The Challenges and Perspectives Regarding the Estimating of the Environmental Reputation of Romanian Small and Medium-Sized Enterprises

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Abstract

In a society where success is almost mandatory, environmental reputation has become one of the most controversial issues in accounting. This paper's main purpose is to discuss, according to the transition to IFRS, the answer to the following questions: Could environmental reputation be a signal that policy makers have promulgated standards so complex, unwieldy and conceptually challenged that any hope of systematic compliance, still less the production of serviceable information via their application is no more than a mirage - a false impossible shore? Since we are currently passing a time of economic crisis due to the global crisis event, we decided to use a linear programming model that allows assessing the implications of environmental reputation, with examples in Romanian SMEs. The results of this paper revealed the problems concerning environmental reputation valuation and recognition in a period of crisis.

Keywords: environmental reputation, crises, small and medium sized enterprises

JEL code: P31, O12

1. Introduction

The managers of SMEs companies are flexible and creative people and their business growth is qualitative rather than quantitative.

The central theme of this article is the development of environmental reputation issues as intangible asset at international, European and national level. Against this background I searched for reasonable answers to the following questions: Could environmental reputation be a signal that policy makers have promulgated standards so complex, unwieldy and conceptually challenged that any hope of systematic compliance, still less the production of serviceable information via their application is no more than a mirage - a false impossible shore?

The present research started from the idea that, at a global level environmental reputation is a reality as important as the enterprise. A review of economics literature indicates the problem of environmental reputation as intangible asset as an insufficiently explored topic. In Romania, the topic of intangible assets is relatively recent, coming into debate during the last 10 years. But looking to the countries with a market economy with tradition and taking into account Romania’s alignment to the European Union, an increase of this phenomenon is to be expected in Romania.

In order to obtain answers to the already mentioned questions, I used the White Paper of SMEs edition 2012 as data source and applied a model to optimize the components of intangible assets (linear programming model) on data from 2008 - 2012 related to Romanian listed and unlisted companies. In the following, I present first the current trends of research, of conceptual framework and of international, European and national legislation framework on the topic of intangible assets. I address then the technical and practical aspects concerning the recognition, measurement and presentation of intangible assets. In the next step, I present the results of empirical investigation of the environmental reputation characteristics as intangible asset in the context of accounting convergence.

This paper aims at shedding a different light on the value of “environmental reputation ” as intangible asset of firms, as an integrator of all categories and types of intangible assets generating hidden value in companies. Further, I argue that management assessment techniques as intangible asset (environmental reputation) are to be adapted to Romanian companies, in order to create an appropriate formal framework for reporting its value in the annual situations made available to owners of firms, but also to the stakes-holders.
To highlight how firms should be supported in order to generate additional value by increasing the environmental reputation as generator of intangible value for the company, I focused on methods based on non-financial indicators, which cannot be processed favourably on command. Thus one can identify the environmental reputation that has to be improved in order to increase the value of a firm.

The conclusion emphasizes that only by the recognition, measurement and presentation of environmental reputation as an intangible asset of firms one can identify effective managerial interventions needed to generate added value for a company in the interest of owners and society at large, and that the accounting for this type of intangible asset at the fair value becomes a necessity in the context of international accounting convergence.

2. Environmental Reputation As Intangible Asset - Key Factor of Accounting Convergence Process

The extent of entrepreneurship and small business development in the economies of former socialist countries can be accountable for the nature of entrepreneurship development processes. It can be argued that entrepreneurship in transition economies has received less attention than warranted by the nature and extent of changes that occurred in the previous socialist economies. At the same time, there was also a strong desire to try to summarize some of the results emerging from a number of countries in Central, Eastern European countries and former Soviet republics.

In his book "Post-capitalist society", Peter Drucker argues that the knowledge is a new resource in economy, which adds to the three traditional factors: capital, labor, and land. Therefore, the most important concern of a manager must be the training, the development, the motivation, the reward and ensuring employee’s satisfaction in an enterprise.

