

National Competitiveness and Sustainability: Friends or Foes



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1 Introduction

“National competitiveness” is a broadly discussed (Abbas 2000; Berger 2008; Bhawsar and Chattopadhyay 2015; Bieńkowski 2000; Bracey 2008; Fagerberg et al. 2007; Pace and Stephen 1996; Waheeduzzaman and Ryans 1996), but still not clearly defined interdisciplinary research area, spanning across theories of international trade, development, and strategic management. The rise of interest in this topic has been accelerated by the intensification of economic interconnections at the micro, mezzo, and macro level, as a result of the global economic liberalization since the 1970s. Consequently, it has been observed that some countries, represented by the companies operating within its territories, visibly outperformed the others in grasping the benefits of accelerated international flows of goods, services, and investment.

Resulting from the export performance benchmarks, macro-competitiveness has been originally evaluated through the prism of national trade performance (Thurow 1993). This approach has been however criticized by scholars, who referring to the post-mercantilist, non-zero sum game trade theories, questioned the very sense of discussing “competition between countries” at the academic level (Krugman 1994, 1996). From the 1990s, the supporters of the national competitiveness concept evaluated it in a broader perspective—as an assessment of the nation’s ability to grow in the era of globalization (Bloch and Kenyon 2001, p. 16). This definitional approach has opened a new chapter in the scientific debate, aiming to find the best approaches to conceptualize and strategically stimulate national competitiveness.

Decades after releasing the first publications on national competitiveness, as a consequence to the global financial crisis, progressing deregulation, increasing power of the multinational enterprises and socio-ecological challenges of the global economy, the debate on macro-competitiveness is still vivid and relevant (Aiginger 2016;

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Badinger et al. 2016; Kinra and Antai 2010; Porter and Rivkin 2012). Stronger than ever before, the neoclassical doctrine, rejecting the legitimacy of the strategic developmental policy, is brought into question (Ali 2013; Atkinson and Ezell 2012; Haar 2014). It has been recognized that in order to deal with the challenges faced by modern economies and to enable inclusive sustainable growth of the world population, a long-term sustainable globe as well as a national developmental path has to be designed and implemented. The national competitiveness discourse has been thus enriched with social aspects. Scholars stress the necessity of finding a balance between actions aimed at boosting national productivity levels, responsible use of natural resources, and development of social welfare (Samans et al. 2015; Thore and Tarverdyan 2016). These goals together with the strategies to address them, of which are a part of the main objectives of national governments and supranational institutions, have already become the main concern of industrialized countries and slowly penetrating the agenda of emerging economies.

In the post Washington-consensus era, the Lisbon Strategy and subsequently the Strategy Europe 2020, have both placed smart, sustainable and inclusive growth at the centre of their strategic concerns with their flagship projects “Resource Efficient Europe” and “European Platform Against Poverty” (European Commission 2010). The latest OECD and World Bank efforts concentrate on finding more meaningful ways of measuring the socio-economic success of nations and come up with policy recommendations on how to achieve it, “while preventing environmental degradation, biodiversity loss, and unsustainable natural resource use”. This line of thinking has also been reflected in the recent initiative of the “neoliberal” World Economic Forum, indicating an urgent need of integration of sustainability indicators into the global competitiveness index (Thore and Tarverdyan 2016). The “spirit of sustainability” is clearly visible in their latest reports—evaluating global and European progress towards building a sustainable and inclusive economy (Samans et al. 2015; Schwab 2014).

Due to its many facets and ambiguities, “national competitiveness” constitutes one of the most popular concepts of the modern economics, which is frequently covered in media, political debate, and academic discourse. However, such popularity results in a definitional chaos and confuses the public, leading to “McDonaldization” of this complex research category. For years, researchers have made attempts “to structure this chaos” through developing an overarching methodology to grasp the very sense of macro competitiveness but have been without major success. Today, together with the broadened scope of research, enriched by the socio-environmental aspects, lack of consensus on the best approach to defining and modelling this economic phenomenon further fuels the academic discussions.

