

## Strategies Against Technological Exclusion. The Contribution of the Sustainable Development Concept to the Process of Economic Inclusion of Developing Countries

### Strategie przeciwko ekskluzji technologicznej. Wkład idei zrównoważonego rozwoju w proces inkluzji ekonomicznej państw rozwijających się

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#### Abstract

The article is on the technological dimension of exclusion, which concerns the states underprivileged in transnational economic processes, phenomenon, which is of crucial importance for development and growth. The article deals with the consequences of unbridled economic growth, unequal access to technological progress, in the context of the current paradigm of sustainable development.

Nowadays, developing countries lack the capacity to access and utilize the newest advances in science and technology. Technology, as crucial contribution to the sustainable development, needs to be the poor and nature oriented. Its diffusion, production, adaptation and usage should be universal in order to provide social inclusion and enhancement of the economically excluded nations.

The author aims to present theoretical models of economic growth, sustainable development strategies of developed and highly developed countries, as well as the strategies implemented in order to prevent developing countries from the technological, and hence economic exclusion.

**Key words:** sustainable development, transnational capital, technology transfer, exclusion, economic growth

#### Streszczenie

Niniejszy artykuł traktuje o technologicznym wymiarze ekskluzji państw poszkodowanych w transnarodowych procesach gospodarczych, które to zjawisko ma współcześnie decydujące znaczenie dla rozwoju i wzrostu gospodarczego. Opracowanie przedstawia konsekwencje niepoohamowanego wzrostu gospodarczego, nierównego dostępu do osiągnięć rozwoju technologicznego, w kontekście aktualnie obowiązującego paradygmatu zrównoważonego rozwoju.

Współcześnie kraje rozwijające się nie mają możliwości zastosowania najnowszych zdobyczy nauki i technologii. Technologie, jako kluczowe dla zrównoważonego rozwoju, winny być zorientowane na środowisko naturalne i zjawisko ubóstwa. Ich dyfuzja, produkcja, adaptacja i stosowanie powinny mieć zasięg ogólnoswiatowy, by zapewnić społeczną inkluzję oraz wzmocnienie ekonomiczne wykluczonych narodów.

Celem artykułu jest prezentacja teoretycznych modeli wzrostu gospodarczego, strategii zrównoważonego rozwoju państw rozwiniętych i wysokorozwiniętych oraz strategii stosowanych by uchronić kraje rozwijające się przed technologicznym, a co za tym idzie ekonomicznym wykluczeniem.

**Słowa kluczowe:** zrównoważony rozwój, kapitał transnarodowy, transfer technologii, ekskluzja, wzrost gospodarczy

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## Introduction

Governance for sustainability presents an enormous but unavoidable challenge. For progress towards sustainability, the governance structures and practices must be established, which would coordinate all the *sustainable* works. Special attention should be paid to the contexts of every complex issue and the uncertainties, which may occur during the process.

The basis of the structural changes taking place in modern national economies is the change of existing models of capitalism. The idea, on which the global economy was supposed to be based on after the Second World War, was the concept of social market economy. In fact, speculative capital based on shareholder value began to dominate. An antidote to the neo-liberal market fundamentalism could become the concept of sustainability, which refers to the principle of intergenerational equity and justice, principles of prevention, law of nature, harmony with environment and principles of social and lawful democracy (Kośmicki, 2010).

Pathologies of the contemporary process of capital accumulation include the phenomenon of fraud and looting, which are infamous work of transnational corporations, bringing high profile cases to the bankruptcy of national firms: tax avoidance, as well as the expansion of capitalist property (mainly due to patent activity) on the nature and knowledge. Moreover, as notes the creator of the typology of taking over the global economy, Christian Zeller (2008), accumulation is permanent, hence, the existing, usurped areas are not a limited set and we should expect more takeovers along with the course of historical process.