During the recent decades the idea of an increase in importance of the intellectual capital has gained increasingly more acceptance. It is often considered nowadays that "intellectual capital is the engine of the new economy" or that the most valuable commodity is represented by "knowledge and information". The new economy is viewed as an economy where the value of companies lies in the knowledge and skills of business managers / employees rather than in the value of tangible assets. Moreover, many economists have stressed the importance of intellectual capital as a production factor in comparison to the traditional assets. There are two main theories on economic growth: the neo-classical theory of exogenous growth and the theory of endogenous growth. Intangible assets are reflected different in the endogenous model. According to endogenous growth model, the production growth is defined as a function dependent on the accumulation of intangible assets. In time, permanent growth is possible only if the intangible capital stock virtually changes endlessly.

The problem of environmental reputation as intangible asset is not new and the problem of "intellectual capital" is the last trend developed in knowledge management. Researchers from Deloitte & Touche conducted for example a study in which they wanted to measure whether the differences between accounting value and market value of a company can be ascribed to the way in which companies use their human capital. The survey showed that up to 43% of this value difference can be explained by the contribution of human capital. The remaining difference is due to the company’s business profile (profit, number of countries where it operates, stock ticker, organizational culture) and other factors such as intellectual capital.

The study identified further six categories of key factors for increasing company value: setting salaries from the start, measuring employee’s performance, increasing productivity, talent management (identifying key positions and best personnel to occupy these positions, opportunities for professional development and career planning), pay according to performance and strategic communication. The first three categories depend on the company’s market orientation and the other three categories are universally applicable. Each factor was given a score from 1 (worst) to 100 (best), in order to calculate the importance of each one in the value creation process. The scores were in the range 4-81, a score above 60 meaning that the company manages its human capital well, and a score below 40 meaning that the company needs to review its human capital strategies.

This study allowed an analysis of all components of intellectual capital, namely: Market intangible assets as brand, customer base, distribution network, etc.;

- Intangible assets belonging to the people in the company as skills and expertise, problem solving skills, leadership skills, etc.;
- Intellectual property;
- Infrastructure-type assets such as all the processes, technologies which support company’s operation.
From a practical perspective, the distinction between intellectual capital and intangible assets offers a gain, because it helps to understand and present the "intellectual capital accounts", which normally can be included thus in the annual report of the company. Also, for some time, there was not a very clear difference between "knowledge management" and intellectual capital. Basically, "knowledge management" refers to the management of intellectual capital controlled by a company, in other words it describes the environmental reputation process which has intellectual capital as object. In the following, I point out succinctly the importance of each component for creating the value of the intangible asset called environmental reputation.

The academy provides in most cases a way to learn and think, which is later developed in practice by applying the acquired knowledge. Know-how refers all knowledge and skills necessary to perform certain activities or operations. It can be learned, but in most cases it comes from personal experience.

Knowledge and skills are not everything though, so that companies need employees who are able and want to use these to the company’s advantage. The company has reduced capacity to influence this aspect of intellectual capital, because it depends on each person’s personality. There are companies that put knowledge and attitudes on equal foot. The ability to apply knowledge and skills in very different situations and the ability to innovate, to transform ideas into products or services is fundamental to the success of a company.

Innovation is the ability to build on previous knowledge and generate new knowledge. It is essential for renewal and development of the company. The know-how of the company can be created and developed through innovation. There are companies that have a low innovation level, although they have a very high research and development budget. In the economics literature, the most important indicators of intellectual agility are:

- Cost savings due to ideas suggested by managers;
- New solutions or new processes;
- Index of diversification of the company.