In light of the above, this paper aims to conceptualize national competitiveness in the context of sustainable developmental goals. The key question is whether economic competitiveness can be achieved in parallel to “beyond GDP goals”, or whether increased productivity can be pursued only at the cost of environmental and social degradation.

2 Around the (Miss)Understanding of the National Competitiveness Concept¹

Despite its popularity, national competitiveness is regarded as one of the most misunderstood economic concepts (Berger 2008; Bhawsar and Chattopadhyay 2015; Bracey 2008; Chaudhuri and Ray 1997; Dunn 1994; Ezalea-Harrison 2005; Krugman 1996; Minford 2006; Mulatu 2016; Porter 1990; Reinert 1995). The controversy started with the provocative statement from former US President Bill Clinton that each nation “like a big corporation competes in the global marketplace”. This hypothesis was based on the observation that in the globalized world, an era of increased international trade flows and intensified movement of production factors across borders, some countries visibly outperform the others in relation to their export performance (measured by trade volume) and therefore growth rates (measured by GDP levels).

In this sense, benchmarking the performance of national economies and pointing out “winners” and “losers” of the new international division of labour, has been directly “borrowed” by the American politicians from the strategic management competitiveness theory. This resulted in the populist idea of an “unfair” competition between nations. According to the representatives of this line of thought, companies (or outsourced production facilities) located in the emerging economies, through its significantly lower labour costs, more “relaxed” legal standards, and presumably “unethical” business (and protectionist government) practices, have outperformed the companies in the developed countries in terms of their export performance—which in consequence has led to job reductions and a decrease (or in the best case stagnation) of living standards of people from the most developed countries (Baily 1993; Papadakis 1994; Thurow 1993; Tyson 1993). As globalization proceeds with more visible socio-economic inequalities, the popularity of a zero-sum game approach to national competitiveness is rising in media and populist politics.

Nevertheless, in the 1990s the concept of macro competition, where one country must lose for the other to win, has been severely criticized by trade and economics scholars as being in contradiction to the classical trade theories. The leading voice against discussing the concept of competitiveness on the macro level has been raised by P. Krugman in his article “The Competitiveness—A Dangerous Obsession” (1994). His criticism was based on three pillars.²

First, companies that lose competitive advantage, fall into financial difficulties and eventually go bankrupt. As there is “no well-defined bottom line” of competitiveness on the macro level (as countries do not disappear from the market), there is no sense in discussing their competitiveness. Second, micro competition is a zero-sum game—a company offering more competitive products and services, achieves

¹Original Discussion Around the Meaning of the National Competitiveness Concept Has Been Presented in the Research Paper by Żmuda and Molendowski (2016).

²Elaboration on the controversies around the concept of national competitiveness in the academia together with the critical evaluation of the main points of Krugman’s criticism bases on the research by Żmuda and Molendowski (2016).

above-average returns, and financially wins at the expense of a less competitive company. Shifting this analogy to the macro level means that the success of one country translates into loss for another, which in turn would lead to the existence of winners and losers in foreign trade. However, Ricardian theory assumes that each country has a “comparative advantage in something”. Therefore, there is no theoretical basis for returning to mercantilist assumptions in foreign trade. Third, export competitiveness is a determinant of the socio-economic success of a small open economy. In case of more self-sufficient large economies, growth does not depend on success in international trade, but rather on the ability to use and redistribute their resources. According to Krugman, the concept of national competitiveness is thus not universal and in the light of the presented arguments, it is only a more “catchy” term to refer to the level of national productivity (Cho and Moon 2008; Dunn 1994; Krugman 1994; Olczyk 2008). In his concluding remarks, Krugman has stressed that obsession with national competitiveness is dangerous, as it may encourage counter-productive policy actions, protectionist behaviours or even trade wars. In the light of the above, the question that emerges is whether or not there is a point in launching discussions on national competitiveness at the academic level.

