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Conference Paper

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39th Congress of the European Regional Science Association: "Regional Cohesion and Competitiveness in 21st Century Europe", August 23 - 27, 1999, Dublin, Ireland

Provided in Cooperation with:
European Regional Science Association (ERSA)

Suggested Citation: Brukstaitiene, Daiva; Vytautas Rutkauskas, Aleksandras (1999) : Non-competitiveness and Non-sustainability: New Challenges for an Economy in Transition, 39th Congress of the European Regional Science Association: "Regional Cohesion and Competitiveness in 21st Century Europe", August 23 - 27, 1999, Dublin, Ireland, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:
https://hdl.handle.net/10419/114196

NON-COMPETITIVENESS AND NON-SUSTAINABILITY: NEW CHALLENGES FOR AN ECONOMY IN TRANSITION

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Keywords: Competitiveness, Sustainability, Non-competitiveness, Non-sustainability, Sur/petition, Valufacture, Ecological sustainability, Social sustainability, Regional sustainability

1. Introduction

Lithuania, as one of the three Baltic countries has come into the "New Economy" from a Soviet economic system where competition was not a part of the psyche and so Lithuania entered a non-competitive state. All Baltic neighbours are transferring from non-competitive command economy to fully market economy. In this situation these countries and the entire region strongly collide with the problems of non-competitiveness and the added problems of developing sustainability and so finding themselves with problems of non-sustainability. The old or traditional ways can only guide us to understand that the economy's non-competitiveness and developing non-sustainability shows as one direction where one acts on the other. In addition, at the turn of century competitiveness building ideology and methods of its practical employment have changed principally. For those countries, which like not only survive but also succeed, new approaches are needed.

In countries not only in transition, such as the Baltic, it is necessary to significantly increase competitiveness and noticeably at all levels, within governments and the regions. To do this we must rethink the structure and reform the very concepts we have used in the past. The problems of the New Economy have their own conceptions of solutions and it is these that must be creatively renewed. There is an urgent necessity to strengthen European countries especially those in partnership in their competitive powers as soon as possible. This can only be done by building on the theoretically strong based methods and creatively and innovative forming non-traditional solutions, which will enable the use of synergy and its effects and also by avoiding negative consequences of the non-sustainability of ecological and cultural development in all the countries and regions soon to form a larger united European Community. No country or region should be isolated, no works in isolation can be an active and positive part of the whole.

For the first time in humanity's history we are heading for an understanding of true unity, strong synergy and the need to acknowledge the importance of every member if we are to survive and succeed.

Non-sustainability, like the lack of competitiveness in countries and regions that are developing a market economy, also shows many variations. Our differences and similarities form the base from which we enter the New Economy and develop together into the 21st century. Economically, ecologically and culturally we each are unique and can maintain this while developing away from non-sustainability if we have a common aim, that of, improving the lives of every human being or quality of environment up to practically achievable level. Avoidance of non-stability opposite to the increase of competitive power does not have dependable solution methods. One must be a part of the other in a constructive and positive way. Ecological, social and cultural instability requires conceptual changes and a deepening of these concepts understanding and use.

Any change is uncomfortable. Edward de Bono [1] names 19 ways of changing and not one of them is fully successful. He gives us "positive revolution" as one answer. It is a revolution all economic leaders may use in their rethinking, namely by applying the principles of Effectiveness, Constructiveness, Respect, Self-improvement and Contribution as the new criteria in the formation of future synergetic methods of solving economic problems. However, concept changes and mind-set changes are not easy. It is easier to protest, grumble, criticise and attack. These are negative and we need positive constructive ways.

