THE MANAGEMENT OF ECONOMIC DECLINE
AND THE DIMENSION OF ORGANIZATIONAL CHANGE

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Abstract
In the current climate, more and more companies are faced with multiple failures, which are
the basic problem that crisis management must resolve. In situations of economic decline,
the need for change at the organizational level is imperative to facilitate the recovery of a
company. This study aims to identify methods of corporate restructuring, which would be
to adopt could be adopted by Romanian companies in a time of crisis, to ensure business
sustainability. The research methodology has a theoretical and an empirical component and
it is based on statistical methods that facilitated a quantitative approach, using a sample of
82 companies listed on Bucharest Stock Exchange, all of them being declared insolvent
between 2000 and 2010. The research results have contributed to the classification of
companies, both by generating causes of insolvency and by restructuring methods.

Keywords: organizational change, restructuring, businesses sustainability, insolvency

JEL classification G33, G34, M10, M14

Introduction
The last decade has witnessed a huge increase in corporate restructuring processes around
the world. The deregulation of the markets, technological shocks and intense competition
for the supply of capital urged the firms to make major changes both in their organizational
structure and their funding strategies in order to ensure business sustainability.

In short, sustainability takes into account the extent to which there is a balance between
needs and resources that is able to support business. On a larger scale, sustainability
requires a holistic approach to business, focussing on three dimensions: economic,
environmental and social. Basically, the company is forced to find a balance between
economic growth and environmental protection, requiring a systemic vision and integrating
it in its own development.

During a financial crisis, business sustainability is facing several threats. First, the funding
resources become more expensive as the creditor risk increases. Second, the excess supply
of goods and services and a reduced demand makes the revival of the company by

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increasing prices more difficult. On the contrary, for instance on the real estate market, experience has shown that massive cuts for prices are viable for avoiding bankruptcy, even if it is rather a survival solution that delivers cash for entrepreneurs with significant debts to banks. Third, companies must clearly define exit strategies and become aware of the possibility that after recession, sectors that were profitable could no longer be as such. In such conditions, firms must change their organizational culture, adapting their business to new market requirements and implementing the restructuring process.

This study aims to establish the relationship between the current status of the firms and the generating causes of insolvency, on one hand, and the methods of corporate restructuring on the other hand. The difficult situation of the firm is usually determined by its failure at the organizational level. However, recovery of the firm can be achieved if problems are correctly identified and remedied in time. Among the most important causes of insolvency analysed, we are mentioning the following: poor management, excessive specialization and inadequate financial structure.

The research methodology used to achieve the research objectives was based on literature review, completed with a content analysis of how organizational change takes place inside the firms affected by economic crisis. At the same time, we have conducted a statistical analysis of Romanian companies listed on BSE that were affected by crisis and how they used organizational change in order to improve their financial situation.

The first step of our study was a review of the existent literature, studies and analyses in order to identify some particular features of organizational change specific to companies in crisis. The second step was the content analysis of these particular features. The last step was eminently empirical, presenting the statistical analysis of organizational changes that took place in the Romanian companies affected by crisis and the solutions used to contracarate it.

1. Literature review

Managing a situation of economic decline is a moment of truth for an organization. It is a true test for corporation to understand its business environment and also a reason to resist on the market. White (1994) highlights this decisive character in overcoming a situation of decline, his results indicating that only 6% to 12% of the companies which are insolvent will eventually be able to return to the market. Porter mentions that “the reason why companies succeed or not, is perhaps the central issue in corporate strategy” (Porter, 1991, p. 95). Why do some companies successfully respond to threats, problems, challenges of the market, while others are doomed to failure and fail?

