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GLOBALIZATION, COMPETITIVENESS AND ENVIRONMENT

ABSTRACT

Our goal in this paper is to highlight the role and significance of the environment and natural resources in the process of creation of competitive advantages in a globally connected world. It is possible to define the process of globalization on different levels: worldwide, specific country, specific industry and specific company. Globalization on different levels leads toward continuous requests for increased competitiveness. We would like to show the mechanism through which economic growth in a globalized world leads to environmental degradation and overexploitation of natural resources. Most developed countries admitted significant environmental quality deterioration and natural resources overexploitation as a consequence of high rates of economic growth. In other words, the economic growth pattern was recognized as unsustainable in the long run. We shall make a critical review of particular indicators of competitiveness and sustainability, primarily of the Growth Competitiveness Index and Environmental Sustainability Index. We would like firstly to show important shortfalls of each of them, and secondly would like to propose certain improvements in the form of the creation of a entirely new synthetic indicator – Sustainable Development Competitiveness Index. That index (however still imperfect) might serve as a much better and reliable guidance for all the countries on their road toward genuine sustainability.

Key words: globalization, competitiveness, economic growth, environment, sustainability.

1. Introduction

Globalization can be defined in several different ways depending on the level we choose to focus on: *At a worldwide level*, globalization refers to the growing economic interdependence among countries reflected in increasing cross-border flows of goods, services, capital and know-how. *At the level of a specific country*, globalization refers to the extent of inter-linkages between a country's economy and the rest of the world. *At the level of a specific industry* globalization refers to the degree to which a company's competitive position within that industry in one country is interdependent with that in another country. *At the level of a specific company*, globalization refers to the extent to which a company has expanded its revenue and asset base across countries and engages in cross-border flows of capital, goods and know-how

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across subsidiaries. Hence, one could say that globalization represents the process of increasing convergence and interdependence of national economies and of the international scope and availability of markets, distribution systems, capital, labor, and technology. The trend towards globalization has been clear in the pattern of sustained growth in the world trade and investment flows. Growth in the world economy has become more trade-intensive.

Our interest in this article will be focused on the globalization effects in the form of the continuous requests for increased competitiveness on all levels, from the company to the national economy. We would like to show the role of the environment and natural resources in the process of creation of competitive advantages in a globally connected world. Since the growth in the world economy has become more trade-intensive it means that different forms of traffic and transportation show the tendency of constant increase. Having in mind various negative effects that transport activities have on the environment, we would like to stress the fact that globalization in the long run leads to increased environmental pollution and more intense natural resources usage. In that sense we shall emphasize the importance of different environmental policy measures and indicators like environmental sustainability index (ESI) and ecological footprint. We shall compare these indicators with one indicator which obtained worldwide acceptance and relevance – Growth Competitiveness Index (GCI), which is determined for more than hundred countries and presented in the Global Competitiveness Report for 2004-2005, and Global Competitiveness Report for 2006. We would like to stress some shortfalls of GCI relating to natural resources and environment that might have far reaching and long term consequences on the process of environmental policy creation worldwide. Having in mind the evident need for a more effective environmental policy worldwide we would like to propose the creation of a new synthetic indicator combining GCI and ESI.

Economic growth is an important goal highly ranked on the agenda of all the countries in the world. But since 1970s most developed countries admitted significant environmental quality deterioration and natural resources overexploitation. In other words, the economic growth pattern was recognized as unsustainable in the long run. The main response of all countries was mainly in the form of technological progress. That way significant results have been achieved in reducing the consumption of material and energy per unit of commodity or service produced. Hence, technological progress has been considered as a factor that will enable „decoupling“ environment and natural resources use from economic growth. We bring into question such a belief, analysing the difference between concepts of relative and absolute scarcity and relative and absolute decoupling of environmental and natural resources use from economic growth.