In order to overcome the confusion around the very sense of studying the “national competitiveness” and to fully grasp its “real” meaning, it is worth responding to Krugman’s points of criticism. Only through seeing competitiveness from a broader angle, through a developmental economics aspect rather than a trade lens, its complexity can be uncovered. In its extended meaning, competitiveness can be regarded as a “contemporary” approach to grasping fundamental problems of economic development in the era of globalization (Radło 2008; Reinert 1995). In this perspective, the main areas of investigation within the competitiveness research focus on key topics associated with developmental economics such as reasons for differentiated socio-economic development of countries and strategies how to overcome these inequalities (Fagerberg et al. 2007; Martin 2005, p. 7).

Referring to the first point of Krugman’s criticisms, discussing national competitiveness makes no sense due to inability to define its bottom line. However, competitiveness as a long-term phenomenon with structural features should be evaluated from the qualitative perspective (Aiginger 2016; Aiginger and Vogel 2015; Jagiełło 2008, p. 13). This is a point that distinguishes the competitiveness of an economy from the competitiveness of an enterprise or sector, which should rather be seen as quantitative categories. In terms of competition at the micro-level, successful companies through offering higher value for their customers, outperform rivals, and reach their goals, thus achieving above-average returns. As a consequence, the companies losing their competitive ability, go bankrupt, and disappear from the market. Less competitive economies do not disappear from the international arena—but it does not mean that the rivalry on the macro level does not exist. It has a different character—it is qualitative instead of quantitative. National competitiveness should be thus seen as a dynamic phenomenon, evaluated in a relative perspective, reflecting the change in the national structure of production and trade towards high value-added specialization (Aiginger and Böheim 2015). Consequently, a competitive economy follows an evolutionary developmental path—from resource intensive (that is labour intensive

and capital intensive) to high-technology specialization (Wysokińska 2012). Such a climb on the specialization ladder can be accelerated through active shaping of the country's global positioning through "new industrial policy", targeting the society's ultimate goal to increase living standards of its citizens.

This leads directly to Krugman's second argument that foreign trade is not a zero-sum game. This is of course true—every nation has a comparative advantage in the export of something. It is however worth stressing that one of the central assumptions of the theory of comparative advantage, on which Krugman bases his criticism, assumes the lack of mobility in factors of production (Kojima and Ozawa 1985, p. 136). Today, in the era of globalized markets and accelerated economic integration, free flow of factors of production has been enabled. Competition between countries are thus manifested in the ongoing competition for these mobile factors, such as technological knowledge, highly qualified specialists, and innovative entrepreneurs. Thus, if the perspective on national competitiveness is extended beyond national trade performance, to include the level of attractiveness of a given location for the domestic and international advanced production factors, there is no contradiction to the Ricardian theory.

In this perspective, the emphasis of the competitiveness debate is shifted to the institutions capable of attracting high-end, specialized resources, and encourage innovative entrepreneurship efforts to stimulate positive externalities for the whole economy. Steady development of technological capabilities enables upgrading of the production lines, gradual phasing-out of obsolete technology, and as a consequence stimulates gains in national productivity (Thore and Tarverdyan 2016, pp. 108–109). Effective use of production factors led by higher innovation, support cultural norms (regarding both production and consumption) as well as organizational and managerial skills becoming the basis for structural adjustment and changes in the competitiveness of economic sectors (Cho and Moon 1998; Porter 1998; Radło 2008). It is therefore possible to assume that countries at similar levels of development are struggling to provide a favourable environment for specialized production factors and to attract business to certain sectors of the economy—thus contributing to better integration in the "new" international division of labour.

This is not only the case for small catching-up economies. In the interconnected world big leaders cannot contradict the power of globalization as it is arriving at their doorsteps. Just like companies do not have to internationalize to be a subject of international competition, for countries where trade makes up a small portion of their GDP, the relative strength of their industries in global markets is as important as for trade dependent small open economies. Otherwise, under free market conditions, imported goods may displace uncompetitive national products (as it was in the case of Japanese cars crowding out the American market and eliminating American manufacturers in the 1970s). Moreover, slowdown of the major global economies is frequently associated with reallocations of some (or all) parts of their value chains to other locations offering more attractive conditions for conducting these activities.