Non-sustainability in risk management must be thought creatively and positively. Today it has become obvious, that many countries that are forming the present day market relations are developing non-sustainability. Achieving a situation where competitiveness equals sustainability is at the centre of attention not only in market economy countries and regions and their governments but also throughout the European Community and other unions tending to develop and progress. Therefore, in order not to lose time, each country, government and region needs to achieve a high level of competitive training if it wants to avoid negative ecological, social and cultural unstabilizing consequences. It has become essential to create a new style of balanced system, which increases the competitive power of each business subject as much as the country or region where it functions. The new systems based on new concepts should, however, be based on the similar, uniting and actively progressive principles as those models prepared by the World Bank and other essential institutions of our community. These World Bank [2] models evaluate

countries and regions developing project sustainability, which have clear and functional possibilities for practical use. Since many Central European and Baltic countries are not large, there exists a real possibility to weigh their influences in new ways. Every new economy, new business, restructuring, reforming and international program today can and must increase the competitive powers in their separate country and region and move away from non-competitiveness and non-sustainability in its unique but united way. Competitiveness and sustainability go hand in hand. There are needs to a new approach and a new, united and balanced system, which increases competitive power and avoids the negative results of non-sustainability. It will be suggested here that one way to do this is to create a new emphasise on value, to form a system of integrated values or as E. de Bono says to "valufacture". It is his new word in a New Economy invented to mean "the deliberate process of creating values". It is a refocusing of the traditional use of values to help economists especially to restructure an economy of ethics that puts emphasise on values and not greed.

2. The main aspects of human community and environment development sustainable

The human community that appeared as a consequence of a long evolution of the surrounding environment is one of the most sensible subsystems of biosphere. People can bear only unremarkable changes of Earth and space influence. Thus, for normal existence and survival of the human being, stability of the surrounding environment's evolution is needed. Human community surrounding environment in each region under consideration usually is understood as consisting of social-cultural and ecological surroundings (environment). Because of great dangerous of ecological changes enlarged attention in this time is paid to ecological unstainability. Similar idea has been presented by UN World Environment and Development Commission (1987), when speaking about the necessity for ecologically stable development of mankind. *Ecologically stable development* is perceived as the one, *that allows us to satisfy present needs, without depriving possibility from future generations to fulfil their.*

This is a social-ecological purpose, that can be presented as a prospect of mankind *community survival and assurance of development opportunities*, concretised (see fig. 1.) as a system of genetic stability assurance, strengthening of intellectual and moral human powers as well as the development of technology and economic power targets. The purposes can be achieved only by providing a guarantee for the survival of social-ecological subsystems: micro-organisms, lithosphere and soil, water and air, flora, fauna, direct existence of human being environment and maintenance strategy of the normal landscape

state. Normal existence of any subsystem usually encounters continually changing situations and new problems that require original decisions.

Reflecting on the evolution of the ecosystem we can hardly say, that the main mission of the evolution is maintenance of an environment suitable for existence and for the perfection of the human community, while the main purpose of a person as a reasonable being should be the maintenance and perfection of the ecological environment as his living space.

However, the greatest paradox of civilisation, understood as the contemporary culture of developed countries, is that there are many moments in the behaviour of mankind that can cause unmanageable turns of ecological development, when the ecological environment state will become unsuitable for existence of human being. Though, from the other standpoint, reasonable co-ordination of human activity and ecosystem development gradually becomes prior conceptual problems and practical activities.

ASSURANCE OF PEOPLE COMMUNITY SURVIVAL AND DEVELOPMENT OPPORTUNITIES

Genetic stability, Intellectual and moral power, Technology opportunities, Economical feasibility

Fig. 1. General sight on environment improvement strategy

However, in many regions of the world, particularly in developing countries and ones changing from a planning to a market economy, the ecological situation is steadily worsening, despite obvious decrease of production. According to this fact, as well as understanding the sharpness of ecological problems in the whole world, that is, understanding that almost all of the seven social-ecological subsystems showed in the figure 1 have urgent problems, focus should be oriented not toward creation of environment protection strategies, but towards the preparation and implementation of *improvement of environment state strategies*.

Further, quite a different logic must be used for an understanding of the processes of social-cultural development. At this time, when ecologically stable development is understood as one that allows for the present generation to satisfy their needs without depriving such a possibility for future generations, the economic sustainability is such a way of satisfying the present needs which grounds a base for future generations to satisfy their needs. Social-cultural sustainable development is understood as such consequence of demographic and behavioural changes, which cannot destroy economic sustainability.