Using the estimates of the EU we would like to show that the absolute consumption of natural resources (total number of units multiplied with per unit consumption of environmental services, material and energy) will further increase, not decrease, in the world in the next twenty to thirty years. Regardless of some evident results that primarily information communication technologies (ICT) have achieved in the sense of increasing productivity and dematerialization of the whole economy, constantly increasing GDP and material production have reversed the overall positive trends. The neoclassical economics approach toward the economic growth is still very influential. One can realize that while reading a worldwide influential document entitled „Global Competitiveness Report for 2004-2005“ prepared by the

World Economic Forum (WEF 2004). The Report serves particular countries to compare their practices with the best ranked countries, seen as a model of desirable behavior. Professor Michael Porter, as the main author of the methodological framework and the theoretical background of the Report, based his approach to competitiveness on the premises of the neoclassical economy underestimating the role of natural resources and neglecting practically the concept and ideas of environmentally sustainable development. We use the Report as a basis for discussion on different factors of productivity and competitiveness, primarily on advanced technology which, according to many authors is the prime enabler of the process of decoupling of environment and natural resources from economic growth. So called relative decoupling has been presented as a universal and sufficient solution to numerous problems relating to environment and natural resources overexploitation. On the contrary, our opinion is that absolute decoupling is what is really needed if the mentioned problems are to be resolved in the long run. The emphasis is on the long run. Since absolute decoupling has been very rarely accomplished, we think that emphasis of achievement of only relative decoupling is counterproductive and even dangerous. Saying that the relative decoupling is the final solution to environmental and natural resources problems leads to the situation in which incentives for further efforts aiming at absolute decrease of quality of limited resources used do not exist.

2. Economic growth, global competitiveness and the environment

The Report on Global Competitiveness for the year 2005 has ranked 117 countries according to the value of two indexes: Economic Growth Competitiveness Index, and Business Sector Competitiveness Index. The calculation of these indexes represents a significant contribution to the attempts to better define and analyze concrete factors that contribute to building of competitive advantages of individual countries, as well as to quantify their impact on economic growth. But, in addition to the obvious advantages of these synthetic indicators, we think that certain mistakes and shortcomings in the methodology have occurred, primarily due to the wish of the authors to apply the same common methodological framework to very different countries. These countries are different according to the level of economic development, or the stage of competitive development, to use the term of professor Porter. Yet, some shortcomings are equally applied to all countries and they represent shortcomings based on the broadest view of the philosophy of economic growth and development, as well as the importance of particular factors and the character and dynamics of their mutual interactions. We primarily have in mind the environment and natural resources (material and energy inputs).

From the very name of the Index it is evident that the authors, while deciding on the dominant concept and the broadest methodological framework, gave preference to economic growth and not to the economic development. Also it is obvious that they based their theoretical attitude to the greatest extent, if not entirely, on the postulates of the neoclassical economic thought. This basic orientation has resulted in an approach toward the environment and natural resources which, according to our opinion, is very disputable, both from the theoretic and practical standpoint, in the sense of the goals of economic policy and its concrete results. The authors of the Report entirely ignore clearly defined principles of sustainable development. It seems that professor Porter is interested in the environment primarily because he is convinced that appropriately stringent and adequately structured environmental legislation and policy act as a source of the classical competitive advantages, and not because he is convinced that the

environment by itself should be really protected and that we should radically change our attitude toward the environment. However, only the second would represent a significant step forward toward the transformation of a policy predominantly focused on economic growth to a policy of sustainable development. As for natural resources, the orthodox economic thought has been used which treats the natural resources simply as a given, or as a supposition which will in one way or the other, somewhere and in some form always be available to entrepreneurs, and their technology used in the production processes.