In fact, proponents of the concept of national competitiveness, have never denied the importance of healthy performance of the domestic economy (Cho and Moon 2008, p. 39). Competitiveness models stress the dominant impact of quality of insti-

tutions, domestic savings and investment rates, level of expenses on research and development, quality of human resources and level of entrepreneurship together with the level of development of basic and advanced infrastructure (Bowen and Moesen 2007; Fagerberg 1988; Fagerberg et al. 2007; Lall 2001; Pérez-Moreno et al. 2016; Siggel 2010).

Indeed, screening modern theories on foreign trade and development, one can find aspects highlighted by the theory of strategic management as crucial for building a sustainable competitive advantage (Reinert 1995, p. 29). In the modern globalized world, in order to achieve developmental goals, an economy has to strategically build its international position, taking into account its ability to identify and promote “sectors of the future” within its industrial policy (Sung 2006, pp. 38–42), develop its human resources, strengthen technological capabilities, and improve institutional settings together with mastering adaptability to changing external conditions (Oziewicz 2007, pp. 22–23). These “strategic behaviours” of economies can be linked together as approaches to strategically build national competitiveness.

For proper understanding and shaping of competitiveness (both in strategic management and at the macro level) it is important to stress its relative nature, therefore a nation’s performance should be benchmarked to its historical achievements as well as to its closest peers. In this sense, it is essential to differentiate the countries and based upon their structural and developmental characteristics, categorize them into “strategic groups” (Cho and Moon 2005). Main strategic groups in the international arena, characterized by their developmental level, would be emerging economies and industrialized countries. Referring to strategic management basics on how to achieve competitive advantage, two different strategies to stimulate national competitiveness can be distinguished and assigned to these two strategic groups (Aiginger and Vogel 2015). “Low-road competitiveness” (concept inspired by cost-leadership business level strategy) focuses on cost-based competition. Here countries offering low wages, low taxes, and low energy prices (mainly the emerging economies) win the competitive battle. On the contrary, “high-road competitiveness” (concept inspired by differentiation business level strategy) is focusing on national efforts aimed at raising productivity through development of innovative capabilities to become a quality or innovation leader. This strategic competitiveness distinction is easy to grasp and accurately reflects the situation in the modern international competitive arena. There are countries like Bangladesh, which follow the low-road competitiveness strategy, whereas countries like Switzerland pursue the high-road competitive strategy. Direct analogies to strategic management are however too simplistic and at times misleading—with a strong argument to prove it.

Popular trend in competitiveness research evaluates macro competitiveness as a sum of competitive companies acting in its territory. However, following the strategic management definition, competitiveness could be defined as an ability to reach developmental goals. Under this definition, assuming that the ultimate goal of a nation is to increase the living standards of its citizens, long-term macro goals are not a sum of micro goals. Profit-driven companies, implementing cost leadership strategies, through further cost reductions can reach their developmental goals, that is achieve above average returns. However in this case only the shareholders will

benefit, all other stakeholder groups will be in a disadvantageous position. Through “low-road competitiveness” strategy the fundamental goals of the economy cannot be met. Without wage increases, national welfare cannot be improved. Using cheap fossil resources without investments in latest technologies will result in environmental degradation and the welfare of next generations will not be preserved.

Thus, the only meaningful approach to analysing national competitiveness is to see it through the prism of dynamic national ability to increase the levels of productivity, reaching long-term developmental goals—as an ability to climb-up within the international division of labour, that supports increased welfare and an upward shift in the living standards of citizens. This definition would be universal, despite the developmental level of the analysed economy, for both emerging and industrialized economies.

3 National Competitiveness as Ability to Reach Developmental Goals

Searching for ways how to evaluate a nation’s ability to reach its developmental goals and to benchmark its relative success in the international arena has been an important point on the research agenda of economic scholars for decades.

