elaborated resulting conclusions about minimizing the production costs.

**Key-words:** medium cost, margin cost, fixed and variable production costs, reaction degree.

Pour étudier et evidencier la relation entre le prix marginal en vue de la détermination du volume de la production de la houille extraite pour lequel le niveau du prix moyen est minimum, il est nécessaire de les diviser selon la dépendance du volume de la production en coûts fixes et coûts variables. A ce but on a tenu compte de la structuration des coûts de production par éléments primaires de dépenses, a l’aide desquels celles-ci sont mises en évidences d’après leur caractère économique.

On fait la mention que la structuration des coûts par éléments primaires de dépenses est assurée par les évidences comptables des exploitations minières, celles-ci étant mensuellement observées dans cette structure pendant que la division des coûts de production en fixes et variables n’est pas explicitement mise en évidence.

Pour classifier les prix de production selon leur comportement envers la modification du volume de la production de houille brute extraite, on a analyse en détail toutes les catégories de coûts, avec des spécialistes des secteurs de production, electro-mecanique, transport, le poids des coûts fixes, respectivement variables.

De la sorte, 61% des matériaux auxiliaires utilises dans l’activité d’extraction de la houille sont représentés par des matériaux dont la consommation spécifique est normée en fonction de la tonne de charbon extraite, leur comportement envers la

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variation de la production étant proportionnelle. Les plus importants matériaux de cette catégorie sont: le bois de mine, le bois de charpente, le filet de fil de fer, les bandages soudés, l'explosif, les amorces, les armatures, TH.

Le poids des prix résulte de la consommation de ces matériaux est dominant et la différence de 39 % étant représentée par les matériaux dont la consommation n'est pas dépendante du niveau de la production physique extraite et les plus importants comme valeur sont les tapis en caoutchouc pour la bande minière et les pièces de change, ces dernières déterminant des prix importants à cause du fait qu'on travaille avec des machines et équipement vieilles et pour les maintenir en fonction ils ont besoin de réparations courantes et permanentes.

Dans ces conditions, le poids de la consommation totale de matériaux auxiliaires en prix de production est de 14,3%.

Les consommations d'énergie et d'eau représentent 10,8% environ du total des coûts de production cet élément de dépense ayant un caractère fixe, parce que la plus grande partie de l'énergie est consommée pour réaliser l'aérage souterrain (70%) mais aussi pour le fonctionnement des pompes, cette consommation s'effectuant même dans les jours où l'on ne travaille pas, ainsi, 85% des coûts avec l'énergie et l'eau sont des coûts fixes et seulement 15% sont dépendants de la variation de la production, étant variables.

Les coûts avec l'amortissement des actifs immobilisés représentent 3% seulement du total des coûts de production, à cause de la faible mécanisation des exploitations minières et à cause du fait qu'après 1990 les sommes allouées pour l'acquisition d'équipement ont été très petites, la majeure partie étant allouée pour travaux miniers d'ouverture nécessaires à maintenir les capacités de production.

Bien que les coûts avec l'amortissement soient fixes par rapport à la variation de la production, dans l'activité d'extraction de la houille, 12% environ sont variables, représentant l'amortissement supporté par prix pour les travaux miniers qui sont calculés en fonction de la réserve exploitable et de l'extraction annuelle de substance minérale utile.

L'élément de dépense „travaux et services fournis par des tiers”, comprend de différents services pour le bon déroulement de l'activité d'exploitation mais qui ne dépendent pas du niveau réalisé de la production physique, ayant donc un caractère fixe, en proportion de 100%.

Les coûts avec ces services représentent 3,8% du total des coûts de production et contiennent, en principal, les suivants : dépenses avec les téléphones, services exécutés par le Centre de Calcul Electronique, service avec outillage lourd, vérifications et réparations effectuées à l'équipement possédé par les sociétés commerciales spécialisées, en principal S.C. Umirom S.A. Petroșani et S.C. UPSRUEEMP S.A. Petroșani, services à caractère administratif, etc.

Dans la catégorie "d'autres frais matériels" il y a: dépenses avec l'équipement de travail et protection, dépenses avec le transport à et du lieu de travail, la quota de la compagnie (40% de la quota due par chaque exploitation minière pour le fonctionnement de l'appareil de la Compagnie Nationale de la Houille) etc. Ces coûts

représentent 3,5% du total des coûts de production et ils ont aussi un caractère fixe en proportion de 100%.

Il en résulte que le total des coûts matériels représentent 35,4 des coûts de production, dont 63,2% représentent des prix fixes et 36,8% des coûts variables.

Donc le poids le plus important dans les coûts de production afférents à la houille brute extraite, est détenu par les coûts avec le travail vif, 64,6% respectivement et les salaires bruts avec 36,4% qui représentent en même temps 56% du total des coûts avec le travail vif.

Bien qu'il soit trois formes de salaires (l'accord direct, indirect et à base d'indicateurs), les salaires de base ont un caractère variable pour tout le personnel parce qu'ils se corrigent jusqu'à l'encadrement dans le fond de la réalisation du programme de production.

Pourtant, dans la structure des coûts avec les salaires il y a une composante des prix fixes due aux augmentations accordées (augmentation pour travail permanent dans le front, pour des conditions nocives, dangereuses, pour le temps de nuit) et à d'autres catégories de droits salariaux (les revenus du personnel des équipes de salut minier, les suppléments aux salaires pour les personnes qui effectuent leur conge de repos, le paiement des congés maladie supporte du fond de salaires, les sommes accordées supplémentairement au personnel retraite).

On peut apprécier que 51% du total des salaires bruts représentent des coûts fixes, indépendants de la variation de la production et 49% des coûts variables.

Le poids des coûts fixes représentant des droits salariaux accordés a été réduit à partir de 1998 à cause de la préoccupation des spécialistes du cadre de la Compagnie Nationale de la Houille perfectionner le système des salaires, de sorte que la permission des droits salariaux soit dépendante le plus que possible, de la réalisation de la production. Ainsi, à partir de 1998 on a éliminé le supplément de fidélité qui représentait 45% du salaire de base et s'accordait en somme fixe selon le temps effectivement travaillé.

L'élément de dépense "assurance et protection sociale" qui a un poids de 14,9% en total coûts de production contient des coûts déterminés par des obligations envers les fonds spéciales, représentent des contributions de l'embauche réglées par des actes normatifs en vigueur et dont la base de calcul est représentée par les salaires bruts. Dans cette catégorie il y a la contribution pour l'organisation du fond de chômage, la contribution pour assurances sociales de santé, pour l'organisation du fond de risque et accident. Il est à remarquer le fait que ces contributions au niveau des quotas établis représentent 53% du total des droits salariales accordés et leur division en coûts fixes et variables est similaire aux salaires bruts.

D'autres dépenses avec le travail vif représentent 13,2% du total des coûts, cet élément de dépense contenant en principal:

- une partie des dépenses supportées pour offrir au personnel certaines facilités établies par le Contrat Collectif de Travail (loyer, logement, allocations charbon différence prix à l'énergie électrique, transport du personnel à et du lieu de travail, le



coût partiel des billet de repos et traitement, dépenses avec le repas chaud, les délégations, les salaires, la protection, d'autres dépenses).

Par leur nature, ces coûts ont un comportement indépendant de la variation de la production, donc ce sont des coûts fixes. Dans ces conditions, il en résulte que les coûts avec le travail actif ont un comportement envers la variation de la production par laquelle on peut apprécier que 61% représentent des coûts fixes et 39% variables et au niveau des coûts afférents a la houille brute extraite, 61,8% environ sont fixes et 38,2% variables.

Pour déterminer le prix marginal et le prix moyen, les facteurs de production travail et capital fixe sont considérés constants, le premier a cause du fait qu'à partir de 1997 on effectue de gros „disponibilités” de personnel et a présent pour des raisons économiques et sociales une réduction de personnel n'est plus possible et le deuxième facteur dans l'acception des coûts a court terme, ainsi que le facteur de production variable est le capital circulant, la réalisation des niveaux différents de la production physique ayant besoin des quantités différentes de matériaux, énergie.

Aussi, pour montrer les possibilités de minimiser les coûts de production en utilisant la relation prix moyen – prix marginal, les prix moyens et les prix marginaux sont déterminés en tenant compte des niveaux de référence suivants: production physique 4000000 tonnes, prix moyen 450000 lei/t, niveaux près des réalisations des dernières années, ainsi que la structuration des prix fixes et variables, comme a été déjà mentionnée.