The liberalization and open economy for *systemically closed* countries should mean strengthening the export share, exploring new markets, technological cooperation, that is actions that would lead to economic growth. The key consequence of the rapid process of liberalization and excessive opening has been overlooked: pathologically imperfect competition. Developing countries such as Argentina, Peru and Poland were told, that even limited control and state intervention argue with the idea of economic freedom. In return, the nation-states societies were advised to implement the concept of minimum, promised a simultaneous rapid liberalization and stabilization, which, as it turned out, leveled structure of many national economies, leaving no illusions of a quick restaurant. Washington Consensus (or dictate, if you prefer) takes into account neither the social responsibility, nor sustainability in development of the capitalist system (progressive accumulation of capital).

According to Lucjan Pawłowski (2012):

*Free movement of capital and goods across borders required the liberalization of all the markets in order to minimize the role of the states, which are capable*

*of effective control, protecting workers and the environment on their territory.*

This article deals with the consequences of unbridled economic growth, unequal access to technological progress in the context of the current paradigm of sustainable development. This article aims to present theoretical models of economic growth, sustainable development strategies of developed and highly developed countries and the strategies implemented in order to prevent the phenomenon of economic exclusion of developing countries.

## The idea of sustainable development

The concept of sustainable development was first comprehensively described in the report *Our Common Future* (1987), developed by the United Nations World Commission on Environment and Development. Sustainable development was defined as a process aimed at meeting the development aspirations of the present generation in the manner, that the same aspirations would be possible to fulfill for the future generations.

Sustainable development is usually defined as an integrated concept of assuming equivalence of three aspects: environment, economy and society. While the first two dimensions are clarified for a long time, the social aspect remains indeterminate. The first attempt to change this situation was taken in 1994 by Study Commission *Man and Environment Protection* of the twelfth office of the German parliament. Planes, which were then separated form the basis for the social aspect of durability, are:

- health protection,
- ensuring social stability,
- providing opportunities for development and functioning of society (Heins, 1988).

Goals of sustainable development, which are supposed to ensure a dignified life, are to be achieved through correlation with the mechanisms of corporate social responsibility:

1. Environmental objectives: protecting the Earth's atmosphere, natural resources (consumption rate and the rate of regeneration), human health (effects of harmful substances, noise, etc.).
2. Economic objectives: full employment at acceptable quality of work, adequate income and economic development within the natural space, price stability.
3. Socio-cultural objectives: social security, social inclusion and equitable life chances, quality of life and health (Rogall, 2009).

The idea of sustainable development to the greatest extent was popularized in regard to the relationship: economic development – the natural environment. But, nevertheless, an important consideration is to retain the balance between the rate of development and broadly-defined socio-economic environment of

a man, which consists not only of the natural environment, but also working environment, the scale of direct investment, capital resources, etc.

Sustainable development is pursued in a world of multi-dimensional, intersecting and dynamic complex systems. We cannot expect to describe them fully, much less predict future effects. We may lack even suggestive evidence about many emerging problems, whose influences will ripple unpredictably through complex socio-ecological systems. Sustainability calls for prudence and adaptability, preferring safe-fail over fail-safe technologies, seeking broadly comprehensible options rather than those that are dependent on specialized expertise, ensuring the availability and practicality of backup alternatives, and establishing mechanisms for effective monitoring and response (Gibson, 2001).

Current resource-intensive development patterns are ecologically and ultimately, economically unsustainable. There are also problems of inadequate worker and consumer protection, poverty and exclusion. While modern economic advances have brought a host of value improvements, including important environmental quality gains, few of the gains have been automatic and the overall results still include persistent development failures and deepening ecological decline (Kemp, Parto, Gibson, 2005).

As it has been noted above in the discussion of sustainability and its implications, prospects for progress would be much enhanced by the availability of explicit rules and procedures for trade-offs and compromises. Examples of such rules include (Gibson, 2001):

- compensation for negative effects (where these cannot be fully mitigated): e.g., rehabilitation of aggregate mining operations on degraded agricultural lands;
- net gain and loss calculations involving: weighing major damages to the interests of tribal people displaced by a new dam against more material security for larger numbers of poor farmers downstream (differences in place), weighing efficiency gains from industrial process improvements balanced against associated job losses.