Traditionally, research has been focused on measuring national economic prosperity with GDP per capita as the main indicator—evaluated using growth accounting methods. From this perspective, the most common evaluation of a “broad” approach to national competitiveness associates with the national productivity level that can be achieved through a mix of factors seen as “classical” growth determinants. However, with the progressing research on competitiveness, new factors have been uncovered. A wide body of literature models macro-competitiveness expressed in GDP per capita terms, with the main determinants including exchange rates and interest rates (Zorzi and Schnatz 2010), economic freedom (Bujancă and Ulman 2015), quality of institutions (Bierkowski 2005; Huemer et al. 2013), and capabilities to innovate (Atkinson and Ezell 2012; Castellacci 2008; Dosi and Soete 1991; Fagerberg 1988; Faucher 1991; Karodia et al. 2014; Pelagidis and Mitsopoulos 2014).

Over the past years, the macro competitiveness debate has been enriched by the socio-environmental aspects. In the sustainable competitiveness discourse, scholars stress that increased productivity levels do not suffice for long-term inclusive development of a nation. They point out the necessity for promoting responsible use of natural resources and strengthening of a social welfare (Samans et al. 2015; Thore and Tarverdyan 2016). Several attempts have been made to model and measure the conditions for sustainable competitiveness of a nation, which in the long term is based on productivity enhancements, improved environmental conditions, socio-political stability, and development of human resources (Doryan 1993). Some examples of such attempts include Stiglitz-Sen-Fitoussi Commission’s “Beyond GDP Goals” concept (Stiglitz et al. 2010) and corresponding set of “Better Life Indicators” by OECD (Aiginger 2014, p. 17).

A prototype of such an overarching goal has been formulated in (*Global Sustainable Development Report 2015*, p. 42) as “a prosperous high-quality life that is equitably shared and sustainable”, stressing the need “for new integrated economic metrics of progress beyond GDP, Human Development Index, and other established aggregates” (*Global Sustainable Development Report 2015*, p. 40) (Table 1).

Table 1 Sustainable Development Goals

What is to be sustained?	What is to be developed?
<p><u>Nature</u> Goal 13. Take urgent action to combat climate change and its impacts. Goal 14a. Conserve the oceans and marine resources for sustainable development. Goal 15a. Protect and restore terrestrial ecosystems. Goal 15d. Combat desertification. Goal 15e. Halt reverse land degradation and halt biodiversity loss.</p>	<p><u>People</u> Goal 1. End poverty in all its forms everywhere. Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Goal 3. Ensure healthy lives and promote well-being for all ages. Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all. Goal 6. Ensure availability and sustainable management of water and sanitation for all. Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all. Goal 8b. Promote decent work for all. Goal 16b. Provide access to justice for all.</p>
<p><u>Life support</u> Goal 12. Ensure sustainable consumption and production patterns. Goal 14b. Sustainably use the oceans and marine resources for sustainable development. Goal 15b. Promote sustainable use of terrestrial ecosystems. Goal 15c. Sustainably manage forests.</p>	<p><u>Economy</u> Goal 8a. Promote sustained, inclusive and sustainable economic growth, and full and productive employment. Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster the innovation. Goal 10. Reduce inequality within and among countries. Goal 11. Make cities and human settlement inclusive, safe, resilient, and sustainable. Goal 17a. Strengthen the means of implementation (finance, technology, capacity building, systemic issues policy and institutional coherence, and data, monitoring, and accountability).</p>
<p><u>Community</u> Goal 16a. Promote peaceful societies.</p>	<p><u>Society</u> Goal 5. Achieve gender equality and empower all girls and women. Goal 16a. Promote peaceful and inclusive societies for sustainable development. Goal 16c. Build effective, accountable and inclusive institutions at all levels. Goal 17b. Revitalize the global partnership for sustainable development.</p>

Source *Global Sustainable Development Report 2015*, p. 41

This overarching goal proposed by the GSD Report helps to promote the more precise intentions developed by the United Nations called 17 Sustainable Development Goals (SDGs)—“development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (*Global Sustainable Development Report 2015*, p. 40). Sustainable Development Goals take into consideration six factors needed for sustainable development, namely nature, people, life support, economy, community, and society, and are intended as universal goals of political aspiration, applying to all countries, both developing and developed (*Global Sustainable Development Report 2015*, p. 40).