Produc. physique (t) Coûts de production	3800000	3850000	3900000	4000000	4050000	4100000	4150000
Coûts matériaux (mille lei)	626258	629190	632139	637986	640884	643765	646627
-coûts fixes	403425	403425	403425	403425	403425	403425	403425
-coûts variables	222833	225765	228714	234561	237459	240340	243202
Coûts avec le travail vif (mille lei)	1139383	1145041	1150732	1162014	1167606	1173164	1178688
-coûts fixes	709406	709406	709406	709406	709406	709406	709406
-coûts variables	429977	435635	441326	452608	458200	463758	469282
Total coûts (mille lei)	1765641	1774231	1782871	1800000	1808490	1816929	1825315
-coûts fixes	1112831	1112831	1112831	1112831	1112831	1112831	1112831
-coûts variables	652810	661400	670040	687169	695659	704098	712484
Coût moyen (lei/tonne)	464642	460839	457134	450000	446565	443190	439835
Coût marginal (lei/tonne)	-	173800	172800	171790	169800	168780	167720

Les prix moyens et marginaux pour différents niveaux de la production physique de charbon, des niveaux près du niveau de référence, ainsi qu'on peut apprécier a ce niveau la variation proportionnelle des prix variables, sont présentes dans le tableau n° 4. On constate que le prix moyen aussi que celui marginal diminuent pour ces niveaux de la production physique, mais entre les niveaux du prix moyen et

ceux du prix marginal il y a une différence importante, le dernier étant plus petit, avec 61,8% environ.

Dans ces conditions, dans l'acceptation des coûts à court terme qui suppose leur division en variables et fixes et où les capacités de production ne se modifient pas, le prix moyen ne peut être égal au prix marginal et atteindre le niveau de minimum, par exemple.

Si on suppose que la productivité physique du travail annuel augmentait, en arrivant au niveau de 352,9 tonnes/personne, le niveau le plus élevé de cet indicateur pendant 1960–1998, pour un effectif de 17909 personnes, on obtiendrait une production physique de 6320000 tonnes.

On a montré qu'en fonction de la manière dans laquelle le niveau des coûts variables croît ou décroît selon la variation du volume physique de la production, les coûts variables peuvent se grouper en: coûts proportionnels, coûts progressifs, coûts dégressifs et coûts flexibles.

Bien que dans la littérature de spécialité on choisisse en spécial cette division, certains économistes comme Mellerovicz par exemple, regroupent les coûts de production variables en coûts proportionnels et non proportionnels.

"A une analyse plus attentive et détaillée, on observe que les soi-disant coûts au-dessus du proportionnel ne sont autre chose que des coûts progressifs et ceux au-dessous du proportionnel représentant des coûts dégressifs, dans la catégorie des coûts non proportionnels incluant les coûts flexibles".

Tout en démontrant l'importance de l'influence du volume physique de la production pour caractériser et définir plus précisément le coût, Mellerovicz utilise un indicateur nommé, degré de réaction. À l'aide de cet indicateur, il a réussi à exprimer le degré de réaction de la grandeur des coûts, déterminé par la modification du volume physique de la production en utilisant la relation mathématique:

$$Gr = Cm/V; V = Gr \times Cm; Cm = Gr \times V \quad (1)$$

ou: Gr – degré de réaction;  
Cm – modification du pourcentage du prix analyse;  
V – volume physique de la production.

A cause du fait que pour une si grande variation du volume physique de la production de charbon, il est très difficile à déterminer avec exactitude le comportement des coûts variables, à cause de leur complexité on émet trois hypothèses en fonction desquelles, pour le niveau de la production, on va déterminer le prix moyen et le prix marginal.

Ainsi, dans la première variante, si on suppose que le comportement des coûts variables sur cet interval de variation du volume physique de production (entre 4000 tonnes et 6320 tonnes) est strictement proportionnel à une augmentation de la production avec 63,3%, le degré de réaction étant égal à 1 de la relation de Mellerovicz on détermine la modification en pourcentages des coûts :

$$Cm = Gr \times V = 63,3\% \times 1 = 63,3\% \quad (2)$$

Les coûts variables (Cv) afférents au volume de la production de 6320 tonnes, seront déterminés ainsi:

$$C_v = 687169 \text{ millions lei} \times 1,633 = 1122147 \quad (3)$$

Il en résulte un niveau des coûts totaux de 2234978 lei, le prix moyen étant de 353636 lei/t et le prix marginal 187491 lei/t.

Dans la deuxième variante on suppose que la variation des coûts selon la modification de la production est „sur proportionnel”, c’est-à-dire que ceux – ci ont un degré de réaction de 1,26, de la relation de Mellerovicz on détermine la modification en pourcentage des coûts variables:

$$C_m = 63,3\% \times 1,26 = 79,8\% \quad (4)$$

Les coûts variables afférents à la production de 6320 tonnes s’établissent comme ça:

$$C_v = 687169 \text{ millions lei} \times 1,798 = 1235530 \text{ millions lei} \quad (5)$$

Dans cette hypothèse il résulte un niveau des coûts totaux de 2348361 lei, le prix moyen étant de 371576 lei/t et le prix marginal de 236363 lei/t. On observe que dans cette situation aussi la différence entre le prix moyen (plus haut) et le prix marginal (plus bas) est très grande et le prix moyen décroît.

Dans la troisième variante on suppose que la variation des coûts selon la modification de la production est „sous proportionnel”, c’est-à-dire que ceux – ci ont un degré de réaction de 0,67, de la relation de Mellerovicz on détermine la modification en pourcentage des coûts variables, ainsi:

$$C_m = 63,3\% \times 0,67 = 42,4\% \quad (6)$$

Les coûts variables afférents à la production de 6320 tonnes s’établissent comme ça:

$$C_v = 687169 \text{ millions lei} \times 1,424 = 970529 \text{ millions lei} \quad (7)$$

Il en résulte un niveau des coûts totaux de 2091360 lei, le prix moyen étant de 330911 lei/t et le prix marginal de 125586 lei/t.

Dans cette variante la différence entre le prix moyen et le prix marginal est plus grande encore et aussi le prix moyen, pour des niveaux de la production plus grands, est en baisse.

Conformément aux déterminations effectuées, on peut apprécier que dans les conditions actuelles d’exploitation du gisement de la houille et avec le personnel existant, on ne peut pas obtenir le minimum du prix moyen, même si la productivité physique de travail augmente de 60%, arrivant ainsi au plus haut niveau obtenu dans l’activité d’extraction de houille.

D'ailleurs pour un niveau de la production de houille brute extraite de 6320 tonnes, dans les conditions où les rendements de préparation globales se sont maintenus à peu près constants (> 80%) le marché de vente actuel et en perspective, à court terme, ne présente pas une demande de houille à ce niveau.

Il en résulte donc que des changements de fond s'imposent qui déterminent des modifications à l'égard du comportement des coûts de production, envers la variation du volume physique de la houille brute extraite qui conduise à une autre structuration, à une autre division en coûts fixes et coûts variables.

La restructuration de l'activité d'extraction en vue de la réduction des pertes ne doit pas être dirigée pour fermer en totalité certaines Exploitations Minières, parce que tout cela enregistre une efficacité économique diminuée et cette action particulièrement complexe et difficile doit être orientée "sectoriel" par la suspension de l'exploitations des gisements dans des régions qui entraînent des gros coûts et en spécial qui maintiennent les coûts fixes à un niveau très élevé.

Par la concentration de l'activité d'extraction au niveau de chaque Exploitation Minière dans les zones contraintes à l'horizontale et verticale, on va assurer la réduction des coûts fixes, en éliminant les coûts avec l'entretien des voies d'accès, du transport souterrain par horizontale et verticale, les coûts avec l'aérage, etc.

Pour l'augmentation de l'efficacité de l'activité d'extraction de la houille, il est très important de démarrer l'action de la retechnologie des mines même si cela nécessite un très grand effort d'investissement, effort qui doit être réalisé par le budget de l'Etat par des allocations budgétaires, parce que la Compagnie Nationale de la Houille ne détient pas de fonds propres (le fond de roulement enregistrant des valeurs négatives), cette action conduirait à l'accroissement significative de la productivité du travail, à la réduction des coûts de production unitaires et aussi à la réduction des pertes et des subventions accordées par le budget.

