LÁSZLÓ BERÉNYI

EVALUATION OF SUSTAINABILITY ON ORGANIZATION LEVEL

PH.D. DISSERTATION THEORIES

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ON ORGANIZATION LEVEL

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1. **Review of the Research Topic**

The most important global problems, which also concern the future of humanity, are the reports of the Worldwatch Institute [Brown ed., 1994-2006], the Report of the Brundtlandt Commission [Brundtlandt et al, 1987] and the work of Rakonczai [2003], can be summarized as follows:

**Environmental Problems:**
- greenhouse effect – global warming and climate change;
- conservation of the diversity of species (biodiversity);
- preservation of waters and aquatic life;
- pests and the effects applied for their treatment;
- depletion of fossil fuels (coal, oil) and its substitution with renewable energies (nuclear-, solar-, wind-, geothermic-, hydro-power and biomass energy)

**Social Problems:**
- overpopulation and urbanization;
- difficulties in nutrition;
- spreading of diseases and epidemics;
- peace and security as well as the treatment of related armament.

*Rakonczai* [2003] says that the rise in the attention towards these problems and also their treatment can be explained with globalization, or more precisely, with the acceleration of globalization. Other authors consider the impact of human activity on certain environmental elements [Moser-Pálmai, 1999], [Sántha, 1996]. In my opinion, these approaches are not incongruous, as the authors are consistent in that:
- human activities have significant influence on the development of the problems’ degree
- the main source of the problems is the transgression of the assimilation capacity of the Earth.

Since the major part of environmental use emerge in connection with organizational activity (production and service), organizations as well have to contribute to solve the global social and environmental problems. How and by what means the organizations can play an active and useful role in the resolution of the problems is a fundamental question. The corporate social responsibility (CSR) is more and more popular. This change in approach is urged by the “green” legal regulations as well as by the promotive attitude of the non-governmental organizations concerned in the issue. To tackle and to solve the problems require a complex approach of which realization meets several impediments. On organizational level can be underlined that:

- the organizations are not provided by relevant information neither on their own situation nor on their possibilities;
- the economic interests frequently predominates the realization of the aims of sustainability;
- The correspondence of the individual, organisational and social purposes are not provided in organisational activity.
2. RESEARCH BACKGROUND AND METHODOLOGY

I have begun my research in the field of environment management in 2003 as Ph.D. student of the Institute of Management Science at the University of Miskolc. In my publications, in the beginning, I have dealt with environment-conscious management in general, then, I have narrowed my research on environmental performance appraisal. During my experiences in advisory- and other kinds of projectworks as well as in my scientific literature researches I have met several performance appraisal principle and method, however, these were either too superficial or too specific to offer a comprehensive evaluation of an organisation.

In 2003-2004 I participated in a research of the OTKA (Hungarian Scientific Research Fund) „The interdisciplinary survey of factors that influence strategic management efficiency in regard of globalization and regionality” (leader of research/research leader: Prof. Szintay, István) (research number T034890). Besides the data-processing and -analysis I partook in the establishment of the evaluation system. In 2003-2005 I participated - with similar tasks - in the establishment of Police Excellence Model based on the PHARE programme (number HU 9705-0201-0013) “PILOT EU conform distance learning programme for managers of police headquarters in the Northeast region of Hungary”. During these works conceived the idea of integrating the basis of excellence evaluation method with the possibilities of environment-conscious management.

The basic data of the empirical research results presented in the dissertation are primarily derived from the OTKA (number T048849) research, financed between 2005-2007, the “Cultural foundations of the possibilities of development and improvement in environment-conscious corporate attitude” (research leader: Heidrich Balázs, Ph.D.) The research is in accord with the theme of the dissertation. Its aim is to measure the knowledge of Hungarian organizations in connection with environment consciousness and organisational reserves and possibilities that can be put in the service of development.

In the frame of the research, with the help of a test material, we collected data from several Hungarian organisations different in size and in activity. Besides the for-profit enterprises the non-profit sphere also got role among those who were questioned. A sample of 81 elements was at my disposal in the statistical survey.

