

Opportunities for the Green Economy in Bulgaria

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Summary:

In the process of searching for new opportunities and models for the development of the Bulgarian economy in the post-crisis period, it has become even more obvious that we need a fundamental change in the existing conceptual framework. The existing model of economic growth, based on conventional manufacturing has to be transformed into a new much more resource-conservation one. Promoting 'green' manufacture could be the right response to this new challenge. The economic incentives stimulating towards launching a new model of green new deals aim to promote the creation of new green jobs, to establish energy-efficient production and clean technology.

All this requires timely, adequate and responsible government policy. The active intervention of public authority requires a new distribution of the functions and competences between the private and public sectors keeping in mind the lessons learnt from the mistakes and omissions made so far.

By analogy, 'ecological' capital should be created and developed along with human capital. This capital along with the existing couple of financial capital – new information and communication technologies (NICT)

are to become the driving force of a new type of green economic deal.

The target of the efficient macroeconomic policy for stimulating the development of green economy should be the establishment of a model of long term eco-friendly production on all markets and at all levels through a set of fiscal and regulatory measures. This new model should aim to accomplish a social benefit in the long term rather than maximizing company profits in the short run.

Key words: sustainable development, ecological capital, eco-innovations, green economy, eco-fiscal policy

JEL Classification: Q01, Q58, E60, E61, F64

Introduction

In the process of searching for new opportunities and models for the development of the Bulgarian economy in the post-crisis period, it has become even more obvious that we need a fundamental change in the existing conceptual framework. The transition to low-carbon, energy-efficient and resource-conservation economy is not simply a recommendation, but an absolute necessity which has no alternatives.

In the beginning of 2012 the European Commission adopted the "Innovations for Sustainable Development" strategy which

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aims to stimulate the European economy towards more intensive and more sustainable use of renewable resources and guarantee environment protection of bio diversity. This strategy complies with the decisions made at the Rio+20 meeting, which clearly outlines the fact that the world needs to define explicitly the need to combine economic, environmental and social targets. The "stability culture", initiated by the Maastricht Treaty, should be integrated with a new "sustainability culture". The social and ecological transition presents the new long-term development strategy which Europe needs so that it can quickly and effectively recover from the crisis.

The existing model of economic growth, based on conventional manufacturing has to be transformed into a new much more resource-conservation one. Promoting 'green' manufacture could be the right response to this new challenge. We have to reconsider the existing development framework, to change fundamentally the current model and to launch a new one which can provide for a new type of economic growth.

Profound structural transformations are needed to address these challenges - both in the existing technology and to a very great extent in implementing new technologies and innovation that meet the needs of the 21st century and the creation of new products and services which will guarantee the opportunities for sustainable development.

It is this component in particular that we will be referring to with the term "ecological capital". This "green" element is well maintained in the recovery anti-crisis plans and in the national strategies for economic recovery of most leading European economies. The economic incentives stimulating towards launching a

new model of green new deals aim to promote the creation of new green jobs, to establish energy-efficient production and clean technology, to influence the price of CO₂ and thus to attempt to restrict the emission of greenhouse gasses and to proceed towards solving some of the climate change-related problems.

The topic of the current research is to outline the limitations of the existing model of development and growth in Bulgaria and the exhaustion of the opportunities it provides and analyze the new model of economic growth based on a well-balanced attitude towards the environment, which is presented by means of priority development of green economy sectors.

The efficient functioning of this model requires a clearly defined macroeconomic policy and a set of measures based on the sustainable development principle.

It is not an easy task to give a comprehensive, working and satisfactory definition of the concept "green economy" because this concept differs a lot across the EU member states. Various categories exist such as green sectors, green business, green new deals, bio-economy, recovery based on green economy etc. All these, though closely related, cannot be considered to be identical.

The focus of the International Rio+20 (2012) conference was on the green new deal. Only within the European Growth Pact can billions of euro green investments be found. The €10 billion allocated for the recapitalisation of the European Investment Bank can secure €60 bln additional loans which on its part can result in securing new €180 bln of investments within the EU¹ through the leverage of the private investment funds.