There is a great amount of different parameters or aspects for measuring sustainability of regional development. Although three main aspects: social, economical, and ecological compose the minimum base for defining regional sustainability. Sustainable development or dynamic stability of a regional system is determined by the state of ecosystem in a region their feasibility to function freely, to create production and use in at such a ratio that biodiversity, productivity and regeneration predetermined genetically and defined by evolution, vitality and the potential of meeting major ecological, economic and social requirements are sustained currently and in the future. The function of the sustainable ecosystems at the local, national and global level must cause no damage to other regional systems [3].

No alternative can be found for balanced sustainable development of a regional system. The task is how to maintain ecological sustainability more effectively so that restoration of the environment and retrieval of ecological and environmental changes within the limits of an allowable fluctuation might not require reconstructing industry for the resources. However, the consequences of such industry are also adverse. Therefore, it is necessary to perceive the functioning of regional subsystems, to reveal the forces of homeostasis sustaining their natural state and predetermining their evolution, that, namely, with the aid of these forces sustainability of the whole regional system might be achieved by the most insignificant technological activity.

3. Competitiveness as a result and a factor of regional sustainability

Competitive subject is one, which has a strong urge to win, which is keen to compete. Competitiveness is the natural quality of competitive subject. In common sense competition is the state of relations, where free, complete and authentic information of all economic subjects in either supply or demand for goods and services, manufacture goods and capital is available. As far the conception and the term "competition" is a framework for market economy, as far it is difficult to give the definition, which would be precise and realistic. Indeed, competition, which is the basis for the whole classical political economy, is found on mechanical and utopian schemes, although it has cognitive value. And, to the contrary, competition of the modern economic life gives more examples of rules exceptions, deformations and divergences, than positive samples; however, it reflects economic realities [5].

Methods of competition are an element of market conduct that denotes the ways in which firms in a market compete against each other. There are various ways in which firms can compete against each other [6]:

(a) Price. Sellers may attempt to secure buyer support by putting their product on offer at a lower price than that of rivals. They must bear in mind, however, that rivals may simply lower their prices also with result chat all firms finish up with lower profits.

(b) Non-price competition, including (i) physical-flower differentiation. Sellers may attempt to differentiate technically similar products by altering their quality and design, and by improving their performance. All these efforts are intended to secure buyer allegiance by causing buyers to regard these products as in some way 'better' than competitive offerings, (ii) product differentiation via selling techniques. Competition in selling efforts includes media advertising, general sales promotion (free trial offers, money-off coupons), personal sales promotion (representatives), and the creation of distribution outlets. These activities are directed at stimulating demand by emphasising real and imaginary product attributes relative to competitors, (iii) New Brand competition given dynamic change (advances in technology, changes in consumer tastes), a firm's existing products stand to become obsolete. A supplier is thus obliged to introduce new brands or redesign existing ones to remain competitive.

(c) Low-cost production as a means of competition. Though cost-effectiveness is not a direct means of competition, it is an essential way to strengthen the market position of a supplier. The ability to reduce

costs opens up the possibility of (unmatched) price cuts, or allows firms to devote greater financial resources to differentiation activity.

In order to gain the quality of competitiveness for every region or state usually all methods of competition ought to be used. Competition is rivalry among individuals, firms, and other entities that makes the free enterprise system work. Competition is the regulator of the free enterprise system. Competition serves to regulate the volume of output and the allocation of resources. If competition is effective, the economy tends to function efficiently. Competition tends to prevent any one firm from dominating the market. Competition is not always effective and is seldom perfect.

Competitive pressure is forcing companies to rethink the way in which they do business, and even the business that they do. The need for a coherent business strategy has never been greater, but the view into the future has never been less clear. The company that focuses on adding value to its customers is likely to succeed, and its strategy must be to identify and implement processes that maximise that value. Standard procedures and packages do not provide such differentiation. Indeed, "the ability to learn faster than your competitors may be the only sustainable competitive advantage" [7].

Of course, two conceptions – competitiveness and sustainability often are used together and with intention to find common sense in these categories. The concept of sustainable development is also high on the international agenda. As it already has been mentioned, the Brundtland Commission defined ecologically sustainable development as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”. The fundamental concern for all governments and regions as they become more competitive is whether current economic progress is obtained at the expense of the well being of future generations. Sustainability is a question of intergenerational distribution or equality. While measurements of sustainability include a comprehensive and consistent description of the state of the environment and the impact of human activity. An economic approach to sustainable development requires that nature be valued in monetary terms. If greed or profit with the under estimated ecological or social costs are at the base of competitive policies then sustainability falls victim and becomes non-sustainability.