In the focus of the test material are the structure, the level and the achievements of the management, on which base it examines the treatment of environmental and social problems. It also mentions the explicit examination of the background and the adaptation of electronic solutions which provide opportunity for the elaboration of a (more) environment friendly activity. The test material provides conditions and enables the separated analysis of the results.

Table 1. summarises the content of the subjects analysed in the empirical research.
<table>
<thead>
<tr>
<th>ANALYSED TOPICS</th>
<th>AIM OF THE ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNDAMENTAL ASSUMPTIONS ON ENVIRONMENT</td>
<td>What do the organisations think about the condition of the environment and its treatment?</td>
</tr>
<tr>
<td>LEADERSHIP COMMITMENT</td>
<td>How much does the role of the leadership determinant in the activity and the improvement? What are the proofs of leadership commitment?</td>
</tr>
<tr>
<td>INTERNAL PARTNERSHIP: TRAINING, PARTICIPATION, EMPLOYEE CONTENTMENT</td>
<td>How to ensure the co-operation between leaders and employees? How to motivate the employees? To what extent are the employees contented?</td>
</tr>
<tr>
<td>STRATEGIC PLANNING AND PROCESS APPROACH</td>
<td>Are the organisations aware of their processes, are they manage and improve them? What kind of planning solutions they apply? What kinds of methods support the realisation of strategic- and process approach?</td>
</tr>
<tr>
<td>EXTERNAL PARTNERSHIP</td>
<td>Who are the identified external stakeholders of the organisation? What kind of relationship they cultivate with the external stakeholders? How they increase the reputation and the appreciation of the organisation?</td>
</tr>
<tr>
<td>MANAGEMENT INSTRUMENTS</td>
<td>What kind of coordinational mechanisms are characteristic? What kind of particularly environmental instruments do they apply?</td>
</tr>
<tr>
<td>TECHNOLOGICAL BACKGROUND AND ITS ENVIRONMENTAL PERFORMANCE</td>
<td>What level of technological-engineering background do the organisations possess? How they apply the available resources? How they assess the (environmental) performance?</td>
</tr>
<tr>
<td>ELECTRONIC SOLUTIONS TO SUPPORT THE ACTIVITY</td>
<td>What kind of informatical endowment they have? For what do they use the available equipments? What are the level and the prevalence of the e-solutions?</td>
</tr>
<tr>
<td>ORGANISATION CULTURE</td>
<td>What kind of management style is characteristic? What characterises the employees of the organisation? The ambience of the workplace?</td>
</tr>
<tr>
<td>ACHIEVED RESULTS</td>
<td>What kind of business results did they complete? What kind of social and ecological results did they achieve? What improvements did they realise?</td>
</tr>
</tbody>
</table>

Table 1: Subjects of the empirical analysis

On the basis of the available data I examined:
- the tendencies of the attributes of the organisations in terms of size, activity and profit orientation;
- the strength of the relations between the attributes;
- the effects on each other of the organisational attributes.
3. **AIM OF THE RESEARCH**

The organisations have to contribute to the resolution of those social – environmental problems that are in connection with organisational activity (product production and service rendering). It has to be explored that how the organisations would be able to play an active and useful role in the solution of the environmental and social problems.

The macro toolset have gradually improved since the 1960’s and they are still in progression. According to the principles of sustainable progress the requirements of the present should be satisfied without destroying the prospects of future generations. *[Brundtlandt, 1988]*.

Under the aegis of the UN and the EU several experts explore the causes of global problems and assign the routes leading towards their solutions. The international and the national law actuate a change in the approach both on individual and institutional level. Besides restrictive and punitive regularization the promotion of preventive attitude with informational background as well as with and financial resources has gradually become more emphatic.

The possibilities are reassuring on micro level as well. The environmental management tools and the corporate social responsibility (CSR) are increasingly popular. With the help of various professional organisations these tools, solutions have already been accessible to the economic characters. Nevertheless, many of them are either not familiar with or not aware of how these tools can be established for the aid of their activity.

