

High values of these indicators in combination with low geographic and commodity export diversification causes high sensitivity of national economy to changes in global demand in several product groups. The fall of global investment demand during the crisis led to lower prices and volumes of demand for basic compound of Ukrainian export – ferrous metals (in 2001–2009 their share in national export was 31.6%), the demand for chemical products has also significantly reduced (in 2001–2009 – 8.1% in the structure of export). Terms of trade worsened in 2009 to 11% , while during 2001–2008 they became better (in total for 50%) [7].

Sensitivity parameters of national economy to external influences determine the need to clarify the nature and trends of global economic imbalances development.

Thus, the macroeconomic parameters of national economy functioning improved in 2010 increasing the competitiveness level of the country. However, the reasons that led to the high vulnerability of Ukraine's economy to changes in external conditions, including the impact of global economic imbalances, are not eliminated. Therefore, it is necessary to monitor, predict indexes of global competitiveness and disproportionality of the world economy development, because, as we see, these processes have direct impact on the rate of growth or decline of the economy of Ukraine.

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***International Economy***

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**ENVIRONMENTALLY-ORIENTED
COOPERATION AS AN INSTRUMENT
OF SUSTAINABLE DEVELOPMENT****Abstract**

In order to enhance the process of innovation in environmental industries proposed to intensify cooperation on the environment, by promoting dialogue between different sectors. The impact of cooperation on innovation and the innovation potential of enterprises, and sustainable development were proved.

Key words:

Sectoral system of innovation, environmentally-oriented cooperation, innovation, innovation system, innovation climate, innovation potential, concept of sustainable development.

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1. The role of environmentally-oriented cooperation

The economical environmentally-oriented literature defines different aspects of cooperation. According to the various intentions of cooperation, the desired outcome from such cooperation determines the form of cooperation chosen. These forms of cooperation depend on the desired outcome of cooperation. These cooperation forms can be used both within an industry sector and among the various sectors, lets say, intersectorally. All in all, it becomes apparent that environmentally-oriented cooperation has often been interpreted as market or society-oriented adaptation strategies of enterprises or analysed under the aspect of a pro-active ecological adjustment policy. Environmentally-oriented cooperation can also be regarded as an instrument for obtaining advantages in market and competition. In fact the spectrum is much diversified and ranges from corporate to regional cooperation. Environmentally-oriented cooperation is to be regarded as an alternative compared to classical cooperation, because enterprises do not enter this cooperation only for ecological but often also for economic reasons.

Cooperations present a very diverse phenomenon, which is reflected in various definitions. Kupp defines cooperation as «any form of voluntary and conscious collaboration for the achievement of common objectives», «in which the cooperation partners remain legally and economically independent, whereas cooperation usually includes subareas of the task variety of the cooperation participants» [14, p. 61]. Exemplified Krcal understands by intercompany environmental protection cooperation «all forms of cooperation» which allow for «a common achievement generated for the realization of measures for environmental protection by two or more partners (supplier, end product manufacturer, waste management) with the objective to increase the environmental compatibility of the products» [12, p. 9].

Furthermore there are also differences related to the kind of the involved participants (e. g. NGO, politics, enterprises etc.). Hereby it is remarkable that environmentally-oriented cooperation mostly takes place between enterprises and/or other social or political participants. In particular the policy seems to be notably relevant as a participant for environmentally-oriented cooperation, because on the one hand the economic and social interests can be considered and on the other hand the solution of the ecological problems is not only incumbent upon the enterprises, but also upon the public and the policy.

The broadness of definitions shows that the term of environmentally-oriented cooperation is formulated differently depending upon its precise object. Thus it also appears that the development of an economical understanding of an

environmentally-oriented cooperation takes place specific to the context. However, what they have in common it is that environmentally-oriented cooperation aims at an environmental discharge or improvement. In order to conceptualise this term more precisely, it is absolutely essential to define the substantial characteristics of cooperation. In this process the question arises, which fundamental term-determining characteristics an environmentally-oriented cooperation has to feature.