Le système des salaires pour l'amélioration duquel des spécialistes de la Compagnie Nationale de la Houille se sont préoccupés, doit être perfectionné continuellement par des mesures qui conduisent à la réduction du poids des coûts fixes en coûts avec les salaires bruts. Comme on l'a dit, les coûts de la nature des droits salariaux ont été réduits, en spécial par l'inclusion du supplément de fidélité (qui représentait 45% du salaire de base négocié), dans le salaire de base proprement-dit qui est influencé par l'effectuation des normes de travail mais ils représentent encore 51% des coûts avec les salaires bruts.

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## RENEWABLE ENERGY IN UK

IOAN NICOLAE TIUZBAIAN\*

**Abstract:** The primary aim of the Renewable Energy Programme in UK is the development of a self-sustaining market for each of the technologies as they become technically, economically and environmentally viable. The White Paper "Energy for the Future: Renewable Sources of Energy" suggests very ambitious targets. To achieve a 12 % contribution from renewable energy sources to the EU's gross inland energy consumption by 2010 will involve major deviations from "business-as-usual".

**Key Words:** renewable, environment, energy, greenhouse, guidance, waste, fuels.

### 1. WHAT IS RENEWABLE ENERGY?

Renewable energy is the term used to cover those energy flows that occur naturally and repeatedly in the environment - energy from the sun, the wind and the oceans, and the fall of water. The heat from within the earth itself, geothermal energy, is usually regarded as renewable, although locally it cannot always sustain continuous extraction. Plant material is an important source of renewable energy. Combustible or digestible industrial, agricultural and domestic waste materials are also regarded as renewable sources of energy.

A purpose of the renewables NFFO (Non-Fossil Fuel Obligation) is to demonstrate these electricity producing technologies which are closest to becoming commercially competitive and thereby facilitate their entering the market where, once established, it is expected they will become viable without further special support.

Sources:

- |                 |                                    |
|-----------------|------------------------------------|
| • Hydro Power   | • Geothermal HDR                   |
| • Wind Energy   | • Geothermal Aquifers              |
| • Wave Energy   | • Municipal and Industrial Waste   |
| • Tidal Energy  | • Landfill Gas                     |
| • Photovoltaics | • Agricultural and Forestry Wastes |

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- Photoconversion
- Passive Solar Design
- Active Solar
- Energy Crops
- Advanced Conversion
- Advanced fuel Cells

The primary aim of the Renewable Energy Programme is the development of a self-sustaining market for each of the technologies as they become technically, economically and environmentally viable.

## 2. WHY RENEWABLE ENERGY?

The main advantages of using renewable energy are the substitution of valuable energy sources of finite supply, and the limiting of emissions of greenhouse gases, such as:

- carbon dioxide ( $CO_2$ ) produced in large quantities from burning fossil fuels.
- methane, 22 times more powerful as a greenhouse gas than carbon dioxide.

To achieve sustainable development it is necessary to reconcile the “3 E” : *Economic Development, Energy Security and Environmental protection*. On a “business-as-usual” basis, the IEA (International Energy Agency) World Energy Outlook projects a 65 % growth in energy demand between 1995 and 2020, with a 70 % increase in  $CO_2$  emissions. However, the future won’t be “business-as-usual”.

## 3. LAND USE POLICY

Until the draft guidance note on renewable energy was published in December 1991, LPA’s were working in a policy vacuum for considering the planning issues involved in renewable energy schemes.

PPG 22 explains the government’s policy on renewable energy and LPA’s are urged to: *“bear in mind that investment in renewable energy development can make an important contribution to the national economy, and can help meet our international commitments on limiting greenhouse emissions”*.

PPG 22 provides a broad structure within which local planning authorities can formulate appropriate development plan policies. A number of different stages can be identified:

- the identification of both the nature and the extent of the renewable resources in their area;
- the identification of broad locations on specific sites suitable for the development of renewable energy schemes;
- the development of policies which consider the local environmental impact of renewable energy schemes;

- the consideration of the relevance of government guidance on such topics as green belts, conservation areas and industrial and commercial development for renewable energy schemes;
- the need for developing renewable energy schemes in designed area.

There was a number of specific comments about the role of PPG 22:

- there was concern that the PPG concentrates predominantly on wind energy and excludes other technologies that LPA's were having problems dealing with;
- there was that the PPG does not offer advice and guidance on how to deal with and evaluate potential conflicts;
- authorities were unclear about the methodologies for evaluating the renewable resource potential in their areas;
- LPA's wanted more advice on how policies can be upheld as land use planning issues;
- It was felt that the PPG has a strong rural focus and provides little guidance on the development of renewables technologies in an urban context.

Prompted by government guidance, planning applications from developers, and the "*green approach*" of the council, 49 % of LPA's are including renewable energy policies in their development plans.

There are two areas in which LPA's would like further guidance:

1. What are the procedures and techniques for assessing the renewable energy resource potential of an area ?
2. What standards and techniques should be used to assess the local amenity impacts of the scheme ?

#### 4. FUTURE

Many of the most promising renewable energy sources produce electricity.

The primary renewable electricity sources of wind, solar electricity, hydro, wave and tidal energy share characteristics of capital intensity, negligible atmospheric emissions, and variability of output; many are also inherently small in unit scale. The prospects for these sources depend heavily upon the characteristics of the rest of the system.

The European Union ALTENER (Alternative Energy) programme produced the targets for Europe and an estimated contribution of renewables to electricity generation in the UK in 2025.

A comparison between 1986 government spending in various developed countries on renewables and other forms of energy is given in Table 1, showing the UK level then to be exceptionally low.

Table 1

Country	Renewables spending/\$1 0 <sup>6</sup>	Share of energy budget/%	Spending per capita/\$
Sweden	17.3	21.8	2.06
Switzerland	10.2	14.7	1.57
Netherlands	17.0	10.6	1.17
West Germany	65.9	11.6	1.09
Greece	9.7	63.2	0.97
Japan	99.2	4.3	0.82
United States	177.2	7.8	0.73
Italy	29.5	3.9	0.52
Denmark	2.6	17.8	0.51
Spain	19.4	27.6	0.50
United Kingdom	16.6	4.4	0.29

## 5. NUCLEAR POWER IS NO ANSWER

Although the UK uses significant amounts of hydroelectricity, renewable energy sources like wind, wave, geothermal, tidal, biofuels and solar, have always been treated as poor relations compared to nuclear power. In the last years the funding of UK research into nuclear power has been around **£200 million per year**, while renewables have been given about **£15 million**.

The Department of Energy has no plans to right this imbalance, but instead plans for a long term decrease in government funded renewable research in the expectation that private sector investment in renewables will take off.

The UK's electricity industry is dominated by a pro-nuclear establishment which is still urging investment in nuclear power as a means of combating the greenhouse effect. However, many dispute the claim that building more nuclear power stations is an acceptable way to combat global warming.

Many people argue that nuclear power is not feasible option for reducing carbon dioxide emissions because of its extremely high costs compared to other strategies, and because of its disadvantageous environmental impacts. With current energy growth rates continuing into the future the world would need to build about 5000 nuclear power stations, one every two and a half days, by 2025 to replace energy supply that would otherwise come from coal. Even then carbon dioxide emissions would be slightly more than at present.

Investment in the most energy efficient lighting systems, water heaters, refrigerators, heat pumps and other equipment will reduce emissions nearly seven times effectively than investment in nuclear power stations.

Of course this argument does not remove the need for some new-fossil generating capacity to take the place of some of the retiring fossil fuel power stations that are becoming too expensive to run. But this does not mean that nuclear power is essential or necessary, since we can develop non-greenhouse inducing renewable sources instead.



We must vigorously encourage the development and deployment of renewable energy sources.

Under the Kyoto Protocol, the industrialised countries agreed to reduce emissions of greenhouse gases by an average of 5.4 % from 1990 levels by the period 2008-2010.

While governments define and implement policies, energy decisions are taken by individual producers and consumers; government action has to motivate such decisions, which alone can make the energy future sustainable.

The White Paper "Energy for the Future: Renewable Sources of Energy" suggests very ambitious targets. To achieve a 12 % contribution from renewable energy sources to the EU's gross inland energy consumption by 2010 will involve major deviations from "business-as-usual". For the longer term, many optimistic energy scenarios predict that renewable energies will contribute 50 % of total energy needs by 2050 (including hydropower and biomass).