For example, in the Danish national accounts, traditionally – measured national net savings have been positive in each year during the period 1986-96, amounting to approximately 5 per cent of net national product. Three types of “green” adjustments are made in the analysis, to assume that the net

investments in human capital, including research and development, will not prevent future generations from having the same level of welfare as the present generations. Competitiveness as much as sustainability suffers from uncertainty at many levels. However, a better understanding of the interaction between nature and human activity in a competitive world must be important to all governments and regions as it must be on the micro and macro economic levels [8].

As have been found out earlier the category of competitiveness and category of ecological sustainability are strongly interacted. No less then those categories of competitiveness and social sustainability are strongly interacted also. Further it will be paid attention to those moments of competitiveness, where increase of competition goes in one direction with increase of sustainability.

Secret to Competitiveness. Anyone involved in running a business needs to move beyond competition to sur/petition states E. de Bono. Sur/petition accepts that if only a business wants to "survive" this is not enough. To E. de Bono "competition" means, "seeking together or choosing to run in the same race." The word "sur/petition" means, "seeking above". Instead of choosing to run in the same race, competitors choose their own race. It is about creating "value monopolies". So, instead of seeking "together" you set out to seek "above" [1]. In this way a new approach to competitiveness must be seen as equal to survival and sustainability.

Of course, some of the individual industry productivity gaps are surprisingly large. Japan still leads the world in steel productivity, by almost 50 percent. Productivity in the US food industry tops Japan's by nearly 70 percent. And the German beer industry, even adjusted for differences in quality, trails that of the United States by more than 50 percent. Such disparities are worth noting.

Conventional explanations, such as different manufacturing technologies and economies of scale, do play some role in explaining the gaps in metalworking, steel, food processing, and beer. But elsewhere these factors do not go far in accounting for the gaps. They all are subjected to intense global competition, where constantly pushing the boundaries of productivity is the price of entry — and of survival.

The low-productivity Japanese manufacturing industries, by contrast, have virtually no exposure to global competition. The same is true of Germany, for whose manufacturers competition is largely confined to Europe. The European Community's voluntary restraint agreements with Japan provide substantial protection for the automotive and metalworking industries, for example. In addition, procedural barriers make transplants difficult to establish in traditional industries in Germany. And finally, the shareholdings

and voting-right proxies of the main banks in Germany result in a capital market that is virtually closed to foreign mergers and acquisitions. As a result, German manufacturers primarily compete regionally, not globally. The pressure to innovate is low and innovations are therefore essential, for ethical competitiveness and sustainability.

Further, while productivity gaps point to real opportunities for trailing industries to learn and adopt best practices, they also point to a profound competitive challenge. Big differences in productivity in international industries mean big opportunities for those companies that can achieve high productivity levels. Using foreign direct investment, such leading-edge global producers could not only take huge market share and profits from local industries, but actually raise standards of living in the host countries.

Government protection, and even local consumer loyalty, are not durable foundations for long-term economic health or the survival of unproductive regional companies. Of course, this kind of gains isn't real possibilities for small like Baltic countries and discussed situation has more methodical then practical use. Maybe some practical conclusion can be drown from paying attention to situation is formed in Europe in the sphere of social policy.

In a report from the McKinsey Global Institute named "The ticking bomb at the core of Europe" [9] it is stated that "the social systems of most European countries are undermining the whole region's competitiveness. They are in desperate need of reform.

Europe's socio-economic systems are heading for their severest test ever. The unique philosophy of social support and inclusiveness on which they rest now threatens to become a fatal handicap. The danger is real: a number of powerful forces are working to destabilise systems that already impose heavy costs on corporations via high labour charges and limited operational flexibility. In addition, the growing burden of an ageing population will, if nothing is done, consume an unsustainable large share of GDP.

The paradigm Western Europe offers for the relationship between governments and their citizens stresses inclusiveness and social justice — a "third way" between the extremes of socialism, which most recognise to have failed, and capitalism, which has often been criticised for its indifference to human suffering.