A definition has to contain exactly those characteristics, which allow a specific problem appearing in practice as well as chances and risks of environmentally-oriented cooperation to be imparted and picked out as central themes appropriately. Based on definitions mentioned above it appears that the fundamental characteristics of the cooperation term are accentuated differently depending upon the discipline [14, p. 61; 11, p. 97]. In order to examine the contribution of an environmentally-oriented cooperation to sustainable development, the cooperation must fulfil certain requirements such as an inclusion of different participants or the development of potentials for environmental relief. Therefore, environmentally-oriented cooperation is: «every form of voluntary and conscious cooperation between partners, representing a sector of the economy, political and social level, in order to achieve a common «win-win-oriented» aims, with the assumption that the cooperating partners are legally and economically independent from each other» [20, p. 54].

The creation of an environmentally-oriented cooperation not only strengthens the relations between an enterprise and the other actors, but contributes to the development of an improved economy, and/or to the promotion of competitiveness through environmental projects. The perspective of the implementation of sustainable development by an environmentally-oriented cooperation will be discussed in more detail in the following.

2. The contribution of environmental co-operation to sustainable development

Sustainable development, which has gained importance since the Rio World Summit in 1992 [5, p. 7 et al.], grows increasingly. The concept of sustainable development means «development that meets the requirements of the present without compromising the ability of future generations to meet their own needs» [21, p. 57]. Sustainable development can be regarded on three levels: as a political concept (locally, regionally, nationally, and internationally), as a normative-ethical concept (model) and as an analytical concept [19, p. 5]. This strategy aims at the improvement of competitiveness and orientation of added value and at the promotion of environment and resources protection as well as at the per-

ception of social responsibility by ethical and social behaviour [17, p. 6; 12, p. 123]. It is understood as an integrative concept too [16, p. 411 et al.]. In order to give consideration to the associated substantial changes in economics and society on a long-term basis, a fundamental change of the economic situation is required. At the same time more and more of such solutions, which are already effective in ecological, economic and social respect at very short notice and concepts respectively, gain in importance.

In particular regarding environmental problems, the concept of sustainability has been brought up for discussion very intensively since some years. Due to the global effect of major environmental problems (e.g. climatic change), increasing environmental awareness as well as an intensified and increasingly complex environmental legislation, the basic conditions for project have changed and placed an important role for the re-orientation and the search for solutions, which become better and better. Altogether a dynamiting key role inheres in the ecological dimension of the sustainability, because according to Bumert it represents «qua definition a holistic thinking and action model» [3, p. 97] and therefore is particularly suitable for new impulses.

In order to address the proecological challenges, the environmental innovations become more and more important. This considerably appears in the German and European economic and environmental policy [15], which sees a chance for more environmental protection and sustainability in the realization of innovation. Thereby the environmental innovations play a major role. They are understood as such innovations, which reduce the consumption of resources and can decrease environmental pollution [7, p. 2; 18, p. 5].

Not only the pursuit of efficient and competitive solutions, but also the social acceptance is counted among the aspects, which can stimulate enterprises to innovation activities with other participants. Here it becomes apparent that cooperation plays a decisive and important role for sustainable development. On basis of sustainable development enterprises are not only dared to cooperate (e. g. inter-company co-operation or «Public Private Partnership»), but also to associate it with a chance for innovation or new markets [1, p. 333 et al.]. It is thus necessary to promote cooperation between companies.

The research in this field is focussed increasingly on sustainability networks [10, p. 32] which indeed claim sustainability but do not take consistently all dimensions of sustainability into consideration, mostly only the economic and ecological aspects. Due to the complexity of the sustainability, it is necessarily appropriate to investigate the environmentally-oriented cooperation further on. The evaluation of cooperation, which is necessary for the implementation of the regional and national sustainability strategy, requires a further clarification in context of innovation system.

3. From environmentally-oriented networks to innovation system

In order for the cooperation's to contribute to sustainable development, they have to correspond to the concept of innovation systems in a greater degree. The literature distinguishes usually between national and regional innovation systems, in which basically similar components form the basis independently of the area context [6]. Different forms of collaboration are a central element of innovation systems. Those collaborations are independent of system borders, e.g. country, region or enterprise. Although the definition of systematic limits set within systems is somewhat at odds with the definition for concrete problems, it is at this juncture that the environmentally-oriented BIS, *Industry Innovation Systems*, can be derived, and developed. When compared to the literature, the empirical study presents what is more apparent, that industry has an important characteristic, innovation-relevant cooperation.

