Bojan Radej

From Conventional to Sustainable Economic Development - Implementation Theses

Implementation Theses Advanced economies are finding it increasingly difficult to improve the pattern of their development because they have already achieved a high level of technological and social complexity. The allocation criteria, such as those evoked annually in the budget debate, have so far been underpinned to maintain social partnership and stability, but lacking signs of more welfare effective scopes of resource allocation and lacking signs of enriched future welfare creation opportunities. Implementation gap is seen as one of the essential limiting factors for higher sustainability in a transition countries, resulting in: (i) deteriorated long-term employment of domestic renewable resources; (ii) conventionally, quantities of products (nominations) and productivity are accumulated instead of welfare creativity (opportunities); (iii) excessive exploitation of non-renewable resources in long term. This results in asymmetrically distributed achievements of economic development and rises barriers for the introduction of new development paradigms, such as economic sustainability.

To test our thesis, we studied environmental aspects of Slovenian economic development. Conventionally, economic scarcity of resources led to accumulation of physical quantities of products; however, if we observe the economic problem sustainably, much more sophisticated set of driving forces arise: abundance, diversity and renewal of welfare creation options. As such, the sustainable paradigm not only reflects natural restrictions to economic activity but it also projects them on the screen of social choices to offer social ground for economic overcoming of biophysical limitations. Correspondingly, economic policy is advised to avoid resource allocations that: (i) restraining allocation alternatives; (ii) conflict members of the society in our irrevocable rights to maximise our welfare accumulating behaviour. Instead of conventional options, sustainability offers a whole set of new economic criteria for resource allocation - to increase it in a circumstances of high transitional implementation gap, we propose assessment of demands for the budgetary financing regarding its contribution to the closing of the (governmental) implementation gap. Economic policy is expected either to increase welfare output or to lower present rate of economic irreversibility.

This writing elaborates thesis more in detail to introduce selection of articles on economic sustainability in general and environmental development in Slovenia in particular. The main category in the Strategy of economic development of Slovenia by 2006 which is sustainably compiling improvement in environmental quality with higher economic growth, is maximisation of national (complex or global) competitiveness, in particular so as to improve national public governance (implementation gap).

Bojan Radej

An Introduction to the Economy of Sustainable Development

This study is based on the premise that benefits and damages accruing to a present generation are more important for the introduction of sustainable economic development than benefits and damages accruing to future generations. The sustainable paradigm has arisen from natural sciences, while its implementation has been based on social sciences. This is why the implementation of sustainable development raises the dilemma whether to prioritise the goals of clean environment or comfortable life.Economic theories have revealed that clean environment is one of the human preferences expressed as demand for one of the many economic (welfare) functions of a natural resource. Natural sciences have made significant contributions to understating the renewability and the multi-functionality of the natural resources. At the same time, social sciences have helped define and implement rules of sustainability in practice. We have found out that the best sustainable protection of natural resources is provided by promoting their alternative economic functions that can be used to create long-term renewable welfare. This suggests that not only energy and matter but also welfare are entropic (the meeting of needs) because of the irreversibility principle (conceived on the basis of thermodynamics). Economic development can thus cease to be viewed only from the point of view of economic scarcity. Instead, following the principle of sustainability, the

main economic problem may be redefined from the conventional management of economic scarcity to a challenge to manage the abundance of welfare that is potentially available in economic resources. If the welfare is not exploited when optimal, it moves away from humans to other living beings and other eco-systems. For example, the overgrowing of a forest may be seen as the outflow of the welfare potential for humans to the benefit of the forest. This enables us to replace the world of limitations, which is a central concern of conventional economics, by post-modern values of abundance.
We have realised that present generations cannot be economically worse off in aggregate terms because of the introduction of sustainability. In order to minimise the structural victims of transition, we propose to (i) raise the rate of employing local renewable resources in order to offset the phasing-out of non-sustainable welfare practices, and (ii) cut the discount rate in order to buffer the feeling of sacrifice caused by the re-allocation of part of current consumption to the benefit of future generations. The transition into sustainable development therefore calls for not only an adjusted economic policy but also a new environmental policy. As the latter is generally less operational than the former, and because environmental management processes are irreversible, we conclude that the institution of sustainability will face greater environmental than economic difficulties.