¹ Data provided by the Institute for Sustainable Development and International Relations (IDDRI)

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Due to the great variety of the methodology employed in determining green sectors, green jobs and green production it is still difficult to accurately encompass this matter statistically. Eurostat is the only institution that has managed to define Basic directions based on two fundamental categories – classification of activities related to environment protection and classification of activities related to resource management.

For the needs of the current study we will stick to the following working definition of "green economy": Green economy encompasses sectors grouped in three basic subject fields:

- activities related to environment preservation and conservation (water, bio-economy, waste conservation and recycling, bio diversity);
- activities leading to energy efficiency and low energy consumption (construction, insulation materials, bio-based materials etc.)
- activities which limit the emission of greenhouse gases (renewable energy sources, transportation, green energy).

1. Green economy – a new model of competitiveness after the crisis

Whether it is about resolving issues related to climate change, destruction of biodiversity or natural resources depletion, the inefficiency of and the poor outcomes from the existing method of economic growth economically, environmentally and socially are becoming more and more evident. This is not only a problem that the Bulgarian economy is faced with, but the European economy as a whole.

The market forces and mechanisms cannot deal on their own with the problems

and challenges that the present time poses for the following few reasons in the least:

- in terms of greenhouse gasses and CO₂ in particular the market cannot spontaneously determine the price of carbon dioxide and hence this parameter does not become an integral part of the budgets of the economic agents and of the cost respectively;
- the same applies to the erosion of biodiversity and the 'free' usage of a multitude of eco services (from soil quality to air and water pollution);
- the time lag between the reasons for and the consequences from the climate changes, on the one hand, and the irreversible nature of the damage caused on the other, which calls for the need to take measures even before the economic agents are ready for that;
- using the limited (and thus expensive) natural resources is not sufficiently regulated through the price mechanism solely. This is especially obvious on the oil market and leads to major economic and social shocks.

All this requires timely, adequate and responsible government policy. The active intervention of public authority requires a new distribution of the functions and competences between the private and public sectors keeping in mind the lessons learnt from the mistakes and omissions made so far.

Over the past two decades economic growth was based on two major pillars: the rapid development of new information and communication technology and the related sectors, on the one hand, and the financial globalisation and the global movement of capital, on the other.

The current economic crisis (2007 – 2009) is a straightforward confirmation of the depleting potential for economic growth a model like this provides. Its realization poses a new challenge both for outlining a new model based on green economy industries and for the need for a different type of macroeconomic policy and regulation.

It would be too simplified if we just introduced another pillar in the existing model hoping that this can be an incentive for a green new deal. What is needed is a new, global and integrated understanding of the role of the government in stimulating the change in the behaviour of economic agents, risk management and the introduction of new rules and regulators. This is how prerequisites for a successful green economy model would be created.

The existing development model is incapable of satisfying certain very important aspects of human development. One of those aspects is the need to guarantee a high quality environment and clean nature. Social cohesion is another aspect, which is characterised by accumulated imbalances and risks of social tension – chronic and growing unemployment, aggravating income inequality, the increasing number of households at risk of poverty, the major differences between the separate regions and other problems.

All of the above mentioned slow down the growth rate, as well as the growth of incomes and welfare. Due to the limited financial resources the social and ecological goals are erroneously opposed and an alternative is looked for between the two, but actually the problem lies with the inadequacy between the existing development model, our needs and wants and the resources we have at our disposal.

A clear vision and a long-term strategy are needed when determining several target groups of sectors (subsectors) which have the potential to develop green economy and accordingly work out specific programmes to stimulate and facilitate their development. One possible list of such productions can be:

- production of green energy from renewable energy sources;
- energy-efficient construction and production of insulation materials, incl. bio-based products;
- recycling and industrial processing of waste;
- green chemistry;
- bio-agriculture which is an engine for the development of sustainable agriculture and has great potential for export of globally competitive production;
- green services, incl. bio-tourism.

Over the past years investor interest, just like government supporting policies, was directed to alternative energy sources. What is more, there is a potential risk to turn this into a new "investment bubble". A more thorough and in-depth analysis shows considerable potential and possibilities for achieving good results in each of the remaining areas of production.