The worst is still to come. Today's systems will need major adjustment if Europe is to remain economically and socially viable in the next century. If the productivity gap is not closed, European

companies will inevitably lose out in the competitive battle. As a result, the region's share of the global economy will further diminish, GDP growth will be put in danger.

There is a demographic mismatch in Europe. In Germany, Benelux and the Scandinavian countries, for instance, social costs now stand at nearly 40 percent of GDP, compared to 32 percent in the United States.

The wrong remedies have been used to date. The main challenge for Europe, therefore, is to expand the workforce and increase its productivity to provide for the imminent wave of retirees. Though politically unpopular, a more forward-looking solution would be to make a modest increase in working hours or the retirement age and maintain open borders for trade, investment, and immigration.

All European countries have a more extensive safety net and social system, as well as greater regulation of working practices, than does the United States. Europe's costly systems have been built up gradually during more than a century to address social problems very different from those that it faces today. The social benefits of different systems are, of course, hard to compare and heavily dependent on each society's specific priorities.

Faced with adverse economic circumstances, individual members of society may be forced to lower their expectations and accept a reduced standard of living.

Both companies and their employees may become trapped in a "vicious circle" of decline that works like this: a joblessness reaches upward in recession, unemployment benefits and the other costs imposed by the social system must be borne by a smaller working population. Tax rates and social security contributions are pushed higher, increasing the cost of labour per unit of output. This has two effects: abroad, it causes the competitiveness of that output on world markets to decline; at home, it encourages employers to substitute capital — often in the form of increasing automation — for labour in order to regain cost competitiveness. Both these forces — declining demand for European goods and increasing automation — typically throw still more people out of work, which increases joblessness and once again raises the burden of social costs, thus closing the circle.

Differences in competitiveness have a direct influence on the fortunes of major European industries. These differences in competitiveness are neither trivial nor without practical effect. They have a direct influence on the fortunes of major European industries.

All these problems already have arisen or should arise for countries entering the full market economy but in many times enforced severity. In any case enlargement of effectiveness does not go hand in hand with increase of current social and environmental sustainability.

Sur/petition or beyond Competition. Let us look briefly at sur/petition. Most of us have several concepts of competition. E. de Bono asks for us to re think and change our present concepts. He states that "Competition is for Survival" and "Sur/petition is for success". Sur/petition is concerned with how you move upwards from the baseline of survival. Physical monopolies are illegal in many countries but value monopolies are not. Value monopolies are for the benefit of procedures and are also in the interest of consumers. Sur/petition goes beyond getting things right within a business or organisation such as its cost control or quality. There are other sources to reach, namely:

1. Integrated values;
2. Serious creativity;
3. Concepts used in Research and Development.

Linked to the above are the value drivers. There are four powerful value drivers, which exist and will become more important in the future. They are:

1. pnlvlbodyConvenience;
2. Quality of life;
3. Self-importance;
4. Distraction.

The very notion of value needs re thinking as we enter the 21057st century and then a new structuring needs to be formed. To change values we need to change our concepts and to design new approaches too ever changing challenges.

Complacent organisations cannot wait for evolution to take place. This is inefficient. What needs to be used is the unused potential at all levels and everywhere. That is business thinking must change and to do this E. de Bono suggests the use of "The Four Wheels of Human Thinking". Let us unite innovative the 4 wheels:

1. Procedures and routines;

2. 2. Information;
3. 3. Analysis and logic;
4. 4. Creativity.

How to do this must be left to every economist, government and region. Some guidance is given in [1]. Let us see how these 4 “wheels” can be and have been applied already. No country can ignore the increasing problems of environmental degradation and resource depletion which if ignored cause unsustainability. A transition to sustainability must be made with newly formed procedures and routines within the government or region. Data needs to be collected to form the information needed to ground new policies and renew focus on sustainability while competing. Analysis and logic are sophisticated, technology assisted and available. However, data cannot be ignored and logic must create the changes necessary. All this must be done in an innovative and creative many based on ethics and values motivated by sustainability.

The state of the ecosystem is changing not only as a result of negative human activity but also because of the positive means of the ecosystem’s balance, support and natural evolution of the separate subsystems as well as their interaction. Therefore our economic, competitive and sustainability policies become one, synergistically and all parts have equal importance.