Whetten (1980) draws attention to this question and highlights the importance of studying the management of the economic decline situation. In particular, Whetten criticized the general theories focused on organizational management, organizational development situations, while organizational decline was poorly understood. These criticisms have motivated a growing number of researchers to study the concepts of corporate decline. Generally, the corporate restructuring involves any necessary actions at strategic, financial, and/or operational level to reinverse an anticipated or existing declining situation. These activities may have short term objectives (increased productivity), or may be of long-term strategic nature (Lai and Sudarsanam, 1997).
The corporate restructuring is a complex and planned process of change at strategic and operational levels to align an organization in terms of efficiency and environmental effectiveness. In this sense, corporate restructuring activities are implemented within an organization in difficulty and threatened by the market competitors. The restructuring processes are the natural reaction response to stop the corporate decline and to ensure sustainable development (Francis and Pettit, 2004; Harker, 1998, Morrow, 2004; Sudarsanam and Lai, 2001; Barker III and Mone, 1998; Bibeault, 1982, Gilson, 1990, 2007, Shleifer and Vishny, 2002).

Some specialists (Bibeault, 1982, Jas and Skelcher, 2005, Probst and Raisch, 2005; van Witteloostuijn, 1998, Whetten, 1980, 1988, Balcaen and Ooghe, 2004, 2009) consider that the difficulties for companies come generally from failures at the organizational level which, if correctly identified, can be remedied in time to facilitate recovery. Among the most important causes, we can mention the following:

- **Mismanagement**, the result of incompetence and decision errors;
- **Excessive specialization** (some companies that only focus on one goal or activity considered critical to success);
- **Form of ownership** (meaning that the whole or partial strategy of a state firm will be greater influenced by political factors than by market conditions);
- **Inadequate financial structure** (which may constrain the firm to seek more expensive sources of financing by assuming onerous loan conditions, with obvious difficulties for later reimbursement. However, in the absence of funding sources predictability, the business becomes unsustainable, facing the risk of insolvency and thus, making bankruptcy possible).

The restructuring process relies on several methods, among which we could mention the following (Bibeault, 1982; Balcaen and Ooghe, 2004):

- **Focus on core business** (refocusing on the most profitable activities and products the company knows best and have real competitive advantages);
- **Increase revenue** (assumes increasing sales volume in the context of enterprise activities and existing products through increasing productivity, full utilization of production capacity, reducing prices to stimulate sales, advertising and marketing campaigns);
- **Reduce costs** (monitoring and reducing administrative costs, research and development, marketing and personnel, a better management of stocks of raw materials and end products, improving supply activity, improving the recovery of claims, better cost control systems);
- **Sale of assets** (waiving of certain assets and redistribution of resources, which could prevent the risk of maintaining obsolete products or activities that are too traditional);
- **Mixed** (a combination of the above methods).

Beyond the above causes, restructuring requires the activation of change mechanisms that are in fact a combination of elements that determine change and also that hinder it. The first category includes changing technology, product obsolescence, improved working
conditions, changing the structure of the workforce. These elements exert pressure for change. In turn, the elements that hinder change and strengthen the organization's resistance to change are: outdated attitudes, fear of new, fear of failure, low level of professionalism and mental blockages.

However, reasons related to business strategy require the reduction or even cessation of individual operations in a particular location and their relocation to another geographical perimeter. Thus, there is a real problem of internal corporate legitimacy because the restructuring decisions are criticized by politicians and lose the support of employees, especially if unpopular measures are taken such as layoffs, in an effort to reduce production costs. To the extent that the analysis and calculations underlying the rationale of restructuring decisions will break away from the local branch profitability standards, this will result in undermining the legitimacy of performance-based principles. The relocation of jobs makes decisions no longer the exclusive attribute of managers but a prerogative of different groups existing inside the corporation. Thus, a deficit of legitimacy for managers is created when replacing centralized decision-making process with a negotiation one. But such an approach does not undermine the authority of managers, instead it makes them more responsible in taking the most appropriate measures to ensure recovery and avoid bankruptcy.

2. Research methodology and assumptions

The study aims to establish the relationships between the situation of the firms and the causes of insolvency, on one hand, and the methods of restructuring the company to ensure business sustainability, on the other hand. We have based our study on a sample of 82 companies listed on Bucharest Stock Exchange, which went into insolvency between 2000 and 2010. The data on these companies were collected primarily from Bucharest Stock Exchange, Ministry of Finance and National Trade Register Office websites.