Of course, meeting all these requirements depends up to a certain degree on the personality and character traits of the manager, but primarily on his/her level of professionalism, on the willingness to acquire new knowledge and managerial skills, to develop strategic thinking. All these represent demands particularly important to be fulfilled by managers, in order to ensure a realistic future direction of business and an efficient management of their business. Essentially, nowadays environmental reputation is regarded as a key element together with the ability of firms to attract new capable people. This statement is supported also by factors that influence intellectual capital, namely:

- The revolution in information technology and knowledge based economy;
- The increasing importance of knowledge and knowledge based economy;
- The change of the fundament of interpersonal activities and of society - network;
- The emergence of innovation as the main determinant of competitiveness.

Human capital, like physical assets, is difficult to assess. Trying to assess the human capital as a separate asset in a company is only an approximation and it cannot be regarded as a result of exact science. New intangible assets, such as employee competence, customer service, administrative system, information system, etc. are not recognized in the traditional accounting reporting system. Interestingly, traditional intangible assets such as patents, licenses, copyrights, etc., are present in the financial reports only if they meet certain conditions and criteria for recognition.

With all these improvements and facilities offered by science and technology, business management maintains a high intensity due to complications which are also progressing with time: natural resources reduce, growing global population, increasing globalization, increasing demands in all areas of life. As such, management registrants a trend of reducing direct experiments on systems, and this way, willy-nilly, it has to strengthen the methodology of development and use of models as tools for evaluating new strategies designed to control the consequences of existing uncertainties.

Current accounting systems, whose tools and financial reporting practices are still strongly imbued with Taylorism, encounter difficulties in identifying and measuring intangible assets. The major difficulty comes from the absence of the relationship "cause - effect" in the recognition of some costs as intangible and thus "activate" them in the balance sheet.
In the accounting practice and theory, several measurement bases have been accredited. In the general framework for the preparation of financial reports elaborated by the IASB, these measurement bases are historical cost, current cost, net realization, present value:

- **Historical cost**: assets are recorded according to the amount of cash or cash equivalents paid at the time of their purchase or at the fair value sum paid at the time of their purchase.
- **Current cost**: assets are recorded at the amount of cash or cash equivalents that would be paid if the same or a similar asset should be purchased now.
- **Net realization**: assets are recorded at the amount of cash or cash equivalents that could be obtained currently by normal sale of assets.
- **Present value**: assets are recorded at present value of future cash inflows to be generated in the normal course of business.

The problem lies in choosing the most appropriate of these in the context of meeting the requirements of users of accounting information on the one hand, and of respecting the principles and accounting fundamentals on the other.

Recent studies that emphasize the weak points of national innovation systems (inadequate internal organization of enterprises, of educational system, etc.) relativize previous results. On the one hand, one can notice that research is decreasing in most sectors, excepting the high-tech one, on the other hand, innovations generated by research-development are more incremental than radical and, therefore, have a moderate impact on long-term economic growth. Producers and users of financial reports considers that, in the measurement and presentation of accounting information, the most widely used is the historical cost, although it also has some weaknesses. It is usually combined with other measurement bases. Moreover, the tendency is to move towards using current cost in response to failure of the model based on historical cost accounting to resolve issues posed by the effect of changes in prices of non-monetary assets.

Reformulating the accounting model concerning value consists in reconsidering the fundamental principles of assessment. Accounting evolves from historical cost system to the one of fair value. However, the initial objective of accounting was establishing the price recovery, in other words, the original (historical) cost. Thus, from the beginnings of bookkeeping, assessment of all expenses and immobilizations of resources has been based on costs incurred with the title of inputs.

The registration procedure was the same for items kept in stock at the end of the year and thus immobilized. This led to aging of historical cost, which could not then afterwards display the correct value, which was correct for the periods posterior to registration. In recent years one agreed upon the idea of accounting of some payments (especially those regarding fixed assets) at the estimated value of flows which the (fixed) assets can bring to the entity (recoverable or coverage value), rather than at historical costs, a procedure applicable at least after a certain holding period. Equally well could be used for this purpose the possible resale price (price return and market value).