UK Energy Minister John Battle set out the blueprint for the future of renewables on 30 March, boosting research and development to £43 million over the next 3 years and reaffirming its commitment to developing the industry. The document shows that producing 10% of UK electricity supplies, cost effectively, as soon as possible, and want to achieve this by 2010.

Government cannot achieve sustainable development on its own. It needs the understanding, commitment and involvement of all sectors of society.

Achieving sustainable development will be a huge challenge, a huge undertaking that requires a strategic response; a blue print for action.

That is why the Government will shortly be publishing a new Sustainable Development Strategy. It will identify what the challenges are to achieving sustainable development in Britain.

California's Santa Monica has become the world's first major city to choose to purchase all its electricity for municipal needs from renewable sources - for a year, at least.

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## **THE ROLE PLAYED BY BANK CREDITS IN THE SHORT-TERM MOBILIZATION AND REDISTRIBUTION OF FINANCIAL RESOURCES**

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**Abstract:** The paper presents, as it is suggestively shown in the title, the role played by bank credits in the mobilization and redistribution of short-term financial resources. The present crediting system in Romania is briefly presented as well as the main categories of credits and the principal stages to be met both by the applicant economic agent and the financing bank, so that the crediting bank would make a decision for a short-term crediting.

**Key Words:** economic agent, commercial bank, short-term bank credit, decision making for crediting.

The impact of credit on the economic and social life is continually increasing both at macroeconomic and microeconomic level. This impact is very high due to the “multiplying” function of the credit in market economy, not necessarily in the Keynesian sense, but by the fact that the system of credits mobilizes monetary resources temporarily available and dispersed and places them at the disposal of economic agents temporarily in need of resources in view of their fructification by credits.

The system of crediting is gradually and with certainty integrating in the market system, becoming an integrated part of great importance in this system. One may say for sure that the crediting process is beyond a strict monetary analysis and it becomes an object of study of the general economic theory.

The study of the phenomenon of crediting integrates both in microeconomic theory and practice, as well as in macroeconomic theory and practice, since by crediting one may promptly and efficiently intervene, when this crediting phenomenon is well known and mastered by those practicing it, in the good functioning of the economic agents in general, and in the functioning of the economy as a whole, by

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regulating the economic ratios. The analysis of credit reports is done by the use of an ample range of criteria characterizing them, pointing out their interdependencies and differentiating them.

Among these criteria we mention:

- a) as to the form and subjects of credit reports:
  - commercial credits;
  - bank credits;
- b) as to the relations involved:
  - private credits;
  - public credits;
- c) as to the terms granted:
  - short time credits(one year);
  - medium term credits(2 – 5 years);
  - long term credits(5 – 25 years);
- d) as to the conditions granted:
  - personal credits;
  - real credits;
- e) as to the final destination:
  - credits for production;
  - credits for trade;
  - credits for investment.

As expected, short-term credits will be approached below.

The base of short-term bank credits is made up of monetary resources having become temporarily available as a result of overall movement of funds participating in the economic processes, which are deposited in banks by various subjects.

Relationships of economic agents, legal persons, with banks are usually mutual, the formers having bank accounts opened in banks, forming deposits that could be used as resources, and on the other hand, banks grant credits to economic agents for production needs.

Economic agents – legal persons – are looked upon by reliable banks, that is by a viable and sound bank system, first of all, as being their main creditors and only then, they may become their main debtors as well (“bank goods” consumers, i.e. money).

The main bank credits granted to economic agents – legal persons – involve advances in their current accounts or fund credits (treasury). They are meant to satisfy the current necessities for covering unpredictable production expenses, difficult to be localized.

It is important to emphasize the problems confronted by commercial banks in the way of treating economic agents – legal persons – regarding short-term credits and the so-called requirements of the commercial banks regarding the attitude that economic agents – legal persons – should assume, both from an economic and a managerial point of view, in order to be credited.

Taking into consideration the process of transition of economic agents – legal persons – from centralized planned economy, based exclusively on state property and controlled by a unique political force, to an economy based on private property, economic liberalism and competition, short-term bank credits granted to economic agents should be carefully approached.

Emphasis will be further laid on the role and place of short-term bank credits in the economic –financial regulation and stabilization mechanisms of economic processes within the economy of the economic agents of this turbulent transition period. The importance of short-term bank credits in a market economy is very complex, therefore it has certainly become a routine practice for economic agents – legal persons.

Short-term bank credit involves, both for the commercial bank and for the applying economic agent, to go through certain stages and to make specific analyses for this type of operations, absolutely required for the crediting process.

A first step is to establish the short-term deficit of resources in the administration of the economic agent.

Any economic agent (with state or private capital) will have to choose the objectives to be financed, to foresee the necessary amount of financing, and to decide on a level of the circulating fund and on a covering by permanent capitals or covering by treasury credits. The manager of the economic agent should decide on the financial structure, specifically on the ratio debts and own funds in the total amount of capitals. After this decision is made, decision of a strategic character, tactical decisions should be made on the treasury credits, which should provide for minimal financial expenses, integral covering of needs and a financial flexibility.

Unlike permanent capitals, treasury supports sensitive day to day modifications. Treasury organization and management, as well as determination of the balance of the latter, may be envisaged according to known methods, such as:

1. “collecting – paying” method;
2. “resources – necessary” method.

The management of the treasury lies in alternative administration either of available values and of exceeding funds, or of short-term credits required to cover deficits; exceeding funds may be used to bring in new gains, and the deficits will be covered by treasury credits. Treasury budgets point out possible short-term credit needs, and the operation budget and investment program point out the origin of these values. The ensemble of these forecasts stays at the foundation of any negotiation in a market economy with the banker, the object of negotiations being obtaining authorizations for short-term credits.

The multitude of credits an economic agent can take advantage of, involves the choice of various short-term financing methods, according to the interests of the economic agent. The credits applied for should not necessarily present a too high safety margin, because an insufficient use of those could determine the banker to be more reticent in the following period.

The needs to be covered by treasury credits are given by the existent gap existing between the operation payments and collecting, and the role of treasury credits is directly connected to the duration of the manufacture and stocking cycle. The amplitude of the treasury credit variations is given by the nature seasonableness of the activity, by the more or less regular rhythm of the daily entries and outlets of funds as well as other accidental phenomena.

Treasury credits may be given:

- through bank houses or cash;
- promissory note;
- warrant.

All these treasury credits (short-term) have an applicable cost and a real one. Applicable costs, although complex and rather charged with elements of remuneration of the capital advanced and of the risks assumed, is however smaller than the real cost of the credits. Applicable costs are influenced by two factors: interest rates and afferent commissions. The practiced interest rates, in their turn, are determined by the structure of the resources of the financing bank, structure that, in its turn, is made up of:

- interest rates applied by the Romanian National Bank for credits given to commercial banks;
- interest rates applied by the main banks participating in the capital market, for the sources procured from commercial banks or it they may be inter-bank rates, at mutual credits among banks;
- interest rates applied by the financing bank for resources procured from natural or legal persons.

Along a year, gaps are registered between the required and available resources in the administration of economic agents. These gaps are generated by two main causes:

- (a) differences between total immobilization in the assets of a company (larger) and the funds owned (smaller);
- (b) disturbances in the collecting of economic results, disturbances determining a deficit in treasury;

When short-term credit types are determined, credits to be applied for by economic agents from banks, the starting point is "The status of the patrimony at the end of the previous trimester and forecasts on rising of assets during the period anticipated."

Based on the information found in this "Status", a "Treasury Plan" is drawn up, as reference for establishing the short type credit types, which could be applied for at banks by economic agents.

Decisions on giving credits follow the following stages:

- analysis of the management and economic – financial situation of the economic agent applying for short-term credit;
- analysis of the credit itself requested by the economic agent;
- decision making on short-term crediting;

- periodic analysis of the quality of the bank's short-term credit the portfolio.

*Management analysis of the economic agent applying for short-term credit.*

The process of bank analysis includes two stages:

- 1) formal analysis;
- 2) basic analysis.

*Formal analysis* focuses on presentation of all documents, content of those documents, their being signed by legally authorized persons representing the organization, and correlation between various indicators and if the technical documents are drawn up by authorized technical people.

Within the *formal analysis* a previous analysis is done, that is an inventory of the existing conditions at the economic agent, that would allow for a general documentary diagnosis, which should provide a general idea on the economic agent (balance, account of results, financing plan on term and situation of the treasury). Thus, a general diagnosis of the economic agent is determined, and taking into account the requests for credits of the latter, a particular diagnosis of the economic agent is made.