Our research methodology was focused on the development and testing two working hypotheses:

- a statistical link exists between a company's insolvency situation and its determining causes;
- a statistical link exists between a company's insolvency situation and the corporate restructuring methods used.

For each of the 82 insolvent companies, presented in Table no. 1, the following elements were analyzed: the company’s situation, the generating causes of insolvency and the restructuring methods. Each of these elements was divided in several situations, scored from 1-5, as follows:

- company’s status: 1 dissolution, 2 still in insolvency; 3 viable;
- insolvency causes: 1 concentration niche, 2 high costs, 3 deficient management, 4 property, 5 inadequate financial structure;
- restructuring methods: 1 focus on core business, 2 revenue growth, 3 cost reduction, 4 assets sale, 5 mixed.
Table no. 1: Companies listed on BSE, which became insolvent between 2000-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>Year</th>
<th>Company</th>
<th>Year</th>
<th>Company</th>
<th>Year</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0</td>
<td>2006</td>
<td>RGNA</td>
<td>2009</td>
<td>EDIL</td>
<td>2010</td>
<td>AIUR</td>
</tr>
<tr>
<td>2001</td>
<td>0</td>
<td>2006</td>
<td>TRAX</td>
<td>2009</td>
<td>FAZA</td>
<td>2010</td>
<td>ASCB</td>
</tr>
<tr>
<td>2002</td>
<td>COSP</td>
<td>2006</td>
<td>TRXW</td>
<td>2009</td>
<td>FEPA</td>
<td>2010</td>
<td>AVIM</td>
</tr>
<tr>
<td>2002</td>
<td>VISE</td>
<td>2006</td>
<td>UNPR</td>
<td>2009</td>
<td>INVF</td>
<td>2010</td>
<td>AZRT</td>
</tr>
<tr>
<td>2003</td>
<td>AGAG</td>
<td>2007</td>
<td>ALUT</td>
<td>2009</td>
<td>ISTR</td>
<td>2010</td>
<td>BACO</td>
</tr>
<tr>
<td>2003</td>
<td>AGMR</td>
<td>2007</td>
<td>HATH</td>
<td>2009</td>
<td>MEMI</td>
<td>2010</td>
<td>BEGA</td>
</tr>
<tr>
<td>2003</td>
<td>AGNL</td>
<td>2007</td>
<td>MEMA</td>
<td>2009</td>
<td>METU</td>
<td>2010</td>
<td>BLAN</td>
</tr>
<tr>
<td>2003</td>
<td>AGRZ</td>
<td>2007</td>
<td>MTSX</td>
<td>2009</td>
<td>ALF</td>
<td>2010</td>
<td>CRMC</td>
</tr>
<tr>
<td>2003</td>
<td>AOEN</td>
<td>2007</td>
<td>SCPT</td>
<td>2009</td>
<td>MANA</td>
<td>2010</td>
<td>CEIB</td>
</tr>
<tr>
<td>2003</td>
<td>AONT</td>
<td>2007</td>
<td>VIXX</td>
<td>2009</td>
<td>NEGY</td>
<td>2010</td>
<td>CEBI</td>
</tr>
<tr>
<td>2003</td>
<td>COMM</td>
<td>2008</td>
<td>LBB</td>
<td>2009</td>
<td>PTDB</td>
<td>2010</td>
<td>COMU</td>
</tr>
<tr>
<td>2003</td>
<td>FABR</td>
<td>2008</td>
<td>MRPL</td>
<td>2009</td>
<td>PEJI</td>
<td>2010</td>
<td>COGL</td>
</tr>
<tr>
<td>2003</td>
<td>MAID</td>
<td>2008</td>
<td>NUCA</td>
<td>2009</td>
<td>STR</td>
<td>2010</td>
<td>COAR</td>
</tr>
<tr>
<td>2003</td>
<td>SELU</td>
<td>2009</td>
<td>AGNU</td>
<td>2009</td>
<td>TMDF</td>
<td>2010</td>
<td>COEX</td>
</tr>
<tr>
<td>2003</td>
<td>SEVD</td>
<td>2009</td>
<td>ARDZ</td>
<td>2009</td>
<td>TRBZ</td>
<td>2010</td>
<td>EEOB</td>
</tr>
<tr>
<td>2003</td>
<td>RAF</td>
<td>2009</td>
<td>ARUY</td>
<td>2009</td>
<td>VCD</td>
<td>2010</td>
<td>FELA</td>
</tr>
<tr>
<td>2004</td>
<td>SIBN</td>
<td>2009</td>
<td>PAND</td>
<td>2009</td>
<td>VINI</td>
<td>2010</td>
<td>FLA</td>
</tr>
<tr>
<td>2005</td>
<td>ALIS</td>
<td>2009</td>
<td>CMMR</td>
<td>2010</td>
<td>NUDA</td>
<td>2010</td>
<td>FRUC</td>
</tr>
<tr>
<td>2005</td>
<td>FRUD</td>
<td>2009</td>
<td>CONY</td>
<td>2010</td>
<td>NUIA</td>
<td>2010</td>
<td>GETR</td>
</tr>
<tr>
<td>2005</td>
<td>SCTM</td>
<td>2009</td>
<td>DACC</td>
<td>2010</td>
<td>ADCR</td>
<td>2010</td>
<td>HIRY</td>
</tr>
<tr>
<td>2006</td>
<td>FRAR</td>
<td>2009</td>
<td>DOFA</td>
<td>2010</td>
<td>PERI</td>
<td>2010</td>
<td>IASO</td>
</tr>
</tbody>
</table>