My goal is to work out a solution, which assists the organisation:

- to explore the social and environmental problems emerge in the environment of the organisation;
- to learn the characteristics of the activity;
- to understand the role of the organisation in the formation and the solution of the problems;
- to recognize the accessible potential possibilities and resources;
- to measure and appraise the performance of the organisation;
- to define the possibilities of the coordination of social, environmental and business outcomes;

In order to elaborate a solution that can be productively applied in practice, I explored (besides literature research) the level and the characteristics of organisational management as well as the relations between the features that determine them. I have conceived as a goal the elaboration of a comprehensive sustainability assessment methodology (framework). On the basis of research experiences it is essential to develop a methodology that:

- treats comprehensively the environmental, social and economic concerns of sustainability;
- has a simple but at the same time systematic structure;
- can be applied to a wide range of organisations - adapted (extended, detailed) to their possibilities and requirements;
- provide information for the management in the foundation of development decision.
4. SUSTAINABILITY ASSESSMENT FRAMEWORK

On the basis of my research experiences I developed an organisational performance assessment system which enables the organisations that through self assessment they learn the characteristics and critical features of their activity to establish the basis of effective intervention both in sustainability and in business aspect.

The Sustainability Assessment Framework (SAF) (diagram 1.) provides assistance in organisational appraisal of the aspects of sustainability along a criterion group of 3 features.

The criterion groups are:
- **RESOURCES**: all the possibilities that are at the disposal of the organisation. The assurance of management commandment on which base the assurance of conduct system, the technological-engineering and a supportive infrastructural background are emphasized as fundamental resources. The quality of the relationships within the organisation as well as the relations with external partners should be discussed between the resources;
- **GOALS**: the environmental, social and economic concepts of the organisation regarding its possibilities and its contribution to sustainability;
- **RESULTS**: the performance of the organisation in the aspect of employee contentment, natural environment and social impact. The business results, that are the basis of future development as well, also belong here.

![Diagram 1: The Sustainability Assessment Framework](image-url)
The Sustainability Assessment Framework (SAF) is restricted in its criteria. However, through the versatile opportunities of self assessment its adaptation can be recommended to every organisation who commits itself to the exploration and the development of its own operation.

The bases of the self assessment techniques are the document analysis, the interview and the survey. These can be extended suitably to the characteristics of the organisation, for example, with the application of consultants, opinion-polls, the operation of assessment centres and data processing software, etc.

In regard to size, activities, prospects in human resources and financial possibilities the organisation could adapt the most adequate methods for the assessment of individual criteria.

I recommend the Sustainability Assessment Framework primarily for small and mid-sized enterprises in which it may enlighten those aspects of activity and opportunities for development that - in lack of information - have not been emerged yet. Within networks and chains of contractors or in case of organisations with wide range of activity, it might provide assistance in the exploration and adaptation of ‘best practice’ activities.
5. NEW AND NOVEL OBSERVATIONS OF THE RESEARCH

I present the observations of the research – in form of theses – gathered around four points:

- development and improvement of environmental management;
- level and characteristics of environmental management;
- framing of sustainability assessment;
- improvement of environmental-consciousness;

5.1. THESES REGARDING THE DEVELOPMENT AND IMPROVEMENT OF ENVIRONMENTAL MANAGEMENT

T1: In order to achieve the goals of sustainability the organisations should work out and apply an environmental management approach that is built upon – on strategic level - the active participation and cooperation of organisation members and external stakeholders. The achievements of cooperation ought to appear in products and services and also in other processes connected to production and to organisational activity.

The principle of the sustainable development gives requirements to the realisation of which the collaboration and contribution of every participant (international institutes, states, organisations and individuals) is necessary.

The corporate social responsibility (CSR) is a corporate management philosophy that supports the realisation of sustainable development. Its essence is that the organisations voluntarily integrate the environmental and social concerns into their process.