Among plenty of approaches for assessment of effectiveness and competitiveness direct assessment of these characteristics should be constructive and suitable for many, especially small, countries.

4. The concept and practice of an assessment of the project impact on regional competitiveness and sustainability

4.1. Defining Project Competitiveness and Sustainability. Like the pure economic definition of the project competitiveness or sustainability, we could consider its ability to maintain an acceptable level of benefit flows through its economic life. Similarly to the above given but a more broad definition of the project sustainability is the project capacity to deliver its intended benefits over a long period of time [10]. Lastly this is a definition that is acceptable by a wide group of scientists and project managers and can serve firms, states or regional competitiveness and sustainability definition and which can be used for commensurability of competitiveness and sustainability. Sustainability can be defined as the ability of

system to maintain productivity in spite of a major disturbance such as that caused by intensive (maintained) stresses or a large perturbation [2; p. 14].

A supplementary problem to the definition of project sustainability and even deepening the constructiveness of this definition is the quantitative assessment of proposed definitions. Among numerous lists at indicators for quantitative assessment of project sustainability, the economic rate of return (*ERR*) and composite index (*CI*) based on a set of different indicators prevail among others. Sustainability index usually is identified with the possibility of the project completely fulfilling all designed aims.

4.2. Using the Sustainability Index. Development of the system for assessment of project sustainability does not take a one-sided direction as yet. However, selection of a set of indicators, that comprises of different aspects of a process under the project regulation and development of composite index, based on the set for quantitative assessment represent one of the main approaches for the projects sustainability measurement. There is a common tendency for many types of projects, designed for different kinds of activities, to form seven groups of indicators, each comprising of five separate indicators (see table 1) and assessing:

1. The continued delivery of services and benefits;
2. The maintenance of physical infrastructure;
3. The long term institutional capacity of the agencies, responsible for project operation;
4. The level of political support for the project;
5. The environmental adaptation;
6. The macro economy effectiveness;
7. The competitiveness enforcement.

Table 1. Indicators for the Project Sustainability Index

1 (w_1= 0.03) Continued Delivery of Services and Production of Benefits

- 1-1 Comparison of actual and intended benefits and services and their stability over time
- 1-2 Efficiency of service delivery
- 1-3 Quality of services (benefits)
- 1-4 Satisfaction of beneficiaries
- 1-5 Distribution of benefits among different economic and social groups

2 (w_2= 0.07) Maintenance of Physical Infrastructure

- 2-1 Condition of physical infrastructure
- 2-2 Condition of plant and equipment
- 2-3 Adequacy of maintenance procedures and resources
- 2-4 Efficiency of cost-recovery and adequacy of operating budget
- 2-5 Beneficiary involvement in maintenance procedures

3 (w_3= 0.13) Long - Term Institutional Capacity

- 3-1 Technical capacity and appropriate mandate of the principal operating agencies
- 3-2 Stability of staff and budget of operating agencies
- 3-3 Adequacy of interagency co-ordination
- 3-4 Adequacy of co-ordination with community organisations and beneficiaries
- 3-5 Flexibility and capacity to adapt the project design and operation to changing circumstances

4 (w_4= 0.21) Support from Key Stakeholders

- 4-1 Strength and stability of support from international agencies
- 4-2 Strength and stability of support from the national government
- 4-3 Strength and stability of support from provincial and local government agencies
- 4-4 Strength and stability of support at the community level
- 4-5 Extent to which the project has been able to build a broad base of support and to avoid becoming politically controversial

5 (w_5= 0.26) Environmental Adaptation

- 5-1 Strengthening possibilities to bio-variety maintenance
- 5-2 Excluding possibilities for a wide range disaster
- 5-3 Enlarging possibilities for avoidance of ecological harm
- 5-4 Non oppression of landscape
- 5-5 Does not threaten human health

6 (w_6= 0.3) Macro Economy Effectiveness

- 6-1 Reducing unemployment
- 6-2 Fighting inflation
- 6-3 Lowering interest rates
- 6-4 Encouraging savings
- 6-5 Correcting exchange rates