The *basic analysis* lies in the verification and interpretation of certain economic and financial indicators based on data from credit requests and the financial situation from the credits file.

Another analysis made by the bank is the one connected to economic – financial “performances” of the economic agent. The following aspects are in view in this analysis:

- subscribed and paid social capital;
- carrying out of the economic indicators, cumulated at the beginning of the year, connected to: manufactured goods production, turnover, brut profit, net profit, interest rate of the current circulating dues and sources of covering, remaining credits and payments;
- indicators of efficiency: margin of brut and net profit compared to turnover, stocks in days, interest covering out of profit.

The bank also analyses the bona fides of the economic agent, based on the following classes of indicators:

- (a) indicators of profitability;
- (b) indicators of short-term ready cash;
- (c) medium and long term solvability indicators;
- (d) level of dues and credits;
- (e) indicators of investors.

Following the managerial analysis and of the economic – financial performances, the economic agents applying for credits are of five types:

*A Category* – Companies (economic agents) with profitable economic activity, able to reimburse the credit and pay the interest in time.

*B Category* – Companies (economic agents) with good economic activity at present, but with possible negative outlooks.

*C Category* – Companies (economic agents) with possible worsening economic situation.

*D Category* – Companies (economic agents) with economic and financial indicators oscillating between satisfying and unsatisfying.

*E Category* – These companies (economic agents) have losses and the reimbursement of credits and payment of debts is uncertain.

Once the applicant for credits is accepted as client of the commercial bank, the economic agent is given an official recognition of their performances, the exigency of the bank analysis being of first order. Categorized as the economic agents might be, as one of the five categories, the analysis of the application for credits and of the requested credit is still necessary.

An important activity of the specialized personnel of a bank in Romania, in the current transition period towards market economy and restructuring of the bank system, is the credit analysis, from the moment of the application till the reimbursement itself. The five “C” – s of the management of the credit, with the possibility for a potential or existing borrower to pay the interests and installments in time include:

Capacity - possibility to pay;

Character – will to pay;

Capital – the fortune of the borrower;

Collateral – security if applicable;

Conditions, external, economic.

The analysis itself of the application for credit of the economic agent involves the following stages:

- 1) identification of the aim and of the size of the credit applied for;
- 2) identification of the reimbursement sources of the credit given by the commercial bank to the economic agents.

In this second stage, the management of the credit risk involves:

- establishing the methodology of classification of the credit portfolio;
- the classification itself of the credit portfolio;
- determination of the commissions to be constituted.

- 3) Identification of the credit guarantees.

After the stages of substantiation are over, the Committee of Credits makes the final act of the decision making, i.e. making the decision of crediting. Before decision is made, in favor of the economic agent, the bank makes a correlation between the sums applied for and its own resources of crediting, and the legal restrictions and the evolution of the cost of the credited capital.

Adopting the decision of crediting is based on:

1. Crediting restrictions;
2. Correlation with the bank's own resources;
3. Competencies in adopting the crediting decision and its communication.
4. Analysis of the decision making for crediting.

In conclusion, decision making for crediting is meant to support the economic agent to cover the required funds. As a result, between the financing bank and the short-term credit benefiting economic agent, a flux of funds is accomplished, benefic for the balancing of the financial management. The fluxes towards the economic agent are completed by financial and monetary fluxes connecting the bank and the economic agent.

The monetary funds made temporarily available following the overall movements of the funds participating in the economic processes (production, circulation, repartition, consumption), that are deposited in banks by various subjects, are at the basis of bank credits. The credit relationships of the economic agents and the banks are usually mutual, on the one hand, the economic agents having accounts opened in banks, forming deposits that could be used as resources, and, on the other, the banks give credits to economic agents for their needs of production and investment. It is a well-known fact that in these relationships, one of the partners is the bank, and the relationships between the bank and the partner develops in the field of putting the monetary resources to use and profit making, mainly from interests.

The main credits given by banks refer to advances in the current account or fund credits (treasury), based on a full knowledge of the activity of the economic agent, without being compensated by documents with each commitment. These credits are meant to satisfy the current necessities regarding the covering of the unpredictable and hard to be located production expenses. Generally these credits have no reimbursement deadlines.

Usually these credits are given based on compensatory deposits, their importance residing in the fact that the economic agents preserve all availability in bank accounts, which allows the bank to be cover the requirements of some economic agents, even by redistributing the deposits in current accounts, constituted by other agents.

The situation currently created in the bank system, regarding the possibility of the economic agents of opening accounts in several banks (possibly in all existing commercial banks), contradicts this theory, in the sense that an economic agents applies for a credit in a bank and then, subsequent to this credit, runs almost exclusively all its availability through an other bank, creating unbalances between resources and investments. We agree for the economic agents to select a bank for credits and availability, but once the option is made, this bank should be the only bank for running credits and resources.

The permanent existence of compensating deposits means for a bank a reduction of the resources used, and for the economic agent a means of preserving solvability.

Another characteristic of these credits is the following: without documents, no re-crediting is possible, based on the main resources of the bank. Hence the higher level of interest, but usually established in correlation with the interest of the market and, usually using a commission as well. The general system of giving credits in this manner is the credit line. This may be of two types: *confirmed credit line*, based on a



written agreement between the bank and the economic agent, and *revolving credit line*. The latter involves the current use of this manner of obtaining funds by the economic agent, considering that the reimbursements effected allow for obtaining new credits within in the limits of the sources remitted to the crediting bank.

A bank can thus have a double orientation: one towards the customers – as agent with capital contribution, and the other, as outlet (the users' market), necessary for production. Inter- and parabank competition intervene in a very drastic manner on these two types of markets, hence the double necessity for the financial – banking institutions to make uphill marketing and downhill organization.

The two markets, of resources and users, are not independent one from the other, but they are in a permanent interdependence. It is a known fact that both the private persons and the legal economic agents, along their existence, find themselves either in the position of lenders, or borrowers, this is also function of the economic circumstances or other factors. Therefore the two markets experience an alternation of periods, when they need credits, and when they can constitute monetary savings, which, in their turn can be invested in banks in view of obtaining profits.

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## **SERVICES PROVIDED BY FINANCIAL INSTITUTIONS**

**GABRIELA SLUSARIUC, IMOLA KOVÁCS\***

**Abstract:** There are many different financial institutions offering such a tempting array of services to attract customers. The financial services provided by the banking industry are the following: demand deposits, times deposits, loans, electronic transfer of funds, financial advice, payroll service, certified checks, trust services, safe-deposit boxes.

**Key Words:** financial institutions, deposit, loans, certificate of deposits, check, revolving of deposit, automated teller machines, collateral.

There are many different financial institutions offering such a tempting array of services to attract customers. The financial services provided by the banking industry are the following: demand deposits, times deposits, loans, electronic transfer of funds, financial advice, payroll service, certified checks, trust services, safe-deposit boxes.

The three most important banking services are accepting deposits, granting loans, and providing electronic funds transfer.

### **The Deposit Side of Banking**

Firms and individuals deposit money in checking accounts-demand deposits-so that they can write checks to pay for purchases. A check is a written order for money amount to the business or person indicated on the face of the check. Today, most goods and services are paid for by check. Most financial institutions charge an activity fee or service charge for checking accounts. For businesses, monthly charges are based on the average daily balance in the checking account and on the number of checks written.

Saving accounts (time deposits) provide a safe place to store money and represent a very conservative mean of investing. Depositors can usually withdraw money from passbook accounts whenever they wish to. A depositor who is willing to

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leave money with a bank for a set period of time can earn a higher rate of interest. To do so, the depositor buys a certificate of deposit (CD).

A certificate of deposit is a document stating that bank will pay the depositor a guaranteed interest rate for the money left on deposit for a specified period of time. The interest rate always depends on how much is invested and for how long. Depositors are penalized for early withdrawal of funds invested in certificate of deposits.

### **The Lending Side of Banking**

Credit is purchasing power that is exchanged for a promise to repay it, with or without interest, at a later date. A credit transaction is a two-sided business activity, which involves both a borrower and a lender. The borrower is most often a firm or a person that wishes to make a purchase. The lender may be a bank, some other lending institution, or an intermediary involved in the purchase.