The integration of an environmentally-oriented cooperation to an innovation system has to meet certain requirements, which are considered as fundamental components of an innovation system. Two components are essential for an innovation system: The *framework conditions* of the innovation system which supports an innovation climate e.g. in an industry (region or nation) as well as *various actors*.

Framework conditions

An environmentally-oriented BIS depends basically on the regional economic policy as well as on the environmental policy. Additionally, relevant environmentally-oriented problems can be secondary to the primary purposes of the BIS. The regional economic policy aims at developing harmony among the different actors, and local interests. In the concept of sustainable development, the regional economic policy proves to be both cross-sectional and task-oriented with consideration also for both the ecological and social aspects. Essentially, such policy combines both the economics and ecology relative to long-term sustainable development so that not only does the environmental situation of the region improve, but also, the region's competitive ability can expect long-term support. An ecologically-oriented economic policy is necessary for environmentally-oriented BIS because on the one hand, such a policy has a crucial influence on the traditional industry structure and development in the region, and on the other hand, it affects the priorities of the regional environmental actors, such as ministries, environmental protection authorities) which result from the urgency of the environmental problems in certain economic sectors and industries. Since the environmental policy is subject to continuous changes, the necessity and also the interest of enterprises consist among other things in the examination of these as-

pects. Therefore the general conditions cannot represent a framework for context or action, which is valid on a long-term basis. In fact, they require a continual adjustment on national, regional or industry level, in order to reduce the complexity of economical and environmental questions and to decrease the uncertainty of the actors. Therefore existing potentials for success are to be recognised and used and new possibilities are to be created and developed.

In the context of industry-referred environmental activities, regional and environmental objectives can be achieved in a better way. Thus learning processes in the regionally relevant industries are activated which significantly support the innovation ability of the actors on the one hand and on the other hand the functionality and the further development of a BIS. In order to promote the innovation processes in an environmentally-oriented BIS, among the framework conditions the appropriate constellation of actors is to be taken into consideration.

Actors

Environmentally-oriented BIS, not only depend on the framework conditions, but also on the different levels of the actors, such as:

- enterprises of the industrial and the service sector of the industry,
- supporting knowledge organisations (environmental and scientific actors) and
- the environmentally-relevant interactions between these actors (e. g. professional know-how exchange, coordination) [4].

In an environmentally-oriented BIS, actors are to be included who accomplish (enterprises) or promote (knowledge organizations) environmental innovations.

Through the transformation of an environmentally-oriented cooperation into an innovation system, there are regional promotion opportunities for economic development that can, also, contribute to the initiation and advancement of the BIS. The importance of the environmentally-oriented BIS is connected with the specific kinds and levels of the regional resources which contribute to the stimulation of the innovative and competitive ability of enterprises. Specific regional resources like an existence of expert knowledge with reference to traditional industries, adaptability, business attitudes etc. are regarded as extremely significant for the efforts of enterprises. The realisation of environmentally-oriented BIS is also regarded as an instrument for supporting the competitive ability. Therefore, an environmentally-oriented BIS has to meet the requirements described here and has to supply impulses for the ecological as well as the regional re-orientation and advancement of the enterprise in an industry at the same time, in order to bundle and realise the ideas gained.

The outlines of industry innovation system featured here ought to be submitted for further researches in order to distinguish the concept of BIS from other

forms of cooperation. The development of environmentally-oriented cooperation in the direction of innovation system could be a some kind of a solution, that supports a regional economic development, and therefore contribute to the implementation of sustainable development. It can be emphasized in summation that the industrial orientation is a strong support foundation for BIS and RIS while they provide access to a wide spectrum of information. Well developed information is needed, not only to generate and realize environmental innovations, but it is necessary for an effective support of sustainable development at all levels – from the enterprise to the regional to all the other possible cooperation partners.

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