Sumner (2008) suggests, that sustainability involves a set of structures and processes that build the civil commons. From this basic understanding of sustainability, values within the society play an important role. Civil commons is based on values that promote life first and foremost. That means: co-operative, rather than competitive approach; a human construct, not a naturally occurring phenomenon, by definition, built by human agency.

Contemporary research on sustainable development can be divided into three parts: ethical and philosophical perspective, ecological, social and economic perspective, as well as the technical, legal and political one (Pawłowski, 2011; Fiut, 2012). From

the political scientist's perspective, it is a surprising division (separation of the social and economic spheres from the political one), however, it is justified in terms of analytical aspects.

Sustainable development is based on principles of ethics, and thus it calls for a sense of personal responsibility and liability for the acts. The core values are: responsibility as well as, intra-and intergenerational justice. Another important principle is the principle of welfare, direct democracy, or rule of law, which shows the need for open dialogue and public participation. An unrealistic image of a man proposed by the traditional economics and accepted in numerous theories and research, is not acceptable any more. Balanced economy tends to abandon the concept of *homo economicus* and encourages the use of a real image of a man, which is consistent with the heterogeneous approach. The new idea of *homo cooperativus*, emphasizes the need to take personal action for sustainable development (Rogall, 2008).

F.J. Ayala-Carcedo stated, that economic growth precedes social development, after which, there is a possibility for sustainable development to occur. So, first countries seek to ensure the sustainable economic growth and social development progresses, care for welfare and life quality of the citizens, and the third step of development reflects the concern for natural environment. According to the author, developing countries do not participate in sustainable development and if they finally take into account social or environmental issues, they are still subordinated to economic goals (Ayala-Carcedo, González-Barros, 2000).

Principles of sustainable development involve both: the ecological and the civilization aspects. This approach includes the process of searching, studying and creating new directions in the economic growth and it involves new technologies, social communication and new kinds of social practices, which are aimed at providing people with proper living standards, as well as limiting the activities, that are harmful for the natural environment and human being. The idea of sustainable development is also becoming a scientific and technological endeavor that, according to the Initiative on Science and Technology for Sustainable Development (2006), *seeks to enhance the contribution of knowledge to environmentally sustainable human development around the world.*

### Technological and economic exclusion

Social exclusion, whose main cause remains the economic status, gained another dimension. In conditions of globalization, we can talk about economic exclusion, which consists, inter alia, of technological exclusion, concerning both: individual units in the society (the situation is caused by bar of access to education or the means to purchase technological

equipment), as well as whole societies and this is particularly hazardous.

Technological exclusion of a state means the inability to develop or gain access to the newest technology. It is a condition in which *capital is needed in order to replicate it, the need for prior knowledge to assimilate some new, skills are needed to gain new skills and a certain level of development is essential to make further development possible* (Perez, Soete, 1988).

The nature of the dynamics of technological development and growth is as follows: the more technologically advanced countries get richer and increase the distance to those which do not have access to new technologies. Only a small number of developed countries may allocate sufficient funds for research and development. For the less developed countries, there is only one option left: obtaining access. Although the attraction of foreign direct investment did not cause major problems today, the problem is to persuade the investors to leave the technologies in the country of investment. Host countries have to learn to put tough conditions concerning technology transfer and its licensing.

The endogenous models, which are an attempt of interpretation of economic growth diversification, rejected the assumption of full accessibility to technology for all countries. In these models, there are various combinations of the production function formation, which depends on knowledge – measures aimed at the development sector may be characterized by increasing, decreasing or fixed income relative to the scale. The described approach takes into account the rate of diffusion of technological progress on an international scale, the costs of imitation, the ability to adapt new techniques of production in individual countries, the scope for market failure, which constitutes an incentive for private investment in the creation of technological progress (Siwiński, 2005).