Of course, none of the methods, the classical one based on historical cost, respectively the new one based on current or market values, is infallible. The relevance of the traditional accounting model is still under debate. Not taking into account the expected performance, as discussed before, but also the poor accounting reflecting of intangible assets cast doubts on this model. Reluctance to calculate the size of the value of management as intangible asset is explained by the difficulty and the costs of implementing the existing measuring procedures, but also by the need to select relevant indicators.

### 3. Theoretical Background And Empirical Methodology

It was determined that the most appropriate model to optimize the components of intangible assets is linear programming model (LP). It is known that any model (PL) consists of two parts: the objective function and system limitations.

It employs the statistical correlation values of the indicators X and Y. We will refer to the first model for companies listed on stock exchanges. It is the first analytical methodology formulation; the objective function is a regression equation.

If we have a statistical selection of size \( n \)

\[
(Y_t, X_{1t}, X_{2t}, \ldots, X_{kt}) \quad \text{with} \quad (1 \leq t \leq n)
\]

(4.1)
carried on the vector:

\[
(Y, X_1, X_2, \ldots, X_k)
\]

where \(Y\) is the difference between the market value of the company and the value of equity (own - equity) of the balance sheet and \(X\) - the set of indicators expressing the company's objectives or management strategies for their extinction, then we can write the regression equation of the hyper plane related.

For linear regression function such that expresses the links between \(Y\) and \(X\) values for optimal management components research, the method of least squares (LSM) that if given the choice statistic (4.1) can determine the coefficients \(\theta_0\) and \(\theta_j\) with \((j = 1, k)\) related.

It is based on the regression equation of the hyper plane:

\[
Y = \theta_0 + \theta_1 X_1 + \theta_2 X_2 + \ldots + \theta_n X_n, \quad (1 \leq t \leq n)
\]

(4.3)

the ratio to be determined by using the values of statistical selection (4.1), the coefficients \(\theta_0\) and \(\theta_j\) \((j = 1, n)\)

Method method of least squares requires minimizing a function in this case has the form:

\[
\psi = \sum_{j=1}^{k} \left( Y_t - \theta_0 - \sum_{j=1}^{n} \theta_j X_{jt} \right)^2
\]

(4.4)

Minimizing this function is performed by canceling its partial derivatives with respect \(\theta_0\) and \(\theta_j\) with \((j = 1, k)\):

\[
\frac{\partial \psi}{\partial \theta_0} = 0; \quad \frac{\partial \psi}{\partial \theta_1} = 0; \quad \frac{\partial \psi}{\partial \theta_2} = 0 \ldots \frac{\partial \psi}{\partial \theta_n} = 0
\]

(4.5)

Hence the following linear system to be solved in relation to the unknowns \(\theta_0\) and \(\theta_j\) \((j = 1, n)\):

\[
\begin{align*}
\sum_{i=1}^{k} \theta_0 X_{i1} + \theta_1 \sum_{i=1}^{k} X_{i1} + \ldots + \theta_n \sum_{i=1}^{k} X_{in} &= \sum_{i=1}^{k} Y_i \\
\theta_0 \sum_{i=1}^{k} X_{i1} + \theta_1 \sum_{i=1}^{k} X_{i1}^2 + \ldots + \theta_n \sum_{i=1}^{k} X_{in} X_{i1} &= \sum_{i=1}^{k} X_{i1}^2 Y_i \\
\vdots & \quad \vdots \\
\theta_0 \sum_{i=1}^{n} X_{in} + \theta_1 \sum_{i=1}^{k} X_{i1} X_{in} + \ldots + \theta_n \sum_{i=1}^{k} X_{in}^2 &= \sum_{i=1}^{k} X_{in}^2 Y_i
\end{align*}
\]

(4.6)

This is a normal system of linear equations which is solved by the Gauss-Jordan method and thus resulting parameters \(\theta_0, \theta_1, \ldots, \theta_n\) of the equation (3.3), called the objective function of the model (PL).