As for the way of calculation of different indexes of competitiveness, the first of them, Economic Growth Competitiveness Index is composed of the three component indexes; technological index, public institutions index and macroeconomic environment index. Detailed analysis of the content and the structure of these component indexes show that neither of them takes into account the element of the environment. In the process of calculation of the Business Sector Competitiveness two basic segments were taken into account: functioning and the strategy of companies, and the business environment in the country, which is by itself, composed of four parts: (1) Conditions with regard to inputs-factors, where the subcomponents (physical infrastructure, administrative infrastructure, human resources, technological infrastructure, and capital markets) were taken into account; (2) Demand conditions; (3) Industries that are interlinked and support mutual development; (4) Context for the strategy and rivalry among companies. In the mentioned components the environment found its modest place in the segment of demand conditions, although, honestly speaking, it is not quite clear why, in the form of the expression „stringency of environmental regulation“, it is placed in that particular segment. Natural resources are in an even worse position. Among the factors having influence on the business competitiveness natural resources were not even mentioned. Porter again treats them simply as an assumption, as something that is out of the question and always available. In the Report (WEF 2004, p. 21) Porter said: „Companies in a nation must upgrade their ways of competition if successful economic development is to occur. Broadly, companies must shift from competing on inherent endowments (comparative advantages such as low-cost labor or natural resources) to competing on competitive advantages arising from efficient and distinctive products and process“. And further (WEF 2004, p. 23): “National endowments such as natural resources play a declining role in competitiveness as the resource intensity of the economy falls and as technology substitutes for resources or opens up new resource locations. ... It is the productivity with which natural resources can be utilized, not the resources themselves, that normally have the strongest influence on prosperity. Finally, Porter concludes (WEF 2004, p. 44): „Countries with lower levels of productivity are more dependent on natural resources export“. This way Porter clearly recognizes and admits the role that natural resources have as a mean of competitive battle on the world market. It is an entirely different matter how we see them in that role – as more or less valuable, as efficient or inefficient, as desirable or less desirable. It is more than obvious that natural resources have been and still are, for the large number of countries, the predominant mean in the competitive battle on the world market and the dominant mean by which they realize their economic growth, but probably not economic development, and surely not sustainable development, envisaged as a complex goal realized through a balanced development on four fields simultaneously: economic, environmental, social and cultural.

Stating that technology replaces natural resources Porter evidently declares himself as a technological optimist who believes that technology alone can resolve all the problems and insure desirable continuous economic growth at high rates. We are not going to use this opportunity to offer full argumentation in order to dispute with such an approach, but it is evident that Porter does not take into account numerous findings and insights of economic theorists regarding the limits to growth through an ever increasing usage of technology in the form of social and natural laws.¹ Implicitly, professor Robert Sollow's approach has been adopted, according to which the concept of sustainability has been defined in the form of the sustaining of the total amount of assets, or capital at the disposal of a society, at the unchanged level. However, Sollow said that the ratios of particular components in the structure of assets (human capital, man made capital, financial capital, natural capital) can be changed over time. Obviously professor Sollow assumes unlimited substitutability among particular components of the total assets, which numerous theorists, not only ecologists but economists too, justifiably bring into question.²

Stating that technology finds new resources on new locations, Porter only shows that he entirely neglects the important distinguishing between absolute and relative scarcity of resources, and that he based his approach on the ideas of Stanford University professor Nathan Rosenberg elaborated in the book „Perspectives on Technology“. Rosenberg considers only economic scarcity as a relevant one, but not absolute scarcity imposed by the first and the second thermodynamic laws, as well as the concept of entropy. That concept clearly shows that the absolute quantity of resources with low entropy (as a measure of their usefulness), unrestrainedly decrease due to the way the economic system is functioning in its attempt to insure continuous economic growth measured by the consumption of an ever increasing quantity of goods and services. According to Rosenberg: „Economic scarcity of a particular resource is not determined by the natural spread of the resource but by the level of development of science and technology which enables or disables economically viable exploitation of that resource“ (Rosenberg 1976, p. 280).

The traditional economic theory (the postulates of which are obviously accepted by Porter) accepts the so called relative scarcity as the only relevant scarcity, for its proponents hold that technology is a sufficiently powerful mean for overcoming almost every scarcity human beings might encounter in the process of social development (or economic growth with which the proponents of the traditional economic theory are obviously predominantly occupied). Technological progress and almost infinite faith in technology lie in the very basis of the concept of relative scarcity. According to that concept technological solutions will always, without limits, be able to find a proper way of efficient replacement of scarce materials and the sources of energy with those more spread and previously unused. Hence, according to professor Rosenberg economic scarcity is the only one relevant for economic science and the society as a whole. Economic scarcity, according to Rosenberg, and obviously according to Porter, has no relations with clearly determined and properly defined ecological or geological scarcity, which actually, in the beginning, initiated sporadic debates about growth limits and unsustainability of a theory and practice putting emphasis predominantly on the economic

¹ Like Fred Hirsch: „Social limits to growth“; William Ophuls: „Ecology and the Policy of Scarcity“.