There is a need for shift in approach that promotes organisational activity towards sustainability. As the rights of the disposal of resources are concentrated in its hands, the management has a distinctive role in the conduction of related organisational changes. The environmental management comprehensively represents those attitudes, strategies, systems and instruments that the organisation establishes and utilises in the protection of environment and society. [Láng, 2002]

This is underpinned by Csutora and Kerekes [2005] as well by highlighting the supportive and strategic roles of environmental management. The former emphasizes emission reduction, error conduction and the accordance with regulations, while in the core of the latter is the outstanding and wide-range performance and the innovations.

I have summarised in the strategic model of environmental management (diagram 2) those factors through which the organisations contribute to the attainment of sustainability goals. The decisive roles and relations of the features were proved by the empirical analyses as well.
The basis of the construction of an organisational process that bolsters the attainment of the purposes of sustainability is a senior management who actively participate in necessary transformations. Their activity is significant in four fields:

- **PRODUCTS, SERVICES** that satisfy customer needs in a way that their utilisation and use after utilisation contribute to the protection of the environment;

- **PROCESSES** that are formed in a way to facilitate the activity with fewer loading (fewer input, lower emission, increase energy efficiency, etc.). The process field should not be separated from the sphere of products and services; the developments should be realized integratedly;

- **INTERNAL PARTNERSHIP** is the established relation between the organisation members (leaders and employees). Its quality and extension influence the processes as well;

- **EXTERNAL PARTNERSHIP** is the established relation with the external members of the organisation (customers, contractors, local communities, media, etc.). In the external judgement of the organisation the products, the services and the issues related to processes have a decisive role.
The sustainable performance in environmental aspect could be interpreted in dual aspect:
- all the effects (impacts) imposed on environmental and social factors;
- all the efforts brought to diminish the loading. [Tóth, 2001]

The environmental performance assessment can be carried out by official, market or voluntary initiative. The aim of all the three cases is to explore – before, during or after the process – the environmental-social factors and the related effects. Their fundamental goal is the decision support that is to establish measures that positively and expediently influence the performance.

The advantage of voluntary performance assessment is that it provides a methodological adaptation aligned with the characteristics of the organisation and of the activities.

In the recent years several environmental performance assessment techniques have been elaborated. Depending on the subject of the analysis, the methods that concentrate on products, processes or organisations are distinguished. On the basis of the relation to sustainability the methods that prefer environmental and social or economic concerns can be separated. Some of them focus attention on specific parts while others support the management by providing complex and integrated results.

The fact that the environmental performance assessment techniques are available does not automatically imply their extensive adaptability. My empirical researches demonstrate that especially the small and mid-sized enterprises are not disposed of adequate knowledge and adaptation conditions.

This is presented in two dimensions:
- on the one hand, they are not familiar with the precise content, the advantages and the adaptability of the instruments;
- on the other hand, they are not aware of the characteristics of its own operation, thus, they are not able to select the most appropriate methods.

The aim of the voluntary performance assessment is that the management conceptualize generative interventions and measures on the basis of the outcomes. The feedback should not only be relevant to certain fields of the activity but also have to tackle problems on strategic level. Moreover, the situation is complicated by the fact that appraisal methods do not provide a comprehensive view of the condition and the performance of the organisation. Among the results of complex techniques the causes of the phenomena and the explanation of its tendencies could be lost. The deficiency of the methods focusing on specific parts is that they are not capable of providing solutions for every relevant dimension of sustainability.

In my opinion the resolution of the problem (because of the multi-dimensional nature of sustainability) lays in the elaboration of a method (Thesis 6.) that, as a framework, enables the organisations to systematically assess their own performance in aspect of their own requirements and possibilities.
5.2. THESES REGARDING THE LEVEL OF ENVIRONMENTAL MANAGEMENT

T3: In the fields of regulation, coordination and electronic solutions there are considerable organisational reserves that are available for the development of the organisational contribution to sustainability.

Relying on the empirical research it can be stated that the organisations give importance for environmental protection issues, however, few of them represent it in its activity. Similarly, they estimate positively the quality of their partner relations but they rarely apply it their activity. The organisations devolve the causes partly to independent factors (availability and degree of subsidy sources, information disclosure of national and local institutes). The analyses indicate that internal factors play role as well. The lag in the shift towards sustainability originates in the inappropriate utilization of the possibilities.