As it has already been demonstrated, technological progress is an essential component of sustainable development in the context of investment and capital balance. Technological status of developing countries depends mainly on the transfer of technologies implemented by transnational corporations. This transfer takes many forms: foreign direct investment, selling licenses to the specific technology, agreement on the knowledge transfer and technology services, providing expertise on specific products and services (Kotler, Jatusripitak, Maesincee, 1999).

Concept, which takes into account the diffusion of technological progress from the perspective of economic growth, is a model of R.J. Barro and X. Sala-i-Martin (2004). The model analyzes at least two countries, one of which, the highly developed, generates technological solutions, while the other imitates these solutions. Such an imitation also requires some financial effort, however, this is not to compare to expenditures for the creation of new technologies.

Therefore, the imitating country, impoverished, has the potential to grow faster than the country-innovator. The growth rate is the faster, the higher is the initial income gap between countries. In the long run, the growth rate get leveled, there are no differences between these countries any more, regardless of the savings rate and the difference in spending on research and development.

Another model of knowledge diffusion at the international level implies a positive effect of foreign trade on accumulation and diffusion of knowledge. The liberalization of exchange leads to an overall increase of knowledge, thus, is beneficial to the growth rate of national income by increasing the rate of accumulation of knowledge, ergo accelerating technological progress (Ben-David, Loewy, 2003).

The implementation of economic mechanisms, which, as expected, were supposed to fix the situation of these countries, failed. To these mechanisms were included: trade liberalization, deregulation, privatization and liberalization of financial markets. All were aimed at creating a reliable and predictable economic environment for private parties, price stability and overall macroeconomic stability.

John Dunning (1993) suggests policy options for the host state in order to increase the transfer of technology to the country:

- determining the initial conditions for technology transfer for new and / or current foreign investors (instead of hope that the investor voluntarily leave the technology in the host country);
- elimination of restrictions of the usage of technology provided by transnational corporations (rules concerning the application of technology imported by investors should be established and written in the contract before agreeing on the investment);
- reducing the amount of license fees for technology transfer;
- developing market structures, that are most conducive to the efficient inflow and dispersion of technology;
- imposing an obligation on transnational corporations for the staff trainings (the investor may, for example, propose a budget earmarked for staff training in using the new technologies);
- extension of incentives for the creation of research centers by TNCs in the host countries (creating a research center is the best proof, that the investor is planning to bond with the economy of the host state for longer and its activities is not focused only on raising the next market outlets);
- favorable tax incentives, that would stimulate research and development activities (only the involvement in research activities

may constitute justification for the introduction of tax breaks or other fiscal advantages for transnational capital).

The concept of monopolistic advantage shows clearly that the company is encouraged to foreign investments, when it has a specific advantage over competitors in foreign markets, advantage, which weakens the position of local firms (Rymarczyk, 2004). To the most important factors of competitive advantage towards the local companies belong: better management skills, marketing strategies, the usage of advanced technology, favorable financial links (Kowalski, 2004). In brief, the most important technological advantage is identified with knowledge. The knowledge of products, production processes, methods of organization and management, as well as marketing techniques.

Knowledge resources are not a subject of the internationalization processes. Due to the fact, that knowledge is a unique key element of competitive advantage over their competitors, corporations choose to internalize knowledge, which means that know-how diffusion is restricted mostly to the internal market for the company. The knowledge internalization refers to the practice of vertical integration, the acquisition by suppliers and customers (Rymarczyk, 2004).

#### **Examples of inclusive strategies**

Singapore, which is very often used as reference to the concepts of transferring advanced technologies, showed that the developing country may find its own way to acquire and implement technology. The government of Singapore used a selective approach and it has made extensive intervention in the development of industry – in the 1960s focusing on its labor-intensive industries and sectors with a higher share of capital and skills. Tax incentives for foreign investment were introduced – this is how Singapore attracted foreign investment, combining the local factors of production with foreign technical and managerial expertise.