These sectors are characterised with great growth potential, good competitiveness, dynamic growth in domestic and international demand, and export capacity. As a result the green economy may become the driving force to bottom out of the crisis. These industries can be the leverage which will stimulate business activity, economic recovery and employment, and thus improve well-being, ecological equilibrium and social inequality. Stimulating sectors of the green economy

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could become a successful transition towards a new, social and ecological type of economy.

The economic crisis, which we have seemingly overcome, is an obstacle to the fulfilment of this common European ambition. The crisis should be seen as a signal for structural transformation – a signal which rejects the old models of the past and poses serious issues related to choosing new models which, in the long run, will face the challenges of the future.

To this effect Bulgaria should once again clearly make its right choice – whether to go for the traditional, well-known and established but not very efficient production and consumption models (and conduct an economic policy of ‘catching up’) or to go for the innovative, eco-friendly and resource-saving production with good competitive potential, which will allow for taking good positions in international trade and the new international labour division.

By analogy, ‘ecological’ capital should be created and developed along with human capital. This capital along with the existing couple of financial capital – new information and communication technologies (NICT) are to become the driving force of a new type of green economic deal.

The existing model based solely on NICT and the international capital flows show that it cannot generate sustainable growth, one reason for that being the abrupt aggravation of social inequality, ecological risks and financial instability worldwide.

A similar approach calls for finding answers to a number of questions. It should be established whether companies are sufficiently interested in social and ecological behaviour at a macroeconomic level. What would improve the performance

- the stimulation of voluntary efforts on the part of the economic agents in this direction or strengthening the compulsory regulation and the normative sanctions on the part of the institutions? It is equally important that we clearly outline the effects from the implementation of the eco policies on the economic performance of the companies and their market competitiveness.

Despite the vast research conducted during the past decade, scientific publications do not contain a clear-cut consensus in terms of Porter hypothesis (Porter, Van der Linde (1995) where it is stated that good social and/or eco-friendly policies implemented by companies could guarantee successful economic development.

The assumption of such positive impact goes through two channels (Ambec, Lanoie (2007):

- the effect of reducing company expenditure: money spent on paying fines, sanctions for breaking eco requirements decreases; energy consumption costs go down, better access to capital markets and lower interest rates, lower labour costs (effect of double dividend) as a result of lower social security contributions made by employers;
- the effect of growing income: improving access to certain markets, product diversification, better risk management in the long term, boosting demand for company production (for example, bio-food, bio-tourism).

The latest research carried out at a microeconomic level send certain positive signals and give evidence

that complementing technical capital (innovation), human capital (organisation, management) and ecological capital lead to improving company's economic development. (Cavaco, Crifo, 2009).²

There are serious concerns, however, that a situation similar to Solow paradox (i.e. a kind of "green Solow paradox") might arise with respect to new eco-friendly technologies. The fact that at a macroeconomic level it is difficult to prove that there is a direct positive connection between the implementation of new green technology, growth in productivity and growth realization, on the one hand, and deteriorating company competitiveness with increasing eco-fiscal burden or tightening the implementation of regulatory rules and regulations, the time lag in introducing and adapting green technology, the small relative share of the sector related to the production of eco-technology in the national economy, the even weaker effect of accompanying productions - all that causes some scepticism and leads to underestimating the opportunities that green economy offers in the national strategy for economic revival.

Since the end of 2008 of the total \$2,800 billion earmarked worldwide for the stimulation of economic growth, 15% have been allocated for green investments, distributed in three main fields:

- stimulating energy efficiency (energy saving) – 67% of all green investments concentrated primarily in building new and renovating the existing railroad infrastructure, smart grids, rehabilitation of buildings, manufacturing low-carbon automobiles;
- management of the water sector, waste processing and technology for reducing pollution – 19%;

- production of low-carbon energy, including renewable energy sources, CO2 capture and storage – 14% of the green investments.

The chart shows the leading countries in the development of sectors of green economy. In China and the United States, for instance, the share of green investments in the general recovery plans amounts to 38% and 12% respectively.