Impedient factors of the realisation of sustainability:
- the organisations gather information primarily from the Magyar Közlöny and from professional corporations;
- the project planning process of the organisations is general, annual and in its approach dominantly financial;
- the application of management techniques related to environment protection is concentrated in production- and in large corporations;
- the involvement of the external members is on a low level, even in the case of costumers and contractors.

Promotive factors of the realisation of sustainability:
- in the organisational activity the written regulations are general and provide basis for the integration and mediation of the sustainability values;
- at least the half of the organisations have quality control system (in accordance with ISO 9001) and one third of them have environmental control system (in accordance with ISO 14001), these systems support the performance incensement by their system aspect approach;
- in the internal information flow the small group conversation and the informal communication are decisive. The former supports the problem oriented organisational activity by the conscious engagement of leaders, employees and experts, the latter has a role in the extensive transmission of values;
- although the low rate of those who are exactly familiar with the devises and techniques that support management, the “easier” solutions (brainstorming, SWOT-analysis) are significant;
- the organisations are interested in the opportunities of environmental management (cleaner production, waste reduction, ecomapping) but they are not aware of their adaptational possibilities;
- all of the examined organisations have a computer and two-third of them use the Internet. The internal computer networks (Intranet) are developed in proportion to the growth of the organisation. The electronic support of the activity accelerates and broadens the information flow and at the same time with the reduction of paper based communication it directly diminishes the impact on the environment.
The small, mid-size and large organisations equally have to contribute to the attainment of sustainability. The attention is usually focused on the large, financially muscular corporations which have significant role in environmental loading and have broad possibilities in financial grounds, in human resources and in methodology as well. At the same time, the small and mid-size organisations should not be neglected. Although they occupy only minor function, on the whole, they are dominant characters. According to the data of the HCSO (Hungarian Central Statistical Office) these kinds of organisations represent 99% of Hungarian economies and employ quasi two-third of the workers.

My empirical studies generally show proportional relation between the organisational size and the level of operational features. I managed to reveal significant divergence in various fields:

- the utilisation of information sources and the internal informational channels;
- initiation and operation of the quality- and environmental control system;
- determination of the goals in connection with environment protection;
- written regulations;
- strategic planning;
- process aspect approach;
- application of management techniques.

There is no significant difference in the case of the features - conceptualised in the I. Thesis - that determine the operation and the development of the environmental management. Besides, in certain cases rather the small organisations are in advantage: Thus:

- the organisations possess notions of the future to a nearly similar degree;
- the occasional involvement of the employees into the exploration and resolution of the problems is typical of small organisations;
- the level of the involvement of external partners is similar in the examined organisations;
- the contentment of the employees with their working conditions, employment and payment decrease in proportion with the enlargement by the organisational size, which is confirmed by the indicators of fluctuation.

The effective utilisation of the accessible informational and methodological possibilities that correlates with the enlargement of the organisational size can be increased, if the companies in their application rely on the active participation of small and mid-size organisations. In which the contractor relations between companies proves to be an adequate medium. The large organisations ought to provide professional-methodological support for the accomplishment of the requirements composed for the contractors. As a result, by intensifying their own efficiency, the contentment of their consumers and their social partners, the organisations contribute to the improvement of the possibilities and achievements of their contractors.
The sustainability developments cannot be realised without the consideration and improvement of organisational culture. As the cultural characteristics of organisations, on the basis of present examinations, have indirect effect on the results, their development should be realized through the improvement of those factors (management commitment, internal partnership, conduct system) in which they are dominantly presented.

The organisational culture “comprises the opinion, the customs, the values, the attitudes, the mentality and the behavioural forms of employees in connection with their company (organisation)”. The culture reaches the environment through the employees and it ought to be appropriately supervised and formed by the senior management [Buchowicz, 1990 id. Heidrich, 2000].

Rókusfalvy interprets the environmental protection as a psychological process in which the protection of the external environment (biosphere) and the internal environment (individual spiritual-moral environment) are conjunct. In other words it is an action and a way of thinking at the same time. It is emphasized that the thinking is the initial condition of action [Rókusfalvy, 2001]. The improving interventions could only be truly efficient if they are aimed at the thought through which they influence the action. On this basis, the organisational culture has a decisive function in the organisational shift towards sustainability.