Source: Bucharest Stock Exchange, 2012; Ministry of Public Finances, 2012; The National Trade Register Office, 2010

The research method we have used was Correspondences of Factorial Analysis (CFA). CFA is a multidimensional statistical analysis method that aims to describe the links (associations) between two nonnumeric (categorical) variables. Working with a large data table, CFA shows a factorial axes system that summarizes the initial information in a graphical form that could easily be interpreted. The factorial axes are "classified" in descending order, according to their importance in explaining the total variance of the cloud of points.

Applying the CFA method, the initial information contained in a contingency table or a disjunctive one is summarized in a factorial axes system. Points of the recorded variables for different categories are projected on these axes. The factor analysis aims to find correspondences between them uncorrelated orthogonal axes on which to design the point-line cloud. For this, we calculate the proper values of inertia matrix and the coordinates associated with each value ($\lambda_k$).
Eigenvalues sum called total inertia is equal to:

$$\sum_{k=1}^{K} \lambda_k = \frac{\chi^2}{n}$$  \hspace{1cm} (1)

The calculation of the coordinates of points on the axes line is done using factorial coordinates of eigenvectors associated with eigenvalues of the matrix of inertia. To assess the distance between two points, distance $\chi$ is used.

Table of line profiles (Table no. 2) has relative frequencies, due in part to $f_j/i$ calculated as the ratio of partial absolute frequencies $(n_{ij})$ and the marginal absolute frequency $(n_{i.})$ for each value of the variable $X$: $f_j/i = n_{ij} / n_{i.}$

<table>
<thead>
<tr>
<th>Variable X</th>
<th>Variable Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_1$</td>
<td>$Y_2$</td>
</tr>
<tr>
<td>$n_{11}/n_{1.}$</td>
<td>$n_{12}/n_{1.}$</td>
</tr>
<tr>
<td>$X_2$</td>
<td>$n_{22}/n_{2.}$</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>$X_i$</td>
<td>$n_{i1}/n_{i.}$</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>$X_m$</td>
<td>$n_{m1}/n_{m.}$</td>
</tr>
</tbody>
</table>

A profile-line shows, for each value $X_i$, the percentage of statistical values $y_i$ of the variable $Y$.

Testing the hypothesis of independence between variables formulation involves the following assumptions:

- null hypothesis, $H_0$, which admits that there is independence between the variables considered (no links between the variables);
- alternative hypothesis, $H_1$, which admits that the variables are dependent (there are links between them).