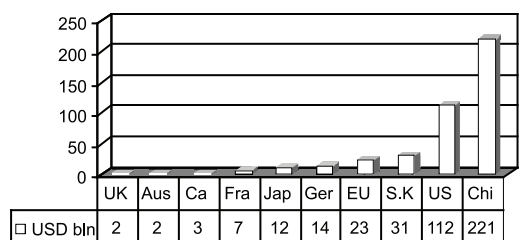


Fig. 1. Green stimulus regional ranking

Source: HSBC global research

Promoting this new type of economy encounters considerable difficulties which can be divided into two main groups:

- ensuing from market imperfection;
- ensuing from the poor efficiency of policies related to stimulating these productions.

An indisputable obstacle is the lack of security of the institutional regulations, i.e. the consistency which different governments in our country develop (and in the ideal case – implement) legal measures which stimulate the development of such sectors. The predictability of the policy conducted in this area is of extremely great importance to investors and an important factor for the efficiency of their investments.

There are a huge number of negative examples in this area. We can try and remember what has happened over the past years in the area of manufacturing, buying

² From a purely empirical aspect such a hypothesis has not been substantiated so far (Crifo, Ponssard, 2009)

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out and the price of electricity generated by WPS (water power stations) and the construction of photovoltaic power stations.

Therefore, the development (not only on paper) of a Sustainable Development Strategy and its efficient integration in the common national development strategy should be a major priority. The goal is to "integrate" the idea about the green deal in all activities of the public authorities. It is extremely important that an integrated approach be implemented since it is obvious that the segmentation of activities does not produce the desired results.

In order to classify such a policy as successful, in addition to the optimum balance between the selection of tools and goals (for example, choosing between a new eco-tax or a technical standard; between

improving infrastructures or promoting research and development), it should take account of the implementation methods. In that context the operational independence of the regulating institutions, the integration of the goals and tasks of the public authorities in stable legal rules and regulations, the stable financing of the departments whose task it is to implement that policy and the efficient interdepartmental management are of extreme importance and a key factor for high efficiency.

The table below attempts to summarize and identify the measures, activities and players involved in the process of integrating green economy in the common economic policy.

2. New macroeconomic policy paradigm

Table 1. Integration of the green economy in the common economic policy

| Strategic priorities | Activities and measures for implementation |
|--|--|
| Working out a common framework for the development of green economy; Identifying the main departments (Line ministries, NGO, Ministry of Finance ; representatives of the private sector etc.) involved in the process | <ul style="list-style-type: none"> - review of the existing national programmes in different ministries; - coordinating activities related to various programmes, including those that refer to investments in infrastructure; development of rural areas, territorial development of municipalities; - attracting experts and establishing working groups for all-round, concerted actions |
| Determining the possibilities for adapting different organisations (incl. cooperation between individual sectors, recognizing individual possible perspectives) | <ul style="list-style-type: none"> - identifying existing obstacles; - broadening the participation of independent experts and NGOs in working groups on economic and eco policies; - active promotion of the good practices in our country and in the EU and their stimulation; - determining priorities within the "Europe 2020" and "Horizons 2020" strategies |
| Promoting the potential of green economy among public; awareness, education, know-how | Explaining the links to and significance for the environment, sustainable development and welfare of the opportunities that green economy has; Adapting educational programmes to new demands |
| Identifying analytical tools for the creation and development of training adapted to the needs of green economy | <ul style="list-style-type: none"> - Financing scientific projects related to the development of analyses similar to "expenditure-benefits" policies and investments in green sectors; - Regular reports on the outcomes and the economic and social efficiency of the implemented pilot projects; - Adapting the national statistics and data base to the needs of such analyses |

The aim of the efficient macroeconomic policy for stimulating the development of green economy should be the establishment of a model of long term eco-friendly production on all markets and at all levels through a set of fiscal and regulatory measures.

The role of the public authority in the new model of the green new deal is to:

- identify and determine as strategic those sectors which are the driving forces of this growth, i.e. those that allow the use of available resources to the greatest extent, the ones where the social agents are best prepared, as well as the ones whose development can be stimulated through innovation or facilitated by the institutions;
- coordinate its actions with the private sector to create new market segmentation and find pragmatic solutions in the difficult fields;
- stimulate a radical change in the system of professional and qualified preparation in order to carry out the necessary transformation of the labour market to adapt to the needs of the green economy.