The correlation is verified by multiple correlation coefficient \(r\), calculated as follows:

\[
r = \sqrt{1 - \frac{S^2_r (k - n)}{\sigma^2_y (n - 1)}} \quad (k - \text{sample}, n - \text{variable})
\]

(4.7)

\(SY\) is the standard deviation of the \(Y\) values calculated with the equation adopted and \(\sigma_y\) the standard deviation of the sample statistic values.

4. Data And Empirical Results

In developing this model and the database has left the analysis and grouping of 191 listed and unlisted Romanian companies in relation to environmental reputation indicator (Table 1). This indicator includes the following elements: reputation company manager who evaluates and employs people with valuable intellectual capital, years of experience in the profession, employee satisfaction, value added related to the employee, the report adds value to 1 Euro.
Table 1. Group of companies based on environmental reputation

<table>
<thead>
<tr>
<th>Group</th>
<th>Value environmental reputation</th>
<th>Firms on the interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Under 20,000 euro</td>
<td>89</td>
</tr>
<tr>
<td>II</td>
<td>20,000 – 40,000 euro</td>
<td>15</td>
</tr>
<tr>
<td>III</td>
<td>40,000 – 60,000 euro</td>
<td>16</td>
</tr>
<tr>
<td>IV</td>
<td>60,000 – 80,000 euro</td>
<td>11</td>
</tr>
<tr>
<td>V</td>
<td>80,000 – 100,000 euro</td>
<td>12</td>
</tr>
<tr>
<td>VI</td>
<td>100,000 – 120,000 euro</td>
<td>15</td>
</tr>
<tr>
<td>VII</td>
<td>120,000 – 140,000 euro</td>
<td>11</td>
</tr>
<tr>
<td>VIII</td>
<td>140,000 – 170,000 euro</td>
<td>10</td>
</tr>
<tr>
<td>IX</td>
<td>170,000 – 200,000 euro</td>
<td>7</td>
</tr>
<tr>
<td>X</td>
<td>Over 200,000 euro</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>191</td>
</tr>
</tbody>
</table>

Source: own calculations

Using the data presented in Table 1 is considered as a set of five statistical observations of vector elements above, registered firms whose data were used for the numerical realization of the model system of constraints (4.1) - (4.7) corresponding to achieving this companies over the last five years, will provide the data required. These are shown in Table 2.

Table 2. Statistical data on the evolution of the firm in the last 5 years

<table>
<thead>
<tr>
<th>Years</th>
<th>Environmental reputation Y, (Euro)</th>
<th>Increase Sales X₁, (%)</th>
<th>Value added per employee X₂, , Euro/employee</th>
<th>Employee satisfaction X₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6,000,000</td>
<td>11,00</td>
<td>25,000</td>
<td>2,05</td>
</tr>
<tr>
<td>2</td>
<td>5,430,000</td>
<td>4,00</td>
<td>26,250</td>
<td>2,10</td>
</tr>
<tr>
<td>3</td>
<td>27,150,000</td>
<td>11,00</td>
<td>28,000</td>
<td>2,25</td>
</tr>
<tr>
<td>4</td>
<td>38,010,000</td>
<td>7,50</td>
<td>27,500</td>
<td>2,20</td>
</tr>
<tr>
<td>5</td>
<td>35,750,000</td>
<td>5,00</td>
<td>25,000</td>
<td>2,40</td>
</tr>
</tbody>
</table>

Source: own calculations

The Y difference between the market value of shares and the net book value (equity) was calculated based on the representation of Table 2. X₁ sales growth is correlated with similar data from the relevant industry. Value added X₂ corresponds to the data in the financial statements of the company. For the satisfaction of people showed X₃ also monitor values of intangible assets based on market research.

In order to facilitate calculations the values in Table 2 were brought to a more compressed form in Table 3.