To test these hypotheses, statistical calculation $\chi^2$ is used, according to the equation:

$$\chi^2 = \sum_{i} \sum_{j} \frac{(n_{ij} - n'_{ij})^2}{n_{ij}}$$  \hspace{1cm} (2)

where: $n_{ij}$ are observed effectives; $n'_{ij}$ are theoretical effectives.

A calculated value of statistics $\chi^2$ larger than a read critical value in the table $\chi^2$ for risk taking and $v=(m-1)(p-1)$ degrees of freedom, leads to rejection of the hypothesis $H_0$. We can consider, in this case that the variables $X$ and $Y$ are linked (associated). The description of these links is done by interpreting the results of CFA.
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profile-line can be represented as a point, \( x_{ij} \), in the space of variable \( Y \) values. The values \( x_{ij} \) have a ,,mass'' equal to the marginal rate \( f_i \) that shows the proportion of statistical units that record the value \( x_i \) of the variable \( X \).

The point lines, \( X_{ij} \), form a cloud of \( m \) points located in a sub-space (\( p-1 \)) dimensions, as \( \sum_{j=1}^{p} f_{-j} = 1 \).

The assessment of association between two-line profiles is obtained by calculating the distance between the points represented by them. To calculate the distance between two points, \( x_{ij} \) and \( x_{ij'} \), turns the CFA, the coordinates of points \( x_{ij} \) by the relation:

\[
    x'_{ij} = \frac{f_{j/i}}{\sqrt{f_{-j}}} 
\]

Considering the transformation of coordinates, the distance \( \chi^2 \) becomes Euclidean distance in \( R^p \) and it is calculated as follows:

\[
    d^2(x'_{ij}, x'_{ij'}) = \sum_{j=1}^{p} \frac{1}{f_{-j}} (f_{j/i} - f_{j/i'})^2 
\]

The center of gravity of the cloud line profiles (\( G_i \)), which defines the average profile is given by:

\[
    G_i = \sum_i f_i x'_{ij} 
\]

3. The research results

The research results were obtained by testing the two hypotheses set out above, as follows:

The testing of first hypothesis: a statistical link exists between a company's insolvency situation and its determining causes.

The values from Table no. 3 show the distribution of insolvency causes of the companies listed on the BSE, firms that became insolvent between 2000 and 2010. Of the total number of firms that were insolvent and were winding up, 6.8% of them were insolvent because of their focus on a niche, 17.2% because of high costs, 37.9% because of poor management, 24.1% because of ownership and 13.7% because of financial structure. These values form the profile of insolvent companies that ultimately have been dissolved (profile-line).

From the total number of insolvent firms that went bankrupt, 19.2% of them became insolvent because of their focus on a niche, 15.3% because of high costs, 38.4% because of management, 15.3% because of ownership and 11.5% because of financial structure. The mentioned values form the profile of insolvent companies that are still involved in judicial proceedings (profile-line).
From the total number of insolvent firms that managed to overcome bankruptcy and remain viable, 14.8% of them became insolvent because of their focus on a niche, 22.2% because of high costs, 14.8% because of management, 11.1% because of ownership and 37.0% because of financial structure. The values form the profile of insolvent companies that managed to surpass the legal proceedings and are economically viable (profile-line).

**Table no. 3: The distribution of companies that became insolvent based on determining causes**

<table>
<thead>
<tr>
<th>company</th>
<th>Cause of insolvency</th>
<th>Nice concentration</th>
<th>High costs</th>
<th>Management</th>
<th>Property</th>
<th>Financial structure</th>
<th>Active Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>dissolution</td>
<td></td>
<td>2</td>
<td>0.068</td>
<td>5</td>
<td>0.172</td>
<td>11</td>
<td>0.379</td>
</tr>
<tr>
<td>bankruptcy</td>
<td></td>
<td>5</td>
<td>0.192</td>
<td>4</td>
<td>0.153</td>
<td>10</td>
<td>0.384</td>
</tr>
<tr>
<td>viable</td>
<td></td>
<td>4</td>
<td>0.148</td>
<td>6</td>
<td>0.222</td>
<td>4</td>
<td>0.148</td>
</tr>
<tr>
<td>Active Margin</td>
<td></td>
<td>11</td>
<td>0.148</td>
<td>15</td>
<td>0.225</td>
<td>25</td>
<td>0.148</td>
</tr>
</tbody>
</table>

Source: our own calculations using SPSS 17.0

Testing the hypothesis of independence between variables involves the formulation of the following assumptions:

- null hypothesis, H0: hypothesis of independence (no statistical links between the variables);
- alternative hypothesis, H1: dependence hypothesis (statistical links exists between the variables).