I examined the characteristics of the leaders, the employees and the ambiance of the workplace. The leaders are determined, the employees act in accordance with organisational interests and the ambience has a communal nature. The value of loyalty is high both towards leaders and employees. Besides, instead of competition the collaboration, the team-work has the main role.

The empirical analyses pointed out that the impacts of the components of organisational culture are not manifested directly in the outcomes but through the management commitment, the internal partnership and the management system. In this frame, the improvements could be effectively realised between instrument- and culture development by an iterative method. On the long run, it is necessary to endeavour that the impacts of cultural factors are not only be revealed indirectly. The cultural characteristics of leaders and employees show that the principal field of development is the management system. The initiation of quality- and environmental control systems and management techniques and the alterations of regulation are in accord with the characteristics of management and are acceptable to the employees acting in favour or organisational interests. The education – training connected to initiation and in practice the sustainability interests can be efficiently inserted to public knowledge.
5.3. THESES CONCERNING THE ELABORATION OF SUSTAINABILITY ASSESSMENT

T6: For the sustainability assessment of organisations a methodology should be constructed. This methodology – on the basis of decisive elements of operation and on their interaction – considers organisational efforts and achievements along environmental, social and economic dimensions of sustainability.

To the measurement and development of organisational contribution to sustainability, there should be an elaborated methodology that enables the systematic and comprehensive overview and the assessment of the decisive elements of the operation (1. Thesis). The content features of the methodology should be formed in a way that it could provide possibility to the analysis of the relations between operational factors.

<table>
<thead>
<tr>
<th>CRITERION GROUPS</th>
<th>CRITERIA</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>RESOURCES</td>
<td>Management commitment</td>
<td>the subsidy and active participation of senior management in the exploration and resolution of the problems</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Technological/engineering</td>
<td>technological elements decisive in the core competence of the corporation</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>background</td>
<td></td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Conduct/Management system</td>
<td>methods concerning the operation of the organisation</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Infrastructural background</td>
<td>solutions outside the core-competencies and informatical solutions that support the activity</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Internal partnership</td>
<td>treatment of the relations between corporate members</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>External partnership</td>
<td>treatment of the relations with external members</td>
</tr>
<tr>
<td>GOALS</td>
<td>Environmental goals</td>
<td>environmental aspects of the aims</td>
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<td>GOALS</td>
<td>Social goals</td>
<td>social aspects of the aims</td>
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<tr>
<td>GOALS</td>
<td>Economic goals</td>
<td>economic aspects of the aims</td>
</tr>
<tr>
<td>ACHIEVEMENTS</td>
<td>Environmental performance</td>
<td>achievements in connection with natural environment</td>
</tr>
<tr>
<td>ACHIEVEMENTS</td>
<td>Employee contentment</td>
<td>achievements through internal partnership</td>
</tr>
<tr>
<td>ACHIEVEMENTS</td>
<td>Social contentment</td>
<td>achievements and the quality of relations with the external partners, and generally with society</td>
</tr>
<tr>
<td>ACHIEVEMENTS</td>
<td>Business results</td>
<td>economic aspects of the results</td>
</tr>
</tbody>
</table>

Table 2: Assessment criteria
The role of strategic features outlined in the 1. thesis (management commitment, internal and external partnership, products, services and processes) are reinforced by the empirical researches. Moreover, they provide possibility to the explicit examination of the management commitment, the internal and external partnership and the process management. The examination of the correlation between the features has revealed tight relationships. The explanatory interaction of the features is generally high but with low reliability. This indicates the individuality of the organisational solutions.

The backbone of the evaluation methodology is constituted of those attributes in between which the explanatory effects characteristically exist along with high reliability. On the basis of the excellence evaluation methods [Bodor-Herz, 2001],[Szintay, 2005] and the empirical research results, I have organized the relevant features in forms of criteria and criterion groups summarized in the 2. Table.