Table 3. Statistics of development indicators film company Y, X₁, X₂ and X₃

<table>
<thead>
<tr>
<th>t</th>
<th>Yᵣ (mil. Euro)</th>
<th>X₁ᵣ (%)</th>
<th>X₂ᵣ (mil. Euro)</th>
<th>X₃ᵣ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>11</td>
<td>25</td>
<td>2,05</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>4</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>10</td>
<td>28</td>
<td>2,25</td>
</tr>
<tr>
<td>4</td>
<td>38</td>
<td>7,5</td>
<td>27,5</td>
<td>2,2</td>
</tr>
<tr>
<td>5</td>
<td>35,5</td>
<td>5</td>
<td>25</td>
<td>2,4</td>
</tr>
</tbody>
</table>

Source: own calculations

Rewrite the regression equation expressing the dependence of the value of intangible asset management as Y and the three indicators X₁, X₂ and X₃, vary with time t in years,

\[ Yᵣ = \theta_0 + \theta_1 X₁ᵣ + \theta_2 X₂ᵣ + \theta_3 X₃ᵣ \]  

(5.1.)

To determine the four coefficients \( \theta \) of this equation using the data in Table 3, are launched into the method of least squares, according to the algorithm:
1. Write function $W$ of the small square to:
\[
W = \sum_{i=1}^{5} \left( Y_i - \theta_0 - \theta_1 X_{1i} - \theta_2 X_{2i} - \theta_3 X_{3i} \right) = 0 \tag{5.2.}
\]

2. Condition (1) shall be canceled if the partial derivatives of this expression
\[
\begin{align*}
\frac{\partial W}{\partial \theta_0} &= -2 \sum_{i=1}^{5} (Y_i - \theta_0 - \theta_1 X_{1i} - \theta_2 X_{2i} - \theta_3 X_{3i}) = 0 \\
\frac{\partial W}{\partial \theta_1} &= -2 \sum_{i=1}^{5} (Y_i - \theta_0 - \theta_1 X_{1i} - \theta_2 X_{2i} - \theta_3 X_{3i}) X_{1i} = 0 \\
\frac{\partial W}{\partial \theta_2} &= -2 \sum_{i=1}^{5} (Y_i - \theta_0 - \theta_1 X_{1i} - \theta_2 X_{2i} - \theta_3 X_{3i}) X_{2i} = 0 \\
\frac{\partial W}{\partial \theta_3} &= -2 \sum_{i=1}^{5} (Y_i - \theta_0 - \theta_1 X_{1i} - \theta_2 X_{2i} - \theta_3 X_{3i}) X_{3i} = 0
\end{align*}
\]
\[S_1\]

3. As in the above system (5.2) cannot be zero, it means that the so-called normal equation system, resulting from step (2) will be:
\[
\begin{align*}
\sum Y_i &= 5\theta_0 + \theta_1 \sum X_{1i} + \theta_2 \sum X_{2i} + \theta_3 \sum X_{3i} \\
\sum Y_i X_{1i} &= \theta_0 \sum X_{1i} + \theta_1 \sum X_{1i}^2 + \theta_2 \sum X_{1i} X_{2i} + \theta_3 \sum X_{1i} X_{3i} \\
\sum Y_i X_{2i} &= \theta_0 \sum X_{2i} + \theta_1 \sum X_{1i} X_{2i} + \theta_2 \sum X_{2i}^2 + \theta_3 \sum X_{2i} X_{3i} \\
\sum Y_i X_{3i} &= \theta_0 \sum X_{3i} + \theta_1 \sum X_{1i} X_{3i} + \theta_2 \sum X_{2i} X_{3i} + \theta_3 \sum X_{3i}^2
\end{align*}
\]
\[S_2\]