In Table no. 4, the calculated value of test statistic is ($\chi^2 = 16.997$) > ($\chi^2_{0.05;8} = 8.85$) or (Sig. = 0.020) < 0.05, which shows that the hypothesis H0 is rejected. It can be guaranteed with a 95% probability that there are links between the considered variables. The description of these links is done by interpreting the results for the AFC-line profiles.

The largest eigenvalue shows the variance of the first factorial axis and the total sum shows the total inertia of cloud of points. The largest eigenvalue is $\lambda_1 = 0.219$. Sum of eigenvalues is 0.243. The first factorial axis explains 90.4% of the total variance (inertia).

**Table no. 4: The calculated value of statistics $\chi^2$ and explained inertia on each factorial axis used to establish the link cause of insolvency – situation of the firm**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Singular Value</th>
<th>Inertia</th>
<th>Chi Square</th>
<th>Sig.</th>
<th>Proportion of Inertia</th>
<th>Standard Deviation</th>
<th>Confidence Value</th>
<th>Cumulative</th>
<th>Standard</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.468</td>
<td>.219</td>
<td>.094</td>
<td>.04</td>
<td>.904</td>
<td>.092</td>
<td>.019</td>
<td>.100</td>
<td>.100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.153</td>
<td>.023</td>
<td>.096</td>
<td></td>
<td>1.000</td>
<td>.111</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.243</td>
<td>16.997</td>
<td>.020</td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: our own calculations using SPSS 17.0
The graphic representation of the profile line and column onto the factorial axes system shows a synthetic image of the original data table.

The diagram shown in Figure no. 1 summarizes, in a simple graphic, the output values in \textit{Summary}. It is noted that the largest distance between the points represented by profiles-column is recorded between niche concentration (0.875) and financial structure (-0.402) (Table no. 5). The greatest distance between-line profiles is recorded between viable firms (-0.975) and dissolved companies (0.655).

The position of points represented by column profiles (cause of insolvency) onto the first two factorial axes system shows that the largest differences in insolvency causes is observed between niche focus areas and financial structure: the firms for which a particular cause of insolvency applies are not affected by the other ones and vice versa.

The position of points represented by line profiles (situation of the firm) onto the first two factorial axes system shows that the largest differences between the situation of the firms in terms of capacity to surpass the judicial proceedings shall be recorded between viable firms (-0.975) and dissolved companies (0.655). These situations are characterized by the different capacity of the companies to surpass the judicial procedure phase.

\begin{tabular}{|l|c|c|c|c|c|c|c|c|}
\hline
\textbf{Cause of insolvency} & \textbf{Score in Dimension} & \textbf{Contribution} & \textbf{Inertia} & \textbf{Of Point to Inertia} & \textbf{Of Dimension to Inertia of Point} & \textbf{Mass} & \textbf{1} & \textbf{2} & \textbf{1} & \textbf{2} \\
\hline
Niche focus & .129 & -561 & 875 & .034 & .086 & .643 & .557 & .443 & 1.000 \\
High costs & .186 & .042 & -.134 & .001 & .001 & .022 & .234 & .766 & 1.000 \\
Management property & .300 & .382 & .138 & .021 & .094 & .037 & .959 & .041 & 1.000 \\
Total Assets & .000 & .243 & .243 & 1.000 & 1.000 & \\
\hline
\end{tabular}

Source: our own calculations using SPSS 17.0

The conclusions can be drawn in accordance with the different hypostases that entreprises, which facing difficulties are in, as follows:

- for companies that have gone through the court proceedings and became viable after exit from bankruptcy, insolvency was due to an inadequate financial structure;
- for companies in dissolution, the main cause for insolvency is the form of ownership, and the second one is the high costs;
- for companies that are still in insolvency proceedings, the cause for insolvency is poor management.
The testing of the second assumption: a statistical link exists between a company’s insolvency situation and the corporate restructuring methods used.