Janko Seljak
New Measures of Development - Sustainable Development Index
This article examines the concept of sustainable development, which has become one of the most important theoretical concerns underlying global and national development strategies in the last ten years. The effectiveness of each strategy can only be assessed if its goals are measurable. It is therefore necessary to define all aspects of balanced development in order to be able to measure its level and change. On the other hand, this concept should be compatible with all value systems if it wants to be acceptable worldwide. The article presents the main features of the sustainable development indicator and the calculations showing the indicator's current level and change for 24 European countries for 1990 and 1998. A comparative analysis showing a relationship with other widely-used development indicators has also been made.

Ivanka Zakotnik, Bojan Radej
Identification of Environmental Pressures Resulting from Increased Volume of Economic Activity
In line with its orientation towards sustainability, Strategy of economic development of Slovenia until 2006 has prioritised improvement of created factors of competitiveness (technology, human capital) against natural ones (labour force, natural resources). We try to identify environmental driving force in the Strategy: favourable, shown as a decrease in per unit demand for environmental capital which normally accompany technological improvement or unfavourable, shown as increased aggregate pressure resulting from increased volume of economic activity. Economic development in manufacturing is assumed sustainably fair, when it results in contraction of per unit emissions at a rate equal or higher to the difference between value added and production growth rates.
We analysed dynamics and structure of manufacturing's exports of goods, emissions, production and value added growth for the period between 1992-2006 and identified the following: Slovenian priority environmental problem are relatively high emissions (22% increase in emissions linked to exports and 0.7 structural points decrease in natural resource intensity in exports of goods by 2006). The following sectors have been identified as dirty industries: metal and metal products, miscellaneous non-metal products, textile fibbers and products, chemicals, wood, paper and cardboard. Their production growth rate has surpassed that of manufacturing on average in the period 1995 - 2000. Emissions are concentrated on some 900 enterprises employing some 40,000 people, creating 20% of value added and accounting for 22% of total exports of goods in manufacturing.
We expect that improvements, decreasing environmental degradation per unit of production are sufficient only to offset expected additional aggregate deterioration in environmental quality arising from bare increase in volume of production by 2006. If there are no additional measures introduced

to implement sustainably ambitious Strategy, these two trends can only neutralise each other keeping environmental quality at the end of the period at the level, close to the present one.

Art Kovacic

Measuring the Global Competitiveness of Countries and the Importance of Environmental Protection

Nation's competitiveness is the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, which simultaneously maintaining and expanding the real incomes of its people over the long term. It is clear that living standards have broader roots than per capital income. In particular, there is a growing recognition that standards of living are inextricably tied to the quality of the natural environment. Environment performance clearly affects health and safety and the desirability of countries as places to live, both important aspects of standards of living. Countries with strong environmental regulatory regimes generally show strong competitiveness and GDP performance as well. The purpose of the article is to check whether the conventional explanation that a rise in environmental expenditures harms global competitiveness holds. Our analysis of IMD and WEF data did not confirm this. On the contrary, we found out that there exists a positive connection between the level of environmental protection and global competitiveness. This was also our starting-point thesis. Concerning Slovenia, this finding means that it has to reinforce the implementation of environmental legislation and investments into environment protection. With regard to Slovenia's sustainable development orientation, as stated in the Strategy of Economic Development of the Republic of Slovenia, a stronger emphasis on harmonious environmental and economic development will be needed.

Bojan Radej

Selected bibliography dealing with environmental economics and sustainable development and translations of summaries of the selected articles

Selected bibliography dealing with environmental economics and sustainable development

Author have selected works published by 1994, when the theoretic debate about the concept of sustainable development, which is the main topic of this issue, was mostly finished.

The selection is was made from the following:

(i) Krishnan R.; J.M. Harris; N. R. Goodwin. 1995. A Survey of Ecological Economics. Washington, D.C., Covelo: Island Press, 384 str.;

(ii) Pearce D.; D. Whittington; S. Georgiou; D. Moran; N. Hadker. Economic values and the environment in the developing world - a report to the UNEP. London: CSERGE, University College London and University of East Anglia, Environmental Economics Series Paper no. 14;

(iii) Tietenberg T. 1996. Environmental and Natural Resource Economics. Glenview: Scott Foresman & Co., 4. issue, 614 page.;

(iv) Atkinson G.; R. Doubourg; K. Hamilton; M. Munasinghe; D. Pearce; C. Young. 1997. Measuring Sustainable Development: Macroeconomics and the Environment. Lyme: Edward Elgar Publishing, 252 page;

(v) Review Theory and Practice year. 23, no. 9-10/1986; year 25, no. 1-2/1988, year 26, no. 11-12/1989, year. 27, no. 10-11/1990;

(vi) selection of articles from Journal for critisizm of science prepered by mr. Andrej Klemenc, editor of OIKOS.