One of the major manifestations of the new strategy was a radical shift in policy of wage setting. On the one hand, in order to reduce the attractiveness of investments in the areas of labor-intensive and low skilled, labor costs were increased and measures such as changes in tariffs or restrictions on importing labor from abroad were implemented. On the other hand, policy makers were actively supporting the process of moving operations of low cost labor to neighboring countries, in order to promote their industrial development and to ensure, that the producers in Singapore would have an access to cheap inputs. The government of Singapore has introduced a number of instruments of economic policy (generous tax and fiscal incentives), which purpose was to shift

investments towards a more capital-intensive, technologically advanced manufacturing (Dunning, 1993).

According to Eisuke Sakakibara, the cardinal error of the international financial institutions and private lenders is to use the same model for all developing economies: *to some extent, the emerging economies have accepted the dictates of dogmatic formulas because of fear of negative reaction from the market in case of rejection of these recommendations. In this sense, the Washington Consensus was not only a consensus in Washington, but it also represented the official position of the wealthiest countries of the G-7 and other member states of the IMF and the World Bank, both lenders and borrowers and the market participants* (Sakakibara, 2009).

Alice Amsden analyzing the different directions of economic development, stated, that the fastest growing economies in the last three decades – Japan, South Korea and Taiwan opted for economic policy diametrically opposite than recommended for the post-socialist Europe. Similarly, the reconstruction of Western Europe after World War II contained a large dose of public ownership, capital controls and other instruments of economic planning, which became the curse of the current prescriptions of the World Bank. Anglo-Saxon economies of the greatest enthusiasm for the complete cure in a cold bath – USA, United Kingdom – have undergone the same stagnation in relation to Western and Asian economies, which use a more interventionist state (Amsden, 1993).

The UNDP report (1999) concentrates on globalization, *with a human face*, which, according to the report, should be characterized by strong leadership at the global, regional, national and local level. Such solution would concentrate on the benefits of globalization, caring at the same time, for people and the environment. Globalization, according to the authors' rapport, should proceed on common values such as respect for life, liberty, equality, justice, tolerance, which are contained in the *UN Charter* and *Universal Declaration of Human Rights*. To implement the suggestions, UNDP has proposed an adoption of a program aimed at ensuring the comprehensive development of a man. To meet these requirements, the international community must take concrete actions, inter alia: strengthening the measures for human development and adapting them to new realities of the world economy; activities taken in order to minimize the risks of financial vulnerability of economies by eliminating financial instability and leading to greater transparency of international financial institutions; protection of natural environment; promoting human rights in transnational companies by creating codes of conduct (Human Development Report, 1999).

The *2011 Human Development Report* argues that the urgent global challenges of sustainability and equity must be incorporated to policies on the national and global level in order to get interlinked goals. The Report outlines great potential for positive synergies in the quest for greater equality and sustainability, especially at the national level. UNDP emphasizes the human right to a healthy environment, the importance of integrating social equity into environmental policies, and the critical importance of public participation and official accountability. The Report compares the concepts of sustainability and equity. The main issues are the adverse repercussions for human development of the lack of environmental sustainability, especially for those currently disadvantaged, and more positively, the intersections between greater sustainability and equity, as well as the potential for progressive reforms that promote both goals. In the authors' opinion, the ideas are similar in one fundamental sense: both are about distributive justice (Human Development Report, 2011). Much is expected from governance in context of sustainability strategies. According to the European Commission, good governance consists of openness and participation, accountability, effective coherence, efficiency and sensitivity to the immediate context that is promised by subsidiarity. For sustainability, other requirements include means of internalizing external costs and ensuring integration of policy considerations, evaluation of options and dealing with trade-offs.

### Sustainable development and economic growth

Prosperity has vital social and psychological dimensions. To do well is in part about the ability to enjoy the respect of your peers, to contribute useful work, and to have a sense of belonging and trust in the community. In short, an important component of prosperity is the ability to participate meaningfully in the life of society. This view of prosperity has much in common with Amartya Sen's vision of development as *capabilities for flourishing*. However, this vision needs to be interpreted carefully: not as a set of disembodied freedoms, but as a range of *bounded capabilities* to live well – within certain clearly defined limits. Growth has been the default mechanism for preventing collapse. In particular, market economies have placed a high emphasis on labour productivity. Continuous improvements in technology mean that more output can be produced for any given input of labour. But crucially, this also means that fewer people are needed to produce the same goods from one year to the next (Jackson, 2009).