Banks lend money because they are in business for that purpose. The interest they charge is what provides their profit. There are at least two reasons why other businesses extend credit to their customers. First, some customers simply can't afford to pay the entire amount of their purchase immediately, but they can repay credit in a number of smaller payments, stretched out over some period of time. Second, some firms are forced to sell goods or services on credit to compete effectively when other firms offer credit to their customers.

Today the effective management of credit is a practical necessity for most businesses. Credit terms can be used as a competitive weapon, and firms can earn a profit from interest charges. The major pitfall in granting credit is the possibility of nonpayment and the resulting loss of income. However, if a firm follows the five C's of credit management, it can minimize this possibility.

Commercial banks, savings and loan associations, credit unions and other financial institution provide short-term and long-term loans to both individuals and firms. Short-term loans are those that are to be repaid within one year. For businesses, short-term loans are generally used to provide working capital that will be repaid with sales revenues. To ensure that short-term money will be available when it is needed, many firms establish a line of credit. A line of credit is a loan that is approved before the money is actually needed. Because all the necessary paper work is already completed and the loan prepared, the firm can later obtain the money without delay, as soon as it is required. Even with a line of credit, a firm may not be able to borrow money if the bank does not have sufficient funds available. For this reason, some firms prefer a revolving credit agreement, which is a guaranteed line of credit.

Although there are many short-term financing needs, two deserve special attention. First, certain necessary business practices may affect a firm's cash flow and create a need for short-term financing.

Cash flow is the movement of money into and out of organizations. The ideal is to have sufficient money coming into the firm, in any period, to cover the firm's expenses during that period. But the ideal is not always achieved. Short-term financing

is then needed to pay the firm's bills until customers have paid theirs. An unexpectedly slow selling season or unanticipated expenses may also cause cash flow problems.

A second major need for short-term financing related to a firm's cash flow problem is that of inventory. Inventory requires considerable investment for most manufactures, wholesales and retailers. Moreover, most goods are manufactured four to nine months before they are actually sold to the ultimate customer. As a result, manufacturers that engage in this type of speculative productions often need short-term financing. The borrowed money is used to buy materials and supplies, to pay wages and rent, and to cover inventory costs until the goods are sold. Then, the money is repaid out of sales revenue.

Long term business loans have a longer repayment period, generally three to seven years but sometimes as long as fifteen years. They are most often used to finance the growth of a firm or its product mixes (all the products that a firm offers for sale).

Most lenders prefer some type of collateral for both business and personal long-term loans. Collateral is real or personal property (stocks, bonds, land, equipment, or any other asset of value) that the firm or individual owns and that is pledged as security for a loan. The lender can repossess the collateral if the borrower fails to repay the loan according to the terms specified in the loan agreement.

Repayment terms and interest rates for both short-term and long-term loans are arranged between the lender and the borrower. For businesses, repayment terms may include monthly, semiannual, or annual payments. Repayment terms and interest rates for personal loans vary, depending on how the money will be used and what type of collateral, if any, is pledged. Borrowers should always search for a loan, comparing the repayment terms and interest rates offered by competing financial institutions.

#### **Electronic Transfer of Funds**

The newest service provided by financial institutions is electronic banking. Electronic funds transfer (EFT) system is a means for performing financial transactions through a computer terminal or telephone hookup.

Automated teller machine is an electronic bank teller, a machine that provides almost any service a human teller can provide. Once the customer is properly identified, the machine can dispense cash from the customer's checking or savings account or can make a cash advance charged to a credit card.

Most automated teller machines can also accept deposits and provide information about current account balances. Automated teller machines are located in bank parking lots, supermarket drugstores, and even gas station. Customers have access to them any time, day or night.

Where automated clearinghouses are available, large companies can use them to transfer wages and salaries directly their employees' bank accounts without making out individual paychecks. The automated clearinghouse system saves time and effort for both employers and employees and it is a measure of security to the transfer of these payments.

A point of sale terminal is a computerized cash register that is located in a retail store and connected to a bank's computer. At the cash register, you pull the debit

cards through a magnetic card reader and you enter the personal identification number. A central processing center notifies a computer at the bank that someone wants to make a purchase. The bank's computer immediately deducts from the checking account the amount of the purchase. Then, it is added to the store's account. Finally, the store is notified that the transaction is complete and the cash register prints out the receipt.

There are numerous types of cards. The most commonly used are debit cards and credit cards. A debit card is a type of plastic money, which allows payment to be taken directly from the bank account.

With a credit card, money is deducted immediately from the account. A credit-card transaction, on the other hand, involves a short-term loan made to the bank or credit card company. The use of a point of sale terminal has two advantages. First, you don't have to write a check to pay for merchandise. Second, the retailer doesn't have to worry about nonpayment because the money is withdrawn from the account immediately.

Individuals can authorize their banks to make payments to various creditors by using a touch-tone telephone like a computer terminal. The customer simply punches in the required information and the bank transfers the funds automatically.

Bankers are generally pleased with electronic funds transfers because they are fast and eliminate some costly processing of checks. However, many customers are reluctant to use The Electronic Funds Transfers Systems. Some customers simply don't like "the machine", others fear the computer will garble their accounts. But the customers are protected in case the bank makes an error or the customer's identification card is lost or stolen. No doubt the use of Electronic Funds Transfers will increase, as people become more familiar with it.

A network as diverse and influential as the banking industry must be subject to uniform regulations and controls. In fact, regulation of banking in the country really amounts to regulation of our economy at large.

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## **ENVIRONMENT PROTECTION STRATEGY AND THE PREPARATION OF ROMANIA JOINING THE EUROPEAN UNION**

**IOAN NICOLAE TIUZBAIAN\***

**Abstract:** Sustainable development means, pragmatically, the maintenance of the living possibilities and conditions for the coming generations, especially the preservation of regenerative natural resources – at least at the level of those already existing – for the present generation, as well as the improvement of the environmental factors affected by pollution. The lack of material and financial resources, the difficult access to “clean” technologies, the deficiencies in the formational and mostly informational education, the spiritual pollution is strongly restrictive factors for the promotion of spectacular measures aimed at the environment protection and rehabilitation.

**Key Words:** sustainable, environment, preservation, development, management, pollution, resources, scenario.

### **1. ENVIRONMENT PROTECTION STRATEGY AND SUSTAINABLE DEVELOPMENT**

Environment protection matters are particularly complex and concern all the activity sectors: economic, social and political ones. The proper solutions of these matters demand the participation of all environment pollution factors, as well as of the ones interested in the environment protection, mainly the population and its representatives elected within various organisms, non-governmental organisations, in a word, the entire stated structure.

Sustainable Development means, pragmatically, the maintenance of the living possibilities and conditions for the coming generations, especially the preservation of regenerative natural resources - at least at the level of those already existing - for the present generation, as well as the improvement of the environmental factors affected by pollution. Spiritually, sustainable development means much more, namely to

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preserve the cultural inheritance, coming from the past and from the present, and also to cultivate the creative capacity of the elite to come.

**A sustainable development** cannot be conceived without a proper environment protection, such as:

- the development, preservation and turning into account of the *natural capital* under its bearing limit, first and foremost that of the natural resources apt to regenerate (waters, soil, forest, fauna, flora, protected zones, ecosystems, etc.) - a primordial wealth of the present - day generation but also of the generations to come;
- the continuous reorganisation and expansion of *physical capital* in keeping with the environmental conditions, with the attained economic stage and with the actual state of the population's health;
- the development of *human capital*, which is the predominant component of the entire capital conditioning the country's progress.

*When the Environment Protection Strategy was elaborated, one took into account the natural resources this country disposes of, its level of economic and social development and especially the quality of the environment factors. All these are in fact premises, starting points in the Strategy setting up.*

The strategy should observe both the targets established on a national plane and the ones which this country is expected to deal with by virtue of the International Conventions Romania has adhered to or is a party of. It is impossible, unless one has a proper strategy, to solve the very complex issue's environment protection rises. The strategy requires the elaboration of the National Action Programme, connected with the Action Programme for the Environment Protection in Central and Eastern Europe - *Lucerne, 1993* - the general principles of which have also been adopted by this country.

## **2. ENVIRONMENT PROTECTION STRATEGY IN ROMANIA**

The Environmental Protection Strategy elaborated by the Ministry of Waters, Forests and Environmental Protection, should observe the target established on a national plane and the ones which this country is expected to deal by virtue of the International Conventions where Romania has adhered to or is a party of.