4. The $S_2$ system can substitute the values $Y_i$, $X_{1i}$, $X_{2i}$ and $X_{3i}$ the values in Table 3. To make it easier to work, the amount of the system is pre-calculated.
Replacing these values in the equation system $S_2$ leads to system $S_3$:
\[
\begin{align*}
111.5 &= 2.5\theta_0 + 37.5\theta_1 + 131.5\theta_2 + 10.9\theta_3 \\
1.637 &= 37.5\theta_0 + 636.5\theta_1 + 1.980\theta_2 + 163.1\theta_3 \\
5.937 &= 131.5\theta_0 + 1.980\theta_1 + 6.932\theta_2 + 573.5\theta_3 \\
503.7 &= 10.9\theta_0 + 163.1\theta_1 + 47.73\theta_2 + 573.5\theta_3
\end{align*}
\]
\[S_3\]

5. It solves $S_3$ system against unknown’s $\theta_0$, $\theta_1$, $\theta_2$ and $\theta_3$. Detailed solving is presented in Appendix 1. The solution of this system is:
\[
\begin{align*}
\theta_0 &= -273.33; \quad \theta_1 = -0.1423; \quad \theta_2 = 2.25; \quad \theta_3 = 41.15 \tag{5.3.}
\end{align*}
\]

6. Replace these values in the multiple regression equation (4.1) and the resulting:
\[
Y = -273.33 - 0.1423 X_1 + 2.25 X_2 + 41.15 X_3 = \hat{Y}
\]
\[5.4\]

7. Check the degree of correlation that it provides the relation (4.1).
For this purpose, use the formula (4.2), which gives the coefficient of correlation:
\[
r = \sqrt{1 - \frac{S_Y}{\sigma_Y^2}} \left( \frac{k - n}{n - 1} \right), \quad (k - \text{number of observations}, n - \text{number of variables})
\]

Table 4 presents the values of $Y_t$, $X_{jt}$ and calculations $\hat{Y}_t = f(X_{jt})$.

<table>
<thead>
<tr>
<th>$t$</th>
<th>$Y_t$</th>
<th>$X_{1t}$</th>
<th>$X_{2t}$</th>
<th>$X_{3t}$</th>
<th>$\hat{Y}$ (million Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>11</td>
<td>25</td>
<td>2.05</td>
<td>273.33–0.1423(11)+2.25(25)+41.15(2.05)=5.22</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>4</td>
<td>26</td>
<td>2</td>
<td>273.33–0.1423(4)+2.25(26)+41.15(2)=7.03</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>10</td>
<td>28</td>
<td>2.25</td>
<td>273.33–0.1423(10)+2.25(28)+41.15(2.25)=35.0</td>
</tr>
<tr>
<td>4</td>
<td>38</td>
<td>7.5</td>
<td>27.5</td>
<td>2.2</td>
<td>273.33–0.1423(10)+2.25(28)+41.15(2.2)=29.35</td>
</tr>
<tr>
<td>5</td>
<td>35.5</td>
<td>5</td>
<td>25</td>
<td>2.4</td>
<td>273.33–0.1423(5)+2.25(25)+41.15(2.4)=35.27</td>
</tr>
</tbody>
</table>

Source: own calculations
Under these conditions the estimate $S^2$ dispersion function $Y$ will be:

$$S^2 = \frac{(6 - 5.22)^2 + (5 - 7.03)^2 + (27 - 35)^2 + (38 - 29.35)^2 + (35.5 - 35.27)^2}{2.5 - 2} = 287$$

For standard deviation $\sigma_Y$, first calculate the average $Y$.

$$\bar{Y} = \frac{6 + 5 + 27 + 38 + 35.5}{2.5} = 22.3$$

Taking this into account, the variance (dispersion) $\sigma^2_Y$ will have the value:

$$\sigma^2 = \frac{(6 - 22.3)^2 + (5 - 22.3)^2 + (38 - 22.3)^2 + (35.5 - 22.3)^2}{4 - 1} = 660.5$$

Resulting correlation coefficient:

$$r = \sqrt{1 - \frac{287}{660.5} \frac{(2.5 - 2)}{(2 - 0.5)}} = \sqrt{0.86} = 0.93$$

Since we obtained $r > 0$, means that we are dealing with a direct correlation between variables. Value is reached, $r = 0.975$, states that it is a high correlation, which lends credibility to the use of the formula for practical purposes.