² Like David W. Pearce in his book „Economic Values and the Natural World“.

growth, and finally led to a clearly shaped philosophy and principles of sustainable development.

Stating that developed countries turn increasingly to the service sector, because their material component is limited, Dahl implicitly advocates that the relevance of natural resources that way is diminished and that their importance in the future would be ever decreasing. We would like to remind that according to the Report (WEF 2004, p. 44) the countries that lead in the export (measured in the absolute physical amount **not** as a size relative to their overall export) of minimally processed natural resources are the most developed countries: United States, Canada, Russia, Australia and Norway. On the other hand, we would like to remind that 20 % of population of the developed countries produces 80% of the world GDP. We do not believe that the whole 80% represents only services. *Developed countries, like Japan, which is among the most important producers of steel despite the fact that it does not possess its own metal ore at all, enormously use natural resources of other countries and to a significant extent base their competitiveness on them. But the Index known as the Ecological Footprint clearly and unambiguously points to that fact and stresses the unsustainability of such a practice of economic growth of developed countries and the world as a whole.* The Ecological Footprint Index converts a country's total resource consumption into the equivalent of hectares of biologically productive land, and then divides this population to obtain a final value of hectares per capita. The term "Ecological footprint" represents the corresponding surface of productive land and water ecosystems that are necessary in order to produce raw materials and assimilate produced waste, by the defined population on the specified level of the material standard of living, **regardless where on the planet that land is located.** It is really warning that the ecological footprint of London – with 12 % of the total Great Britain population and physically located on 170.000 hectares – amounts to 21 million hectares or 121 times more than the real surface of the very London, which is the equivalent of the whole productive land in Great Britain. Any comment is unnecessary.

In the process of consolidation of two mentioned indexes and calculation of the Global Competitiveness Index (WEF 2004, p. 74), on the list of twelve pillars of competitiveness, environment was simply lost and joined natural resources already lost in the previous iteration. In the repeated segment entitled Consumers (Demand Conditions) in the process of consolidation only three sub segments were stated explicitly: government procurement of advanced technology products, sophistication of the buyers and degree of customer orientation. The previously used term „stringency of environmental regulation“ simply is not there. All this probably for the reason stated by Porter in one sentence (WEF 2004, p. 44): „Natural resources result from endowments, not economic competitiveness“. But, from the previously mentioned arguments it is clear that Porter has acknowledged that particular countries (concretely those with low productivity) use natural resources as a base of their competitiveness, which means that competitiveness stems from natural resources available within the boundaries of those countries or within the boundaries of other countries. We deliberately say “of **other** countries” because even the most developed countries base their development either on natural resources located in other countries (Japan – metal ore) or on an exaggerated usage of the common environmental goods (U.S.A. currently use 36% of atmosphere as a place for disposal of CO₂ and CFC).

U.S.A. has not signed the Kyoto agreement. Explanation – it would result in an enormous increase of the costs of manufacturing. Of course, it would lead to significantly lower

competitiveness of US companies, or better to say competitiveness would be finally brought to a more realistic measure. Does one need more obvious proof that even the most developed countries base their competitiveness and their overall prosperity to a great extent on the overuse of natural resources? Conclusion: by exaggerated insistence on product differentiation as a strategic direction for obtaining competitive advantages, Porter entirely ignores the cost aspect of competitiveness. Low costs of the products in developed countries to a great extent have been insured either by natural resources from other countries or by overuse of common environmental resources. Had these costs been taken into account, the overall picture of competitive advantages and ranking of countries would be quite different.