### **2.1. General Principles of the Environment Protection Strategy**

The following general principles have been adopted for the elaboration of the Environment Protection Strategy:

- The preservation and improvement of people's health;
- Sustainable development;
- Pollution avoidance by warning;
- Conservation of biodiversity;
- Preservation of the inherited cultural and historical assets;

- “The polluter has to pay”;
- Stimulation of environment rehabilitation activities.

## **2.2. Criteria for fixing up the priorities regarding the environment protection targets**

Taking into account the environment protection general principles, the environment conditions in Romania, the following criteria were adopted so as to enable the establishment of priorities as regards the actions to be undertaken for the environment rehabilitation and protection:

- The maintenance and improvement of the population’s health and of life quality, corresponding to the first principle of the Environment Protection Strategy;
- The preservation and improvement of nature’s existing potential, corresponding to the sustainable development;
- Protection against natural calamities and accidents;
- Maximum profit/cost ratio
- Connection to the provisions of International Conventions and to the environment protection International Programmes;
- The preparation for Romania’s joining the European Union.

## **2.3. Scenarios regarding the investment for environment protection strategy and the estimation of their effect**

It is very difficult to make a quantum estimation of the investments for environment protection purposes but their effect are even more difficult to estimate.

This is the reason why only certain scenarios can be presented, on a macroeconomics level, starting from realities existing in this country and in other countries as well.

The environment protection strategy scenarios that were analysed refer to the evolution of the main polluters emissions, taking into account the necessity of the sustainable development of the industry, agriculture, of the populated centres, transports and of other activities.

### **2.3.1. Scenario A**

Maintenance of the present rhythm of investments for the environment protection, i.e. about 2.73% of the State Budget, respectively some 0.65 of the Gross Domestic Product (GDP).

It is estimated that the measures to be adopted within this scenario will lead:

- To the pollution reduction by 20-30% until 2005-2010, as regards the carbon oxide, ammonia, methane under such circumstances as an industrial output volume in the year 2000 will represent some 80% of the one in 1989



- (reference year) to reach 100% by 2005-2010. The carbon dioxide emission will either remain practically constant, or will slightly grow.
- The heavy metals will curb down by about 80% during the period 2005-2010.
- The emissions of substances that destroy the ozone layer will be cut to zero in the period 2005-2008.
- Regarding the water supply, the present day deficit will be cut to 50% in 2005.
- The municipal water treatment plants will be commissioned and will expand by 20-30%..
- The surface waters quality will improve.
- The forest fund will undergo a rehabilitating process in the areas where it has been damaged due to faulty exploitation and will start developing both intensively and extensively, so as to cover 29-30% of this country's area by 2005-2010, including the area covered by forest belts.
- Agriculture will develop at a rather slower pace until 2005, to gather momentum after this year.

### **2.3.2. Scenario B**

The doubling of the present investments rhythm for environment protection purposes. The investments will thus amount to some 5.5% of the State Budget, 1.2% of the GDP, respectively, as it is also by the experience of certain EU 12 countries and they will result in the shortening of the effects expectation as provided in Scenario A, by about 5 years.

Scenario A is considered to be more realistic, its possibility of approaching the Scenario B pending on the development of the financing sources.

Even though in both scenarios certain polluters emissions will grow during the next 3-5 years, they will curb down afterwards, remaining below the figures corresponding to 1989, most of them even below the 1995 figures registered in the EU 12 countries.

## **3. THE WAY IN WHICH THE ENVIRONMENT PROTECTION STRATEGY RESPONDS OF THE PREPARATION OF ROMANIA JOINING THE EUROPEAN UNION**

During the eleven years that passed since December 1989, important steps were made in the environment protection activity in Romania. The polluters emissions were reduced not only due to industrial output curbing down but also consequent to the actions undertaken as regards the environment protection; an adequate institutional framework has been set up at a central level, as for instance the Ministry of Waters, Forests and Environment Protection, the specialised institutes, as well as at a territorial level.

As far as education and tuition are concerned, actions were rendered by introducing the ecology objects of study into the school programme, by setting up sections dealing with environment engineering and ecology in the higher educational institutes and by organising post graduate courses of lectures and workshop on environment issues.

An important number of non-governmental organisations are preoccupied by the environment matters.

There are certain political parties declaring themselves ecologist, although few of them are entitled to.

The International Conventions and Programmes on the environment protection Romania has adhered to or is a party of contribute, by the fulfilment of the obligation incumbent upon it, to the preparation of this country's joining the European Union.

From the point of view of the environment matters, the advantages and opportunities of own joining the European Union result at least the following actions, which are beneficent to Romania:

- Transfer of "clean" technologies having high efficiency, facilitating the saving of the natural resources and the curbing down of pollution which in Romania has a marked local character;
- The financing of certain environment protection programmes and action with non-reimbursable funds or low interest loans; an easier access to the funds set up by international bodies concerned with the environment protection;
- The possibility to acquire a sustainable development, especially in certain sectors where the polluters emissions per inhabitant and year in Romania are below the average values in the European countries;
- The more rapid restructuring of the non-profitable enterprises which pollute the environment with no major social negative effects;
- Access to information and to modern systems of professional training in the field of environment; training courses in Romania with foreign technical assistance or specialised courses in the European Unions countries;
- The uniformization of the environment protection legislation;
- The bringing to the same level, in the course of time, of the life and health conditions in Eastern and Western countries;
- Better conditions of prevention of certain misunderstandings in matters concerning transfrontier pollution.

Romania's joining the European Union within the shortest possible time also means the doing away with certain conditions generating unfavourable situations as regards the environment protection, such situations being frequently encountered in this country during the period of transition to the market economy, such as:

- highly trained specialists left this country, for other places where the living conditions are better;
- imports of poor quality foodstuff or their "production" in Romania, in doubtful circumstances, with labels that conceal the reality;
- the import of old technologies and even of wastes, etc.;

- the import of products which are results of intellectual activity and lead to spiritual pollution.

The achievement of the environmental protection tasks requires investments exceeding 0.6 % of the Gross Domestic Product, respectively 2.73 % of the State budget.

Taking into account the economic situation in this country, the analysed scenarios show that a supply of funds from foreign sources is necessary to speed up the achievement of the environment conditions in the prospective of Romania's joining the European Union.

#### 4. GENERAL CONCLUSIONS

For the implementation of any of the mentioned scenarios a transfer of "clean" technology is necessary from the advanced countries to Romania, for at least two reasons:

1. the same investment for the polluting reductions in the developing countries has an effect which is 3-5 times bigger than if the investment was achieved in economically advanced countries;
2. the economically advanced countries have the duty to reduce the global pollution for which they are highly responsible (the destruction of the ozone layer, the climate modifications, the modification of the biodiversity) and, in keeping with the "polluter - payer" principle, they should grant compensation to the developing countries for the provoked damages, offering them non-reimbursable credits and technology transfers.

The lack of material and financial resources, the difficult access to "clean" technologies, the deficiencies in the formational and mostly informational education, the spiritual pollution is strongly restrictive factors for the promotion of spectacular measures aimed at the environment protection and rehabilitation.

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## **THE ROLE OF THE STOCK EXCHANGE IN THE TRANSITION PERIOD TO THE MARKET ECONOMY IN ROMANIA**

**IOAN UIFĂLEAN, ALINA FLEȘER\***

**Abstract:** The article makes a review of the role that the Stock Exchange has in the market economy and a short history of it in Romania. It also makes a presentation of the OTC (“over the market”) market – which is a component of the secondary capital market. The indisputable international leader of this market is NASDAQ, and for Romania the transactional system on the OTC market is RASDAQ.

**Key-Words:** stock exchange, black market, secondary market, BVB, OTC, RASDAQ.

”In many communist countries the stock exchange represents, next to McDonalds, an icon of capitalism. The constitution of a stock exchange has because of that a symbolic value and can give credibility to the governmental efforts directed towards the economic reform” – was written in ”The Financial Times”.

The constitution of the stock exchanges represents before all an essential component of the reform, of the measures regarding the bringing into operation of the economic market institutions and mechanisms after several decades of totalitarianism.

The nucleus of the financial market, the stock exchange – even in its incipient form – ensures the manifestation of the request and the offer of capital in the economy and the relaunching of the financial circuit on economical criteria, valorizing the role of the financial mechanisms in the process of the national economy development. From the centralized economy, with its mechanical levers for macroeconomic setting, it reenters in the normality of the modern economy, based on financial means to join the economic agents in a business system governed by the laws of the market.