The values in table no. 6 show the distribution by methods of restructuring for companies that became insolvent between 2000 and 2010 according to the BSE. From the total number of firms that were insolvent and were winding up, 3.4% of them were used to focus on business core, 17.2% on revenue growth, 13.8% on mixed methods, 17.2% on cost reduction and 48.3% on sale of assets. These values form the profile of the recovery methods used by companies during the insolvency proceedings; these companies ultimately being dissolved (profile-line).

From the total number of insolvent firms that went bankrupt, 16% of them used as restructuring method the focus on business core, 12% the revenue growth, 12% the mixed methods, 44% the cost reduction and 16% the sale of assets. These values form the profile of the recovery methods used by insolvent companies that are still involved in judicial proceedings (profile-line).

From the total number of insolvent firms that managed to overcome bankruptcy and remain viable, 28.6% of them used as restructuring method the focus on business core, 14.3% the revenue growth, 28.5% the mixed methods, 17.9% the cost reduction and 10.7% the sale of assets. These values form the profile of restructuring methods used by insolvent companies that managed to surpass the legal proceedings phase (profile-line).
Table no. 6: The distribution of insolvent companies due to restructuring methods

<table>
<thead>
<tr>
<th>Company</th>
<th>Focus on core business</th>
<th>Revenue growth</th>
<th>Mixed</th>
<th>Cost reduction</th>
<th>Assets sale</th>
<th>Active Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolution</td>
<td>1</td>
<td>0.034</td>
<td>5</td>
<td>0.172</td>
<td>4</td>
<td>0.138</td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>4</td>
<td>0.16</td>
<td>3</td>
<td>0.12</td>
<td>11</td>
<td>0.12</td>
</tr>
<tr>
<td>Viable</td>
<td>8</td>
<td>0.286</td>
<td>4</td>
<td>0.143</td>
<td>8</td>
<td>0.285</td>
</tr>
<tr>
<td>Active Margin</td>
<td>13</td>
<td>12</td>
<td>15</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: our own calculations using SPSS 17.0

Testing the hypothesis of independence between variables involves the following assumptions:

- null hypothesis, H0: hypothesis of independence (no links between the statistical variables);
- alternative hypothesis, H1: dependence hypothesis (links exist between the statistical variables).

In Tables no. 7 and 8, the calculated value of test statistic is \( \chi^2 = 22.997 > 8.85 \) or \( \text{Sig.} = 0.004 < 0.05 \), which shows that the hypothesis H0 is rejected. It can be guaranteed with a 95% probability that there are links between the considered variables. The description of these links is done by interpreting the results for the AFC line profiles.

The largest eigenvalue shows the variance of the first factorial axis and the total sum shows the total inertia of the cloud of points. Also, the largest eigenvalue is \( \lambda_1 = 0.287 \), sum of eigenvalues is 0.322. The first factorial axis explains 89.1% of the total variance (inertia).

Table no. 7: The calculated statistics \( \chi^2 \) and explained inertia on each factorial axis for the link situation of the company - restructuring methods

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Proportion of Inertia</th>
<th>Confidence Singular Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular Value</td>
<td>Inertia</td>
</tr>
<tr>
<td>1</td>
<td>.536</td>
<td>.287</td>
</tr>
<tr>
<td>2</td>
<td>.187</td>
<td>.035</td>
</tr>
<tr>
<td>Total</td>
<td>.322</td>
<td>22.539</td>
</tr>
</tbody>
</table>

a. 8 degrees of freedom
### Table no. 8: The results of column points (methods of restructuring)