Transnational corporations from the most developed countries, in spite of the most advanced technology in their possession, constantly search for locations worldwide characterized by comparative advantages in the form of cheap natural resources and labor force. It is another proof supporting the statement that not only low developed countries used natural resources as a basis of their competitiveness but also the most developed countries. They use their higher productivity simply to achieve larger production and easier distribution of their products all over the world. Hence, not to include natural resources in any way as a factor in the process of calculation of competitiveness index (justifying their exclusion by the statement that natural resources represent the gift of God and not the result of the conscious efforts), simply does not have real justification. We think that *globalization, which supports previously mentioned patterns of behavior, represents the best way to practically keep alive otherwise unsustainable competitive advantages. It is even worse, they are constantly recommended as a desirable model of behavior.*

3. Absolute and relative decoupling of economic growth and natural resource consumption and environmental degradation

The term decoupling refers to breaking the link between “environmental bads” and “economic goods.” Decoupling environmental pressures from economic growth is one of the main objectives of the OECD Environmental Strategy for the First Decade of the 21st Century, adopted by OECD Environment Ministers in 2001. Decoupling occurs when the growth rate of an environmental pressure is less than that of its economic driving force (e.g. GDP) over a given period. Decoupling can be either absolute or relative. *Absolute decoupling* is said to occur when the environmentally relevant variable is stable or decreasing while the economic driving force is growing. Decoupling is said to be *relative* when the growth rate of the environmentally relevant variable is positive, but less than the growth rate of the economic variable. According to Joke Waller-Hunter, former Director of the Environment Directorate of OECD, despite eco-efficiency improvements, overall environmental degradation has persisted in most cases. OECD countries reduced the energy intensity of their economies by 31% in the period 1973-1996, but they increased total energy consumption by 23% over the same period. Their total energy use is expected to grow by a further 30-50% to 2020. (Waller-Hunter 2000). The situation is similar with greenhouse gas emissions. While the output of GHG emissions relative to GDP has fallen for OECD countries in recent years, total absolute emissions have risen. Under current policies, OECD countries could increase GHG emissions by a further 30% to 2010, far from the overall Kyoto Protocol target of a 5% reduction from 1990 levels to 2008-2012. In some cases, there are no signs of any real improvement. This is true of *transportation*, where motor vehicle kilometers traveled in the OECD are expected to increase

by at least 65% in the period 1990-2020 and passenger air kilometers are expected almost to quadruple. Similarly, levels of OECD municipal waste generation in 2020 are expected to continue following GDP growth, approximately doubling from the 1980 levels. In the European Commission document entitled: "Towards a Thematic Strategy on the Sustainable Use of Natural Resources" there is a following statement: "Energy is a key resource for our economy. Overall demand is predicted to grow substantially over the coming decades, by 30% for the OECD countries and by 70% for the world as a whole in the next 30 years. For the EU, these increases are smaller than the targeted doubling of the economy over the same period; if efforts are maintained, the decoupling of energy use from economic growth will continue. However, energy consumption will still increase in absolute terms (European Commission 2003, 11).

It is obvious that in spite of increased productivity and more efficient usage of natural resources, in the form of smaller quantity of material and energy per unit of final goods, the key factor determining the total usage of natural resources is increasing the total quantity of final goods and services produced, which is significantly higher than achieved savings through a decrease of material and energy intensity per unit. When Porter talks of the decreasing role of natural resources in economy he obviously has in mind the decrease of material and energy intensity per unit of final output. But he does not recognize and does not accept trends clearly showing that the total quantity of natural resources used is increasing not decreasing. We are convinced their importance in the future will be higher not lower, as Porter believes.

An important shortfall of Porter's model of a competitive economy represents the fact that economic growth depends on **increasing usage of material and energy in absolute terms**. Unfortunately, increased productivity means increased efficiency with which natural resources have been transformed into the final products, since the basic definition of the productivity can be stripped to the statement that productivity represents the **quantity** of the goods produced in the unit of time. Porter overlooked the important fact elaborated clearly by the Directorate for the Environment: „An annual economic growth of 3% leads to a doubling of the economy in 25 years³ If this growth is realized within the production and consumption patterns of today, including the use of currently available technologies, the resource use will grow with a factor 2 as well. In this case there is a 1:1 coupling of economic growth and resource use. Fortunately, this scenario will not happen. The economic growth is not simply realized by doing more of the same. In other words, in the coming decades a considerable amount of value will be created, which material and energy intensity is less than today's products and services. The growing contribution of services to the economy is one reason for this. The ongoing improvement of technologies is another one. Nevertheless, the increase of energy and material use will be considerable, e.g. the energy use in OECD countries is expected to grow in the next 20 years by 35% and by 51% worldwide (OECD 2001). This means that economic growth and resource use are decoupled to some extent. In other words, resource use is growing, but less steep than the growth of the economy. This phenomenon is called relative decoupling. Absolute decoupling would take place if the growth of the resource use would be negative" (European Commission 2002, 7). We think that additional comment is not necessary. Experts did take into account expected technological progress, but still envisage