In the latest editions of the Global Competitiveness Report, efforts have been made to find a link between the concepts of sustainability and national competitiveness. It has been stressed that “although competitiveness can be equated with productivity, sustainable competitiveness can be linked to a broader concept that focuses on aspects beyond the mere economic outcomes to include other important elements that render societies sustainably prosperous by ensuring high-quality growth (...) and producing the kind of society in which we want to live” (Corrigan et al. 2014, p. 55). Resulting from this line of thought, a conclusion has been made that economic competitiveness is a necessary but not sufficient condition for long-term prosperity (Corrigan et al. 2014, pp. 64–65). Reflecting the need for introducing the environmental-, sustainability-, and social sustainability-adjusted measures of competitiveness, a final sustainability-adjusted Global Competitiveness Index has been introduced. This is an important step in linking the Sustainable Development Goals (SDGs) and competitiveness as prerequisites for job creation and long-term sustainable growth (Corrigan et al. 2014, p. 63) (Table 2).

Table 2 Sustainable Development Goals and Global Competitiveness Index equivalents

Goals proposed by UN’s SDGs	Equivalent in global competitiveness index
Goal 3: Attain healthy lives for all	4th Pillar: Health sub-pillar
Goal 4: Provide quality education and life-long learning opportunities for all	4th Pillar: Primary education sub-pillar 5th Pillar: Higher education and training
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	7th Pillar: Labour market efficiency
Goal 9: Promote sustainable infrastructure and industrialization and foster innovation	2nd Pillar: Infrastructure 12th Pillar: Innovation
Goal 16: Achieve peaceful and inclusive societies, access to justice for all, and effective and capable institutions	1st Pillar: Institutions

Source (Corrigan et al. 2014, p. 63)

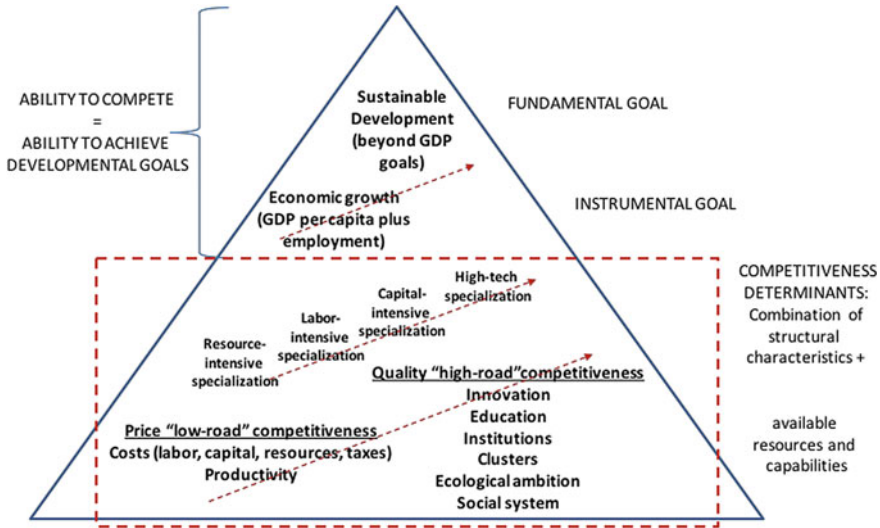


Fig. 1 Sustainable Competitiveness Model *Source* Author’s elaboration based on (Aiginger 2016; Aiginger and Böheim 2015; Aiginger and Vogel 2015)

4 Modelling Sustainable National Competitiveness

In light of the arguments presented above, macro competitiveness is defined in this paper as the national ability to reach developmental goals. These goals have been divided into instrumental (productivity- and innovation-driven evolution of trade specialization leading to growth, which is measured by GDP per capita) and fundamental goals (“beyond GDP goals” that reflect socio-economic development without ecological degradation).