According to Hans Christoph Binswanger, Goethe in *Faust* confronts the promises and pitfalls of the Industrial Revolution and the economic growth that it generated. Goethe's protagonist is a representative of modern man who seeks to subjugate nature and to build up a new economic reality of freedom and

prosperity. However, Goethe warns that all these riches seen by Faust may be built upon an unsustainable illusion. Human progress entails curbing nature by constructing an artificial world consisting of cities, industry, transport, and intensified agriculture, symbolized in Faust by land reclamation through building of the dyke. In Faust Goethe draws attention to the new threats – consequences of rapid uncontrolled development, however Faust believes, that if all available forces are coordinated, all possible dangers can be overcome (Binswanger, 1994).

The Rio conference on Sustainable Development (1992) demonstrated, that, as H. Ch. Binswanger says, we live in a finite, limited world and that development is only sustainable if we take account of these limitations. The author returns to Goethe and his prophetic book and notes that we must be careful observers of nature's parameters and allow ourselves to be guided by them: *instead of continuing our attempt to dominate nature with linear thinking, we must cultivate an intuitive sensitivity and responsiveness to her complexities. Science must respond to this reorientation by developing the corresponding technology. (...) This is only possible if economists, too, understand that less can be more than in economic production what matters is not so much the amount produced but its increased utility, and that, accordingly, both quantitative and qualitative growth can benefit mankind without damaging nature. Perhaps Faust, or modern man, may never, as Goethe once hoped, achieve a moment so lovely that he would want to hold on to it forever. But if we strive to develop a more respectful relationship with nature, we may very well come closer to creating just such a moment* (Binswanger, 1998).

In his recent book – *The Growth Spiral* (2006), H. Ch. Binswanger revisits vital questions for modern societies: the ecological question and the money question. The author makes the economic circulation into a spiral – by describing the dynamic of money as a permanent growth engine. Our idea of money and its use is dynamic, however, money is not dynamic in itself. Money is not neutral, it *takes sides*. In the current economic structures, money flows firstly to those, who already have much, so the gulf between poor and rich widens more and more. The situation would change through such money creation organizing, that all people of a currency area can participate in it and have an access to money. Such process would bring, so far non-existent, neutrality of money. As far as economic growth is concerned, Binswanger says, that it should be as high and sustainable as possible. Such an approach does not exist in economic theory. Conventional theory is based on the ideas of circulation and balance. However, such economy cannot grow permanently. Binswanger attempts to define a minimal growth rate, at which the world economy would still be stable, his result is 1.8 %.

In each accumulation pattern, we find some economic and social regularities. The distribution of income between wages, profits and taxes, which ultimately allows the reproduction of various groups and social classes and such type of business organization, which define the organization of work and the usage of means of production belong to the most important regularities, from the chosen research perspective (Boyer, 1988).

David L. Russell (2010) proposes a definition of sustainability inextricably linked with technology. The author says that once we define a level of acceptable technology, population, and demand, we are able to define what is sustainable. Under this definition, coal mining, for instance, except for development of materials, would be classified as unsustainable.

The modern economy characterized by a high degree of interdependence, has been on the next stage of development, known as *wikinomics*. This phenomenon is constituted by four pillars: openness, partnership, community resources, and action on a global scale. Subsequently emerging global challenges, such as: global warming, finding new sources of energy, combating poverty and diseases, require cooperation of many countries and organizations – the complexity of the problem forces the openness (Tapscott, Williams, 2008). This kind of openness is the most desirable in contrast to the openness enforced under the threat of economic sanctions.

If, described as a component of *wikinomics*, action on a global scale, is related to other pillars: partnerships and sharing resources, it should foster exclusionary tendencies in underdeveloped countries. However, mostly the activity on a global scale refers to one corporation and its expansion into new markets or companies operating in one industry, coming from highly developed home countries. Such a global action contributes to the exclusion of entities from developing countries.