³ An annual growth of 3% leads to a cumulated growth in 25 years with a factor of $(1.03)^{25} = 2$. Hundred years of growth gives rise to a cumulated growth of $(1.03)^{100} = 20$.

significant increase of the quantity of natural resources used. Consequently, the assimilative capacity of the environment will be significantly endangered.

4. Measurement of competitiveness and sustainability: Sustainable Development Competitiveness Index - SDCI

The Environmental Sustainability Index (ESI) for the year 2005, prepared by the World Economic Forum (in cooperation with Yale and Columbia Universities) calculated for 146 countries, represents the measure of the overall progress toward environmental sustainability, as one of the components of the sustainable development. Environmental sustainability is measured through 20 indicators, each of which combines two to eight variables, for a total of 68 underlying data sets. The ESI tracks relative success for each country in five core components: Environmental Systems, Reducing Stresses, Reducing Human Vulnerability, Social and Institutional Capacity and Global Stewardship. The ESI demonstrates that it is possible to derive quantitative measures (however imperfect) of environmental sustainability that are comparable across a large number of countries. Comparative analysis supports efforts to identify critical environmental trends, track the success (or failure) of policy interventions, benchmark performance, and identify “best practices”. The higher a country’s ESI score, the better position it is in to maintain favorable environmental conditions into the future. It is interesting to see some of the results from the Report. With regard to the synthetic component (which is the most important one, according to our opinion), Reducing Environmental Stresses (with Indicators: Reducing Air Pollution, Reducing Water Stress, Reducing Ecosystem Stresses, Reducing waste and Consumption Pressures) and according to Growth Competitiveness Index the ranking of particular countries is given in the following table:

	Growth Competitiveness Index (GCI)	Reducing Environmental Stresses as a main component of Environmental Sustainability Index (ESI)
Belgium	31	145
Taiwan	15	144
USA	2	143
Netherlands	11	142
Great Britain	13	141
Denmark	4	140
Germany	15	135
Japan	12	128

Sources: WEF January 2005, p. 377 and WEF September 2005, p. 353

We think that figures speak for themselves. As of the component Social and Institutional Capacity, according to one indicator (Science and Technology) comprising of the three variables (Technology achievement index, Technology innovation index, and Mean years of education), USA is in the first place, leaving far behind all other countries. But, if one looks at the other indicator defined as Eco-Efficiency (comprising of two variables: Energy efficiency,

measured as total energy consumption per unit GDP; and Renewable energy production as a percentage of total energy consumption) USA is on the 107. place. As of the indicator Reducing Transboundary Environmental Pressures (CFC Consumption- total times percapita; SO₂ exports; Total marine fish catch), within the component Global Stewardship, it is also interesting to note the ranking of some of the most developed countries: USA-126, France-127, Great Britain-139, and Japan -144.

Having all this in mind, and the fact that all the countries have formally accepted sustainable development as a leading philosophy, it is clear and obvious (to everybody?) that the indicators from the Global Competitiveness Report send a completely wrong and counterproductive message. It is obvious that the rank of particular countries, and USA in the first place, would be drastically changed, even with regard to ESI, if mentioned components and indicators were given significance and weight they *really deserve*. ***And then if we combine, with proper weights, ESI and GCI into our proposed new synthetic index designated as Sustainable Development Competitiveness Index (SDCI), we would get a completely different and more realistic picture and ranking of particular countries. Competitiveness is not the goal for itself. It is supposed to lead to economic development, which is supposed by itself to lead to better life and increased overall welfare of the citizens of particular countries, and not to the increase of only one component – material consumption.*** The calculation of a new synthetic SDCI index requires a decomposition of the GCI and ESI indexes and determination of the weights of all individual indicators, as well as a determination of the very models used for the calculation of these indexes. **This is a necessary prerequisite for combining them into a synthetic, completely new index. Due to the complexity of such a task, the results of these activities in the form of a proposed concrete model for the calculation of SDCI and weights for each of the consisting indexes will be presented in the near future in a new paper.**