Regarding chances to overcome the crisis, Romanian firms immature to chance and have little chance of survival, while Romanian companies mature high-value intangible assets have theoretical chances much higher, but they have no guarantee that crisis will pass. It should be noted that the maturity of a company has nothing to do with her age.

5. Conclusion and Implications

Basically, international accounting bodies and the assessment ones pay attention to quality standards and implicitly to the methods for estimating their fair value of environmental reputation and reputation.

Environmental reputation is identifiable non-monetary assets, without physical substance, held for use for the production of goods or services, to be rented to third parties or be used for administrative purposes. Recognition of an element of environmental reputation requires the company to demonstrate that the item meets the definition above: to have identifiable character, to be controlled, to obtain future economic benefits and can to be able to assess at a reliable cost.

But an environmental reputation is the difference between the consideration paid and the purchaser's share of identifiable net assets acquired. This is a “partial environmental reputation and reputation” method because the non-controlling interest is recognized at its share of identifiable net assets and does not include any environmental reputation and reputation.

The results of this analysis raise more questions than they answer. Could this be a manifestation of inadequate competence or of stubborn unwillingness to yield to the precepts of the mandated reporting framework – comforted by a sense that meaningful rebuke is unlikely? Could this be a signal that policy makers have promulgated standards so complex, unwieldy and conceptually challenged that any hope of systematic compliance, still less the production of serviceable information via their application is no more than a mirage - a false impossible shore? For researchers at least, these puzzles are ripe with challenges we hope will not go long unanswered.

This pressure lies and that "today to be creative is a very difficult task and it is also a need for this millennium" as Bill Gates recognizes. Basically, annual accounts lifting covering environmental reputation remain the privilege of evaluation and accounting practitioners. So far, theoretical and normative approaches regarding management assessment as environmental reputation and reputation, in general, were based on theory. At present, the theory is not so much accepted and there is more and more discussion on a conceptual reorientation of accounting evaluation which could be a prerequisite for the establishment of an improved valuation model.

In our study we have shown, however, those companies applying international accounting rules are required to handle intense intangible values and the identification and management of risks related to recognition, measurement and presentation thereof. From this obligation there may result a competitive disadvantage for companies that only apply national rules that do not recognize and do not record any significant value on environmental reputation values. The solution is convergence, translated by aligning with international accounting standards.
Specifically, convergence requires a single set of standards, with the possibility of adapting their national realities, developed with the participation of representatives of several countries.

From the functional point of view the proposed model for risk analysis of intangible assets proved appropriate expectations. The objective function obtained from the multiple regression confirms its value in that it discriminates parameters correctly with dynamic variables X as experimental data and the correlation coefficient is $r = 0.93$.

It turned out that the intangible asset optimization using linear programming model proposed is economically efficient. Frame rate $\varepsilon$ in efficiency between the limits 0.9 and 1.5 with the 95% is an economic success, and it is also protected from serious risks.

After exposure of the main conclusions we reached during this research project, consider emphasizing useful contributions to the state of knowledge in the area of issue recognition, measurement and presentation of the environmental reputation in the context of international accounting convergence.

As regards the Romanian legal landscape on intangibles accounting as a result of the growing need for transparency, to improve the management entities, was started a process of alignment to European and international accounting standards. It sought to amend accounting rules so that they can be made compatible with IFRS issued by IASB and the Fourth European Directive.

However, returning to the restatement of accounts under environmental reputation in excess of hyperinflationary attorney presents advantages, in principle; inconvenience is probably caused by higher costs from further processing. The auditor should consider also whether individual differences of environmental reputation were accepted as reasonable or oriented in one direction as cumulated can have a significant effect on the financial statements. In such circumstances, the auditor must assess the environmental reputation accounting estimates taken as a whole. Therefore, it can be said that accounting estimate on environmental reputation is one of the challenges of international accounting and auditing in the context of convergence.

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