The request for organized markets also represents a necessity for the against a phenomenon that characterizes many countries in an economic transition: the system of the underground markets, “the black market”.

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The prosperity of the black market comes right from the inability of the system to ensure an open and free confrontation between demand and offer, a realistic reflection of the report between production and consumption. As to the capital market in Romania and especially the stock exchange and the commodity market, it has deep roots in the history of our people.

The beginnings of the stock exchanges and the commodity markets in our country can be situated in about the middle of the past century. Once with the law regarding the exchanges, exchange intermediaries and merchandise intermediaries on June the 1<sup>st</sup> 1881, we can talk about a more serious organization of the stock exchanges in the Old Kingdom. This law modified in 1886 had been applied until 1904, when it was replaced with the law of the commerce exchanges.

Until 1918 the stock exchange will have been strongly affected by the social-political events of those times, but at that moment, according to the writings of the epoch “a collective psychosis that drew the people towards speculation” was recorded.

In 1929 a new stock exchange law was voted for, that brings with it a series of modifications of conception and juridical solution imposed by the requests of the development of the exchange activity in our country and according to the international practise. First of all the status of the stock exchanges was better defined, as they were declared public institutions; another innovation is the separation of the effects, stocks and exchange (the stock exchange) exchanges from the commodity markets. A higher attention is paid to the management and the organization of the exchange, to the control over the operations and the modality of selecting the personnel.

After 1989 the forming and the development of the capital exchange in Romania and the setting of the stock exchange represents essential components of the restructuring process of the economic system in our country and of creation of mechanism and institutions specific to a market economy. In Romania after December 1989 there had been a series of reasons that really imposed the setting of a stock exchange. First of all the apparition in the economy of several private companies, under the form of share companies, that used the public issue of shares (titles), needed an organized market where these titles could be issued (the primary market) and transactionned (the secondary market). This organized market protects the interests of the investors and stimulates the initiative of some financial investments. At the same time the possible loans of state made on an interval level through the issue of bonds needs the setting of a secondary market for the titles of the loan, to sustain both the interest for the acquisition of the bonds and their financial circuit after the issue.

Another premises of the setting of the exchange is the process of the “great reform”, which began in April 1991 with the issue of property certificates and which has to get a financial support, a secondary market that allows the current knowledge, on the basis of the request and offer, of the market course of these certificates. Taking into consideration the fact that the issue of property certificates began in 1991, and the Bucharest stock exchange appeared in 1994, the titles used as tools for the privatization had been issued before an approximation of their nominal value was made, but they were put into circuit without the existence of a market to certify their market value, the

current course. Of course, it is not the stock exchange that will valorize some titles whose use and real capacity to produce further incomes are not known. But the opening in parallel with the evaluation process of the real assets that the property certificates are based upon of a secondary market for these certificates is a condition of the success of the scheme of the “great reform”.

In the third place, the stock exchange, considering its development and recognition, can give consistency to the stimulating measures of the investments in economy, to the mobilization of the money for the financing of the autonomous reggie and the commercial companies. In the context, the stock exchange represents the most efficient mechanism to bring about available funds to the population, an active form of placing for all the fund owners. In the same time, the creation of the stock exchange also represents a modality to bring about foreign capital, offering to those interested a synthetic image over the business climate in Romania in the case of the launching of the stock exchange institution, a guarantee of the irreversible and efficient character of the reform.

The law no. 52 in 1994 adopts the formula of the stock exchange as a public institution that is to be created by the CNVM decision, having as members at least five personal estate societies authorized to work in stock exchange.

The creative process of the BVB required the following steps:

1. The publishing of the law in “Monitorul Oficial”;
2. The validation of the law;
3. The appointment of the CNVM members by the Romanian Parliament;
4. The agreement of the Extraordinary General Assembly and the Administration Council regarding the solicitation of the Negotiation Certificate in the BVB;
5. The submission of the offers for the authorization of at least two agents for personal estate values;
6. The individual request to be given the Negotiation Certificate in BVB for each personal estate society;
7. The common request addressed to CNVM by at least five personal estate societies authorized to negotiate in the stock exchange, through which the creation of BVB is required;
8. The granting of the Negotiation Certificate in BVB of the required personal estate societies;
9. CNVM issues the decision to create the stock exchange.

As to the BVB quotation – it is structured as following:

- The section of the personal estates issued by Romanian juridical persons;
- The section of the bonds and other personal estates issued by the state;
- The international section.

Considering the major role of the stock exchange in the economy, it is only those societies that correspond to reliability, performance and competitiveness specific to a concurrently economy that can make the object of the stock exchange quotation. In the meantime the Romanian stock exchange must meet the requests of mobilization of the capital for the financing of the national economy, of the state and of the private

companies and on the other hand of the insurance of a favorable placement for the funds available for most of the people.

An important factor in this way is the degree of attractiveness of the stock exchange. If it does not offer enough motivations for the stock holders, the shares and bonds transactions will be embezzled, will take place outside the stock exchange and in the most unfavorable event, will supply the unorganized markets, the speculative ones. On the other hand, there is the danger of a stock exchange activity dominated by speculative factors, with successive ups and downs of the share course, having most unfavorable effects on the money market and on the whole business activity.

As to markets outside the stock exchange, they can have a higher or lower degree of organization. The transactions in these markets are arranged between the potential buyers or sellers and a big financial institution that, typically, in the developed countries, is an investment bank. These transactions can be dimensioned in order to satisfy the buyer's or the seller's specifications, while in the capital market the transactions are relatively homogenous to sustain the liquidity of the commercialized shares.

The "over the counter" markets (OTC) are usually more active in transacting the derived instruments (the derivatives are market products sub-adjacent to those to the assets), as well as the option contracts, the contracts at term through some buyers or sellers try to make highly specialized contracts. The OTC market is a component of the secondary capital market, taking part in the category of the secondary stock exchanges and being the second standard as importance and impact over the economy.

Companies that either have a local importance, or are new, or have a developing level that does not allow them the access to the official quotation issue the personal estates that are transacted on the OTC market. At present most of the countries with a market economy have besides the official stock exchange an OTC market that successfully completes the investing process on the capital market.

The well-known international leader of the OTC markets remains NASDAQ. So NASDAQ is at the same time an institution, a transactional system and an informational system. The OTC market in Romania was generally conceived for the transaction of the personal estates resulted from the mass privatization, after which was created a segment of about 13 million share holders, owners of a quantity of hundreds of personal estate shares. Created after the model of the completely informational stock exchange NASDAQ, the OTC market in Romania needed to choose an extremely strong information system. The transactional system for the Romanian OTC market is called RASDAQ and it is created on the basis of the PORTAL system of the RASDAQ market. The main characteristics of the RASDAQ system are:

- It offers the support for the subscription and the forming of a trade union of the public offers initial on the capital primary market;
- It constitutes a support in transacting and current compensation of the issues already launched on the primary market;
- The dynamic actualization of the quotations and their visualization on screens and electronic table in real time;

- The processing of the transactions for a number of 4000 different personal estate shares;
- The connection at distance of the participants on the OTC market through communication networks;
- The taking part in the European transactional system and in other international financial centers;
- The acceptance of a wide range of titles: shares, bonds, derivations, certificates and other stock exchange products of the issuers in the whole world.

Those taking part in the RASDAQ transacting system are classified in four users levels: brokers and dealers; qualified institutional investors; reports – exclusively (RASDAQ members); information – exclusively.

In order to insure a most quickly passing to the market economy in Romania, a determinant factor is the role of the capital market. This, through all its elements, must have a relatively equilibrated character, to be realized at international standards, to insure the efficiency (the profitableness) of the investments, a business environment good for the internal and external investments on short and long term. In Romania there must be emphasized the attracting of the foreign capital through the guarantee of the security of the investments. Of course, for the time being, our country, due to the economic, politic and social fluctuations can not be considered a safe financial environment.

Any foreign investor before deciding to invest is interested in the rating of that country. A rating means an evaluation made by an independent private agency over the risk of not paying a bond by a creditor. The rating is a specific notation of the risk quality of a certain issue. In the end we can conclude that Romania has rallied to the countries with transition to the market economy regarding the capital market and paraphrasing the French historian Fernand Braudel, we can say the "the stock exchange is the last floor of a market that does not close any longer, that overruns and dominates the whole economic reality".

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