If the idea of the sustainable development is really accepted, and not only formally, we are convinced that only one such synthetic indicator as Sustainable Development Competitiveness Index would be a proper indicator of the long-run success of a national economy.

5. Instead of conclusion

The achievement of reduction of environmental impacts requires an absolute decoupling of environmental impacts from economic growth. Relative decoupling tends to mean just resource efficiency, and resource efficiency measures alone will not deliver the objective of ensuring that “the consumption of renewable and non-renewable resources does not exceed the carrying capacity of the environment.” Relative decoupling would not lead to reductions in environmental impacts, merely a slowing down of the increase in environmental impacts.

What is needed is absolute decoupling and not relative decoupling, as Porter with other technological optimists advocates. To achieve absolute decoupling significant changes are requested in the field of consumption, not only in the field of extraction and manufacturing. To achieve absolute decoupling between environmental impacts and economic growth, an overall reduction in resource use will be required. Technological fix and increased resource productivity, however important, are not sufficient. Real decoupling is absolute decoupling and the only one actually deserving that name. Relative decoupling is an illusion that we are

using to convince ourselves that we are going in the right direction, while we accumulate the problems. If we continue with that illusion I am afraid that Keynes might be right: “In the long run we are all dead”.

Thinking about real competitive advantages that would lead to the really sustainable development should lead to a completely different definition and understanding of competitiveness in the globally connected world and hence leads to a completely different ranking of countries. We think that the ranking of countries according to GCI is not in accordance with the principles of environmentally sustainable development. A combination of GCI and ESI could offer a more realistic (although still not perfect) picture. Such a combined index – designated as Sustainable Development Competitiveness Index (SDCI), might serve as a real guidance for all countries on the road toward sustainability. What is needed therefore is a redefinition of the very term social prosperity-progress and defining of different models of development, not only growth. The words of Peter Russell from his book “Awakening of the planet” might be appropriate for the end: “It is not enough to notice and convict only our strivings toward growth, but the limitation of our consciousness about possible ways of growth.”

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GLOBALIZACIJA, KONKURENTNOST I OKOLIŠ

SAŽETAK

Cilj ovog rada je naglasiti ulogu i važnost okoliša i prirodnih resursa u procesu stvaranja konkurentne prednosti u globalno povezanom svijetu. Proces globalizacije možemo definirati na različitim nivoima: svjetskom, određene države, određene industrije i određene tvrtke. Globalizacija na različitim nivoima vodi ka neprestanim zahtjevima za povećanom konkurentnošću. Želimo pokazati mehanizam kojim ekonomski rast u globaliziranom svijetu vodi do degradacije okoliša i pretjeranog iskorištavanja prirodnih resursa. Većina razvijenih zemalja je priznala da dolazi do znatnog smanjenja kvalitete okoliša i pretjeranog iskorištavanja prirodnih resursa kao posljedice visokih stopa ekonomskog rasta. Drugim riječima, shema ekonomskog rasta je dugoročno prepoznata kao neodrživa. Donosimo kritički osvrt na specifične indikatore konkurentnosti i održivosti, prije svega na Indeks konkurentnosti rasta i Indeks održivosti okoliša. Želimo prije svega pokazati značajne mane u oboma, a zatim i predložiti poboljšanja u obliku stvaranja potpuno novog sintetskog indeksa – Indeksa konkurentnosti održivog razvoja. Taj indeks (ma koliko još nesavršen) može poslužiti kao mnogo bolja i pouzdanija vodilja za sve zemlje na njihovom putu ka istinskoj održivosti.

Ključne riječi: globalizacija, konkurentnost, ekonomski rast, okoliš, održivost.