In accordance with the criteria (mentioned above) the sustainability performance of an organisation could be assessed by four dimensions (3. diagram):

- **Internal Cooperation**: the partnership relation between the committed and motivated employees and the management;

- **Social Correspondence**: influencing the organisational operation in a way that meets social requirements;

- **Environmental Impact**: to promote the operation towards an ecologically efficient direction;

- **Business Success**: the economical and profitable sustainability of the operation of the organisation.

![Diagram 3: Dimensions of assessment](image)

In connection with environmental impacts the empirical analysis did not show - as typical of the other dimensions – the significant influence of management commitment. Nevertheless, on strategic level the development of environmental assessment cannot be realised without the support of the management.
5.4. THESIS CONCERNING THE DEVELOPMENT OF ENVIRONMENTAL CONSCIOUSNESS

The development of environmental consciousness is a multi-dimensional task, which includes knowledge expansion, alteration of value system and the mechanisms which operate these on individual, group and organisational level.

The environmental consciousness – connected to persons as well as to organisations – is a form of behaviour that is based on the responsible and active participation of individuals and organisations in connection with the resolution of environmental problems. According to the wider definition of environment – that includes, besides natural environment, social relations and economic interests – the environmental consciousness is a form of behaviour that founds the realisation of sustainability.

Diagram 4: The components of environmental consciousness

The environmental consciousness could be perceived as a multi-dimensional institute, the elements of which I have defined in the followings (4. diagram):

- **KNOWLEDGE**: individual and organisational knowledge in connection with both sustainability and technical questions;

- **ATTITUDES AND VALUES**: those cultural attributes, assumptions, thinking and behaviour samples that play role in the decision making process;

- **PROMOTION**: the devices and methods that render possible the attainment and application of the adequate information, the decision making and the measure implementation;

- **PROPENSITY TO ACTION**: the purpose of individuals and organisations to act in accordance with the sustainability values;

- **ACTION**: realised measures.
The purpose of the development of organisational environmental consciousness means a higher levelled environmental- and social responsibility along profitable operation. The improvement of environmental consciousness is a complex challenge and can be reached by the synchronisation of three fields:

- influencing the way of thinking and the attitude of the organisation members (development on individual level);
- influencing the relations between organisational members (development on group level);
- operation of an environmental management system (development on organisational level).

The organisation performance cannot be separated from individual performance [Bakacsi, 2000]. The investments in management tools will not accomplish the required effect if the leaders and employees do not comprehend, are not able or are not willing to apply them adequately.

The examination and treatment of group level development can be traced back to two causes:

- the division of labour and specialisation entail that the performance of the organisational members is depend on one another, thus, the organisational performance is determined by not the best but by the weakest element;
- the groups within the organisation (working group, organisation unit, development team, clique, etc.) comprise those members whose way of thinking and actions are in a particular interaction.
| 93 | **Moser**, M. – **Pálmai** Gy. (1999): A környezetvédelem alapjai, Nemzeti Tankönyvkiadó, Budapest |
| 111 | **Rókusfalvy**, P. (2001): Az ember fejlődése és fejlesztése, Nemzeti Tankönyvkiadó, Budapest, |
## THE PUBLICATIONS OF THE AUTHOR IN CONNECTION WITH THE DISSERTATION

**BOOK, BOOKLET, COMPLEX INDIVIDUAL PERFORMANCE**

<table>
<thead>
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<td>A kisvállalatok kulturális és vezetési sajátosságai. TDK. Miskolci Egyetem. 2002. (absztrakt jelent meg)</td>
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## NATIONAL JOURNAL ARTICLES

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**PUBLICATIONS OUTSIDE OF THE UNIVERSITY OF MISKOLC (RESEARCH PLACE)**

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<td>Komplex teljesítményértékelés a régiófejlesztésért. XI. Nemzetközi Környezetvédelmi és Vidékfejlesztési Diákkonferencia, Tessedik Sámuél Főiskola, Mezőtúr, 2005. 07. 6-8. 43. p. (absztraktnak jelent meg)</td>
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