7 (w_7= 0.3) Competitiveness Enforcement

- 7-1 Innovation in business thinking
- 7-2 Valufacture
- 7-3 Sur/petition origination
- 7-4 Synergetic effects
- 7-5 Sustainability in competition

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

0	1	2	3	4	5	6	7	8	9	10
cltxlrtb **Subtotal**										

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

0	1	2	3	4	5	6	7	8	9	10
Subtotal										

TOTAL

4.3. Scoring and interpreting the Results. As it can be seen from table 1, seven sets of indicators, each comprising of five separate indicators, were proposed for composing and scoring the composite index. Characteristics assessed by separate sets, range from the quality of produced goods and delivered services, up to the project effects on the competitiveness of the region. For explanatory purposes such procedure for composing and scoring composite index is: prescribing one number from 0 to 10 for each indicator, in the set and at the same time prescribing the weight for each set - w ($w_1 + w_2 + w_3 + w_4 + w_5 + w_6 + w_7 = 1$), and then finding subtotals and a total, which gives a definite number, when the quantitative assessment of the projects sustainability will be made.

Of course, as the number of projects increases, it becomes very difficult to compare them simply by reading descriptive reports on each project and comparing the resulting characteristics. Under these circumstances it is often necessary to use the composite index (*CI*), on which the projects can be compared. Table 1 shows that in such cases each project under estimation, *CI* can acquire a rating from 0 to 70.

The use of the index requires the members of the team conducting the assessment to make judgements about how the project should be rated by each indicator. If there is a too great degree of subjectivity in the assessments, this will seriously undermine the validity of the index. For reducing the degree of subjectivity a special expertise system was developed and used for *CI* estimation for some projects in Lithuania. One of possibilities of employment expertise system is presented in [4].

Really operating expertise system with conformable software for evaluation projects impact on regional competitiveness and sustainability will be presented in the session.

Conclusions

1. A set of processes representing correspondingly competitiveness and sustainability are now in direct confrontation not only for states, transferring to market economy, but also even for highly developed European countries.
2. In order to make work hand in hand above-mentioned confronting processes the new theoretical and practical approaches are needed. Principally new approaches are needed for transferring to market economy countries if they like survive and succeed.
3. Main sources of synergy lay in the selection and co-ordination of optimal ratio between competitiveness strength and sustainability effect; this ratio hardly but could be in commensurability.
4. Contemporary theories of economics and management cannot give definite answer how to act in separate cases for finding and managing this ratio.
5. Solution of these highly prior problems is being made on the basis of the pragmatic conceptions and practical approaches. One of such approaches will be presented in presentation of the paper.

References:

1. Edward de Bono. Sur/petition. Creating Value Monopolies when Everyone Else is Merely Competing. Fontana. 1989.
2. M. Bamberger, S. Cheema. Case Studies of Project Sustainability. The World Bank. Washington, D. C. 1990.
3. L. Kairiukstis. Ecological sustainability of regional development: problem, objectives and methodological solution / Ecological sustainability in a historical perspective, p. 7 – 12. Vilnius, 1998.
4. E. Zavadskas, O. Kaplinski, A. Kaklauskas, J. Brzezinski. Expert systems in Construction Industry. Trends, Potential & Applications. Vilnius: Technika, 1995.
5. Yves Bernard, Jean-Claude Colli. Dictionnaire economique et financier. Paris, 1994.
6. C. Pass, B. Lowes and L. Davies. Dictionary of economics. London, 1988.
7. A. V. Rutkauskas. Evaluation of Business project impact on regional economic – ecological sustainability. The paper prepared for 5th Nordic-Baltic Conference in regional science "Global-Local interplay in the Baltic Sea Region". Parnu, Estonia. October 1 – 4, 1998.
8. J. B. Mortensen. Measuring Sustainable Development. Copenhagen University & Danish Economic Council, 1999.
9. Heino Fassbender and Susan Cooper-Hedegaard. The ticking bomb at the core of Europe. The McKinsey Quarterly, 1993 Number 3, pp. 127 – 142.
10. Honadle, George, and Jerry VanSant. 1985. Implementation for sustainability: Lessons from integrated rural development. West Hartford, CT: Kumarian Press. 128 pp.