<table>
<thead>
<tr>
<th>Restructuring methods</th>
<th>Score in Dimension</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mass</td>
<td>1</td>
</tr>
<tr>
<td>Focus on core business</td>
<td>.157</td>
<td>-.824</td>
</tr>
<tr>
<td>Revenue growth</td>
<td>.143</td>
<td>.433</td>
</tr>
<tr>
<td>Mixed</td>
<td>.129</td>
<td>-.114</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>.271</td>
<td>-.168</td>
</tr>
<tr>
<td>Assets sale</td>
<td>.300</td>
<td>.868</td>
</tr>
<tr>
<td>Active Total</td>
<td>1.000</td>
<td>.322</td>
</tr>
</tbody>
</table>

*Symmetrical normalization*

The graphic representation of the profile, line and column, onto factorial axes system shows a synthetic image of the original data table.

The diagram shown in Figure no. 2 summarizes, in a simple graphic, the output values in **Summary**. It is noted that the largest distance exists between the points represented by column profiles recorded between mixed methods (0.517) and cost reduction (-0.662). The greatest distance between line profiles is recorded between viable firms (-0.779) and dissolved companies (0.945). The position of points represented by column profiles (the restructuring methods) onto the first two factorial axes system shows that the largest differences in the results of restructuring methods is observed between mixed methods (0.517) and cost reduction (-0.662). The analysis shows that a particular method appropriate for a specific company could bring unsatisfactory results for another one.

![Row and Column Points Symmetrical Normalization](image)

**Figure no. 2: The representation of statistical variables categories onto the first two factorial axes for the relationship situation of the firm - restructuring methods**

Source: our own calculations using SPSS 17.0
The position of points represented by line profiles (situation of the firms) onto the first two factorial axes shows that the largest differences between the situation of the firms in terms of capacity to surpass judicial proceedings, shall be recorded in viable firms (-0.779) and dissolved companies (0.945). These situations are characterized by the adoption of different restructuring methods.

Finally, the companies that have gone through judicial procedure phase and they are still viable, used as restructuring method the focus on business core, respective the mixed method. In turn, the dissolving companies have used the sale of assets method, while firms involved in insolvency proceedings have resorted to reducing costs method.

Conclusions

The difficult situation in which an enterprise could find itself constitutes a warning for managers and it requires the adoption and implementation of firm and effective measures for a quick revival of business activity.

The experience of the Romanian companies that have managed the transition from crisis status to performing enterprise shows that all the measures taken have ensured basic requirements such as ensuring a good competitive position, a good financial balance and adopting and implementing appropriate strategies to enable the recovery and enhancement to a higher level of business resources.

Two hypotheses were tested using the method of Correspondence Factorial Analysis on a sample of 82 firms listed on the Bucharest Stock Exchange, companies that became insolvent between 2000 and 2010.

The first assumption was that a statistical link exists between the insolvency situation of a company and its determining causes. In agreement with the hypostases that enterprises facing difficulties could be in, the following conclusions can be drawn:

- for companies that have gone through judicial procedure phase and they are still viable, the cause of their insolvency is the inadequate financial structure;
- for companies in dissolution, the main cause for insolvency is the form of ownership, and the second one is the high cost;
- for companies that are still involved in insolvency proceedings, the cause for insolvency is poor management.

The second hypothesis formulated was that between the situation of an insolvent company and the methods of corporate restructuring there is a statistical link. The analysis showed that there is no general valid method of restructuring. Such a method adapts to the specificity of the company. The focus on business core has been used by companies that have gone through the judicial procedure phase; the dissolving firms used the sale of assets method and firms that are still involved in insolvency proceedings reduced the costs.

The findings of our research allow some recommendations regarding methods of organizational change that companies in crisis should follow. The transition from a difficult situation to a viable and desirable performing business requires the development and the
implementation of an appropriate strategy that through its objectives and policies will enable the change process.

Such a strategy should potentiate the strengths of the enterprise, turning them into competitive advantages and, at the same time, exploiting the opportunities offered by the environment to eliminate weaknesses and thus, to avoid their transformation into threats. At the same time, the revitalization of business activity requires, besides the existence of a managerial action strategy, an active involvement of employees to boost the process of organizational change.

References