Ability to reach these developmental goals is determined by the starting position of a country in the international division of labour. This positioning is however not static. It is determined by national structural characteristics, together with a set of available resources and capabilities that can be actively shaped. The dynamic nature of the model reflects that competitiveness constitutes a continuous effort to “reach a better version of yourself”, placing countries on competitive developmental paths (Fig. 1).

5 New Industrial Policy Spaces to Promote Sustainable “High-Road” National Competitiveness

The convergence strategies of majority of the developing and catching-up economies, pursuing “low-road competitiveness”, have been built around the neoliberal Washington Consensus policy reforms. Their development policies have been dominated

by liberalization, deregulation, privatization, and cuts in government expenses with the aim to boost economic growth and thus reach the standards of the wealthy developed countries, strengthening mainly the economic competitiveness of the supply side of the economy (Kumi et al. 2014, p. 539). State interventions, generally seen as an interference in the free market forces, were limited to a minimum, and eligible only to correct the market failures, thus leaving the socio-environmental issues out of the main policy scope.

To support the rationale of this approach, the neoclassical growth theory assumes that in the long-term, poorer countries should “catch-up” to reach the productivity and income levels of its more developed peers. The models do not however reflect the complex reality. History shows that we are closer to experiencing a “big time divergence”, rather than a convergence in the global economy (Pritchett 1997), indicating that economic and social inequalities are one of the main characteristics of the modern times (Piketty 2014). Despite the industrial revolution, accelerated technological progress, and globalization—all driving massive improvements in the global productivity levels and living standards—not all countries benefited equally from the process of global value creation, thus resulting in the emergence of highly polarized societies.

A large body of literature indicates that instead of accelerating the pace of convergence, liberalization of international trade and investment, has further divided the world into the rich North and poor South. The colonial domination of the “North” has also “continued” in the strategies of the short-term oriented, profit-seeking multinational enterprises taking advantage of the cheaper “South” locations driving their “low-road competitiveness” approach with their favourable cost position (for labour, capital, resources, and low taxes). The increasing income gap within and among countries, together with the emergence of “winners” and “losers” of globalization, clearly shows that the convergence hypothesis is not unconditional. Nor are the gains from the engagement in international trade and network of cross-border interconnections.

Market-led productivity growth not only takes place at the cost of social development but also harms the global ecological balance. In a majority of cases, high growth rates of the low- and middle-income countries have been supported by an intensive development of most polluting industries (e.g. steel, aluminium, cement, glass), of which have high fossil fuel energy consumption and high greenhouse gas emissions (Burchard-Dziubinska 2011). The greatest challenge in this area is associated with the introduction of the pollution norms and standards that should be respected globally. Otherwise, high emission-generating production will be moved to countries that have lower level of institutional development. As a result, neither will the global environmental goals be achieved nor will the mid-range economies progress in the process of socio-economic catching-up.

Traditionally, the load-road competitiveness strategy was based on the inherited competitiveness factors (associated with natural features of the country such as availability of natural resources, large population, and/or historically-determined underdevelopment levels enabling low-wage competition). With increasing awareness, as the developmental goals change, new strategies need to be developed, thus putting the industrial policy “back on the agenda”. Evolution of macro-strategic thinking

Table 3 Low-road versus high-road strategy for competitiveness

	Low-road strategy	High-road strategy
Competitive advantage	Low costs (wages, energy, taxes)	Quality, sophisticated products, productivity
Growth drivers	Subsidies, dual labour market, inward FDI	Innovation, education, universities, clusters
Ambitions	Cost advantage, flexible labour	Social empowerment, ecological excellence, trust
Instruments	Import taxes, protectionism, devaluation (external, internal)	Business environment, entrepreneurship, dialogue
Objectives	Catching-up in GDP per capita, employment	Beyond GDP goals