## Conclusions

The role of science and technology in sustainable human development has been receiving considerable international and national attention. Science and technology have been central to poverty alleviation and economic development. However, the majority of the benefits of technology has not reached the developing countries. There have been technological gaps among and within the nations. Many developing countries lack the capacity to access and utilize advances in science and technology. Technology as crucial contribution to the sustainable development needs to be the poor and nature orientated. Its diffusion, production, adaptation and usage should be universal in order to provide social inclusion and enhancement of the technologically and economically excluded nations. The idea of *wikinomics* must be

popularized not only between the innovative countries, but also in the relationship innovator – recipient country.

The specificity of the sustainable development strategy requires an inclusive policy, which involves cooperation of national governments, NGOs and the business communities. The effective inclusive policy means such a collaboration of government institutions and business circles, which is characterized by adequate regulations, appropriate institutional arrangements. Particular emphasis is placed on the structural policy.

The phase of recession in the current business cycle, particularly severe for the financial sector, forced to think, that sustainable development is also essential to our financial systems and economies as a whole. Ways of overcoming the recession (preventing depression) must be consistent with long-term objectives of sustainable development and environmental strategies, as well as smart growth. The rampant economic growth may not be seen and promoted as the determinant of social and economic development. Particularly developing countries should be aware of the spiral of growth driving by the highly developed countries.

As noted Andrzej Papuziński (2011), sustainable development is a political idea. As one of the few, it has been implemented into law, political, economic and social policies and programs.

Therefore, we need strong nation-states, which will have the authority to establish limits for the activities of transnational actors and to control the inflow of investments in such a way that the activity will be a part of the process of sustainable development. A properly conducted process of implementing sustainable development strategies can contribute to the elimination of technological and economic exclusion. The policymakers can use ready-made, best practice or pursue their own. All these activities are aimed at making clear, what kind of business processes we are witnessing and causing, that we could consciously identify the stages of development and control whether the development is carried out in a way supporting socio-economic balance.

## References

1. AMSDEN A. H., 1993, Structural macroeconomic underpinnings of effective industrial policy: fast growth in the 1980s in five Asian countries, in: *UNCTAD discussion paper 57*, April.
2. AYALA-CARCEDO F.J., GONZÁLES-BARROS M. R., 2005, Economic underdevelopment and sustainable development in the world: conditioning factors, problems and opportunities, in: *Environment, Development and Sustainability*, no 7, p. 95-115.