A comprehensive set of measures and instruments should be developed in order to achieve the final goal – full or partial financing, investments in infrastructure, adaptation and improvement of the legal framework, defining new rules and regulations, re-orientations of public markets.

Some of the proposed or already adopted changes in the area of taxation, loosening the administrative regime etc. can be seen as hopeful positive signals in the right direction. But even more decisive actions are needed.

The main aspects that should be kept into account when developing an entirely new strategy for the stimulation of

sustainable development and in particular the green economy are:

- guidelines for the development of the common economic policy and those in the individual sectors (especially the ones in sectors like transportation, agriculture, energy, food industry and environment) should be regularly reviewed and improved considering their impact (either positive or negative) on the environment;
- the measures taken to stimulate export-oriented economic growth and to boost export should be in line with the impact of the respective productions on the environment;
- the opportunities to improve the coordination between the economic, sector and eco policies should be the subject of continuous monitoring.

Another possible and necessary action on the part of the government is to redirect existing national resource and to allocate additional funds in the current draft budget for national research and practically feasible programmes related to accelerated development of eco-technologies and technological renovation of the green industries. Naturally, this can happen within the limited context of budget cuts which are due to the long-lasting recession. That is why it is important to focus attention on the perspective, competitive and export-oriented sectors, though these are not necessarily characterized by quick and high return in either short term or medium term period.

The big innovation capacity of the economy is a very important prerequisite for the new deal. This refers both to innovations caused by changes in demand and mostly to technological innovations. In this respect it is very important to implement a set of measures which can, on the one hand,

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Table 2. Potential measures encouraging eco-investments

| Cause | Potential measures |
|--|--|
| Insufficient demand for eco-innovations | Using "green taxes" and other market instruments to evaluate the external effects and creation of incentives for demand; Using instruments related to supply, such as public goods, standards, regulations etc. |
| Lack of innovation capacity | General activities aiming to strengthen the innovative capacity |
| Technological obstacles and lack of radical innovative ideas | Investments in research and development in the respective areas, priority financing of scientific projects from the Scientific Research Fund; International technological exchange |
| Little interest on the part of the scientific society to eco-innovations | Support and stimulation (fiscal one incl.) of R&D; measures for financial aid; founding awards for scientific achievements in the field of innovation |
| Insufficient financing | Establishing special co-financing funds; Public-private partnership; Enlarging the opportunities for European financing |
| Administrative obstacles and barriers to starting new business | Simplifying and facilitating procedures; Using the leverages of competitive policy in these areas |
| Lack of capacity for green investments in the small and medium business | Access to financing; Information service and improved competences; Integrating SMEs in the technological parks (centres) Cutting spending related to process administration |

straighten market imperfections and, on the other, weaknesses (inefficiency) of the actions of the public authorities.

The table below summarizes one feasible set of measures directed at promoting eco-investments.

Conclusion

In the context of the limited and further depleting resources, the Bulgarian economy requires a new development model which does not necessarily bind economic growth solely to consumption of non-renewable resources. This new model, based on sectors in the green economy should overcome the weaknesses and the insufficiencies of the existing one related both to the growing social inequality and to the deep ecological imbalances.

Attempts to make an analogy with NICT can lead to the assumption that the new ecological technology will be the engine of future growth and the core of the new development model on condition that its large-scale implementation is stimulated through green investments and accompanied by profound production and organisational changes which can guarantee the efficiency of the implementation of the new innovative technology. This is why it is necessary not only to add a third pillar, the ecological capital, but a serious integrated approach to creating the green economy model.

This new model should aim to accomplish a social benefit in the long term rather than maximizing company profits in the short run.

The introduction of this new future model requires a new role and responsibility on the

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part of the government and redistribution of the roles of the economic agents in the public and private sectors.

The reform should be conducted systemically and consistently in three main directions:

- 1) modifying the traditional market regulatory mechanism (the price system) through an efficient eco-fiscal policy;
- 2) promoting innovations and new eco-technologies;
- 3) increasing energy efficiency.

These three lanes, each of which has its limitations, should be seen as the foundation of a common strategy for sustainable development.

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