Source (Aiginger and Vogel 2015, p. 506)

and departure from the GDP-only goals, calls for a new approach to reach them. In this light, a new industrial policy for industrialized countries is seen as a strategy to promote “high-road competitiveness” and ability of an economy to achieve “beyond GDP goals”. This should promote competitiveness based on “capabilities, good institutions, and high ambitions for social and ecological behaviour” (Aiginger 2014, p. 19). Thus, approaching the ultimate goal of society, new industrial policy should find compromises between high sectorial outcomes and positive external effects, such as innovation and education (Aiginger 2014, p. 19).

As there is a visible impact of the environmental protection policies on the competitiveness of selected pollution-generating industries (Burchard-Dziubinska 2011), transition from low-road to high-road competitiveness strategy constitutes a particular challenge for the catching-up economies (transition mid-range emerging economies). On one hand, upgrading the technological standards of their high-emission sectors will be a step towards building a quality-based competition and embarking on the high-road strategy, while on the other hand, in the short-term, it may endanger the existence of the key industrial building blocks of these economies (Table 3).

Therefore, the transition countries, that have been rapidly upgrading their economic position mainly through low cost competition without a long-term plan for structural adjustments, are facing a danger of the “middle-income trap”. It seems there is no “B scenario” as existing research shows that environmental and economic indicators are effectively interrelated, with the examples of France and Germany indicating integrated innovation-economic-environmental performance (Gilli et al. 2013). A key factor is (Green) innovation that enables a structural transition and as a consequence a recomposition of the economy. Achieving this goal will however not be possible without joined efforts at the micro, mezzo, and macro levels, with supra-national, national, and regional institutions actively guiding and supporting this change.

6 Conclusion

In light of the accelerated pace and magnitude of changes in the global economy since the beginning of the 21st century, the concept of an “unfair competition” has further gained medial attractiveness. The rise of nationalistic movements spreading across the globe may be thus a “dangerous obsession” scenario that Krugman was warning against. That is why, stronger than ever before, the discussion on competitiveness has to be supported by theory and grounded in solid evidence-based arguments. For the sake of future generations, competitiveness strategy spaces have to be additionally enriched by concepts related to social inclusion and environmental sustainability.

Thus, this paper touches upon two important topics of modern economics: competitiveness and sustainability, and shows that these concepts do not necessarily have to be seen as “foes”. Competitiveness in this study departs from the narrow, “low-road”, cost-based, “zero-sum game” trade perspective and is defined as a national ability to reach developmental goals in the era of globalization. These goals have been divided into instrumental (productivity- and innovation-driven evolution of trade specialization leading to growth, which is measured with GDP per capita) and fundamental (“beyond GDP goals”, reflecting socio-economic development without ecological degradation).

In line with the “new sustainable competitiveness wave”, this paper stresses that in the competitiveness debate, emphasis should not only be placed on the linkages between economic, social, and ecological goals but additionally concentrate on the national strategies to reach these goals. After Kumi et al. (2014), it has been concluded that the neoliberal approaches to stimulate national competitiveness support reaching instrumental goals without interventions in the free market, however, in this case, it is difficult to achieve the sustainable development goals. That is why future debate should concentrate on the role of the state in stimulating national competitiveness, reflecting the awakening of the industrial policy.

The second key issue emerging from this paper, thus contributing to the sustainable competitiveness debate, relates to the positioning of the catching-up economies in the global competitive landscape. For these countries, a transition from a low-road to a high-road strategy is particularly challenging as their rapid growth and current global positioning has been mainly based on low-cost competitive factors and high-emission industries. Without a clear, long-term vision, based on institutional support for innovation and efforts to increase the education or consciousness levels (for both production and consumption), these countries may get stuck in the middle-income trap.

Through the suggested sustainable competitiveness model, a link between national competitive ability, competitive strategy, and strategic socio-economic goals has been made. This model constitutes an approach to dynamically represent competitiveness development path for countries at low-, middle-, and high-income levels.

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