3. BARRO R. J., SALA-I-MARTIN X., *Economic Growth*, The MIT Press, Cambridge Mass., London 2004.
4. BEN-DAVID D., LOEWY M. B., 2003, Trade and the Neoclassical Growth Model, in: *Journal of Economic Integration*, vol. 18, no 1, p. 1-16.
5. BINSWANGER H. Ch., *Money and Magic: A Critique of the Modern Economy in Light of Goethe's Faust*, University of Chicago Press, Chicago 1994.
6. BINSWANGER H. Ch., 1998, The Challenge of Faust, in: *Science* 31 July, Vol. 281, no. 5377, p. 640-641.
7. BINSWANGER H. Ch., *Die Wachstums-spirale. Geld, Energie und Imagination in der Dynamik des Marktprozesses*, Metropolis-Verlag, Marburg 2006.
8. BOYER R., Technical Change and the Theory of Regulation, in: *Technical Change and Economic Theory*, eds. Dosi G., Freeman C., Nelson R., Silvberg G., Soete L., Pinter Publishers, London 1988, p. 67-94.
9. DUNNING J., H., *Multinational Enterprises and the Global Economy*, Reading, Wokingham 1993.
10. FIUT I. S., 2012, Sustainable Development: the upcoming civilizational revolution?, in: *Problemy Ekorozwoju /Problems of Sustainable Development*, vol. 7, no 2, p. 43-50.
11. GIBSON R. B., 2001, Specification of sustainability-based environmental assessment decision criteria and implications for determining "significance" in environmental assessment, in: *Canadian Environmental Assessment Agency Research and Development Program*, Ottawa-Hull, Canada.
12. HARVARD KENNEDY SCHOOL, Initiative on Science and Technology for Sustainable Development, 2006, <http://sustsci.harvard.edu/ists/> (21.03.2012).
13. HEINS B., *Soziale Nachhaltigkeit*, Berlin 1988, after: Kośmicki E., *Zrównoważony rozwój w warunkach globalizacji gospodarki*, Ekonomia i Środowisko, Białystok-Poznań 2010.
14. JACKSON T., *Prosperity without growth? The transition to sustainable economy*, Sustainable Development Commission, Earthscan Publications, New York 2009.
15. KEMP R., PARTO S., GIBSON R. B., 2005, Governance for sustainable development: moving from theory to practice, in: *International Journal of Sustainable Development*, vol. 8, nos. 1/2, pp. 12-30.
16. KOŚMICKI E., Wartości we współczesnej gospodarce w warunkach globalizacji, in: *Wymiary społeczne postawy uniwersalistycznej. Europa wspólnotą wspólnot*, ed. Góralski A., Polskie Towarzystwo Uniwersalizmu, Warszawa 2010.
17. KOTLER P., JATUSRIPITAK, S., MAE-SINCEE, S., *Marketing narodów*, Wydawnictwo Profesjonalnej Szkoły Biznesu, Kraków 1999.
18. PAPUZIŃSKI A., 2011, The Implementation of Sustainable Development, in: *Problemy Ekorozwoju /Problems of Sustainable Development*, vol. 6, no 1, p. 107-116.
19. PAWŁOWSKI A., *Sustainable Development as a Civilizational Revolution. A Multidisciplinary Approach to the Challenges of the 21<sup>st</sup> Century*, CRS/Balkema, London 2011.
20. PAWŁOWSKI L., 2012, Do the Liberal Capitalism and Globalization Enable the Implementation of Sustainable Development Strategy?, in: *Problemy Ekorozwoju /Problems of Sustainable Development*, vol. 7, no 2, p. 7-13.
21. ROGALL H., *Ökologische Ökonomie*, VS-Verlag, Wiesbaden 2008.
22. ROGALL H., *Nachhaltige Ökonomie. Ökonomische Theorie und Praxis einer Nachhaltigen Entwicklung*, Metropolis Verlag, Marburg 2009.
23. RUSSELL, D. L., 2010, A Curmudgeon's Thoughts on Sustainability, in: *Problemy Ekorozwoju /Problems of Sustainable Development*, vol. 5, no 1, p. 15-22.
24. SAKAKIBARA E., Kres fundamentalizmu rynkowego, <http://www.uni.wroc.pl/~turowski/sakakibara.htm>, (15.03.2009).
25. SIWIŃSKI W., 2005, Międzynarodowe zróżnicowanie rozwoju gospodarczego: fakty i teoria, in: *Ekonomista*, no 6, p. 724-747.
26. SUMNER J., 2008, From Academic Imperialism to the Civil Commons: Sustainable Development, in: *Interchange*, vol. 39, no 1, p. 77-94.
27. TAPSCOTT D., WILLIAMS A. D., *Wikinomia: O globalnej współpracy, która zmienia wszystko*, Wydawnictwa Akademickie i Profesjonalne, Warszawa 2008.
28. UNDP, *Human Development Report 1999, Globalization with a Human Face*, [http://hdr.undp.org/en/media/HDR\\_1999\\_EN.pdf](http://hdr.undp.org/en/media/HDR_1999_EN.pdf) (12.03.2012).
29. UNDP, *Human Development Report 2011, Sustainability and Equity: A Better Future for All*, <http://hdr.undp.org/en/reports/global/hdr2011/download/> (26.10.2012).
30. ZELLER Ch., 2008, From the gene to the Globe: Extracting rents based on intellectual property economies, in: *Review of International Political Economy*, vol. 15, no 1, p. 86-115.