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# **Finance and Accountancy for Sustainable Development – Sustainable Finance**



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## FINANCING THE TRANSITION TO GREEN ECONOMY IN EUROPE\*

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**Summary:** The global financial crisis confirmed that the return to the previous state is impossible and we need a new concept of economic and social growth adapted to the changing global economy. The new European Union's strategy Europe 2020 emphasizes sustainable development and green economy as an engine of future development. The green economy has a significant role in the structural changes in European economies (technologies, innovation, new jobs). Transition has to be supported by financial instruments from public and private sector.

**Keywords:** sustainable development, green economy, sustainable finance, global crisis.

### 1. Introduction

The purpose of the article is to show how the concept of green economy can be an empowering tool of the sustainable development in Europe and to describe a green economy as a new, more radical direction in creating the harmonious, balanced social and environmental development of countries. The concept of green economy is formulated as an alternative approach to the existing model of economy. This article examines the new thinking started after a global financial crisis (2008) and continued to the conference in Rio de Janeiro (commonly referred to as Rio+20). The integral part of the concept is a system of financing the transition to green economy from the private and public sources.

To achieve the purpose of this paper the methodology based on systemic approach will be used [Sterman 2000, pp. 86–88]. First we have to consider what is the problem? The answer will concentrate on a few aspects of global crisis and will be a short diagnosis of existing economic system. Then follows the second question: Why is it a problem, that means what is the cause of the problem? The next step of the systemic approach is to propose an new model which is green economy. To complete the process some other questions are possible: How to implement the ideal

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concept (model)? What kind of policy instruments can be used? Especially the financial ones. Following that, we can conclude from the literature and from the documents of the European Union what kind of strategy and policy will be used to implement the green economy concept and what kind of financial instrument will support it.

## **2. Global financial crisis as a near death experience for the economy – short diagnosis**

The global financial crisis in 2008–2009 became multidimensional economic, social and environmental. On the economic level the effects of the crisis were a reduction of the world GDP and volume of international trade, reducing investment and jobs creation, etc. Side effect of the crisis was a reduction of the level of well-being [Streeck 2011; Krugman 2009; Roubini, Mihm 2011]. People have lost savings, their jobs and, in particular, have lost confidence in the financial sector, banking and more generally in the market economy. The scale of this crisis, its global dimension and the lack of early warning signals from a market economy were a shock for the citizens, politicians and even for financiers and bankers [Stiglitz 2010]. International organizations and countries prepared recovery programmes and strategies for the future [*Towards Green Growth* 2011; *The Transition to a Green...* 2011; *Europe 2020...* 2010]. What should be the new purpose of economic strategy after the crisis? Which objectives and values are important to build a new model of the economy? Many actors of political and economic life propose a sustainable development, operationally defined as a green economy concept [Barbier 2010; Ocampo 2011].

## **3. What has changed in the world economy after the crisis?**

The myth of growth has failed us – says T. Jackson in his book *Prosperity without Growth*. It has failed the two billion people who still live on less than \$2 a day. It has failed the fragile ecological systems on which we depend for survival. It has failed, spectacularly, in its own terms, to provide economic stability and secure people's livelihoods. Today's world is characterized by the degradation of forests, lakes and soils, conflicts over land use, water quality, fishing rights and the concentrations of carbon in the global atmosphere. And we face these tasks with an economy that is fundamentally broken, in desperate need of renewal. In these circumstances, a return to business as usual is not an option. Prosperity for the few founded on ecological destruction and persistent social injustice is no foundation for a civilized society. The global crisis challenged the dominant economic model to its foundations [Jackson 2009, p. 5].

Table 1 is based on many papers [Wehinger 2009; Krugman 2009; Beker 2011; Streeck 2011], books [Roubini, Mihm 2011; Kolodko 2011; Stiglitz 2010; Jackson

2009], reports, statistical data of Eurostat [Economic crisis... 2009] and articles published just after the crisis. Positive and negative aspects of the crisis show complexity and systemic character of the global crisis.

**Table 1.** Negative and positive aspects of global crisis for economy

Negative	Positive
Reduction of GDP	Discussion of the limitations of GDP as a main indicator of economic activity
Recession	Global Green New Deal
Growing unemployment	Green Economy
Deficit of the national and local budgets	Eco-innovations
High public sector spending on private-sector rescue	Green investment funds
Reducing the level of investment	Sustainable finance and banking
Decrease of people confidence in market and financial sector	Moving toward the renewable energy investments, and environmentally friendly technologies (new jobs)
Lower supply of goods and services	
Reduced public spending for social purpose	
The growing role of governments in economy	
The crisis of an economic model	

Source: own elaboration.

The new trends in the economy are already a fact. We can see sustainable banking, eco-taxes, green investment funds, green public procurement, eco-innovations in industry, low carbon economy, alternative sources of energy, etc. New strategies prepared for the European Union and other countries only confirmed existing trends.

#### **4. What is a new picture of economy, what kind of development do we need? Main world and European initiatives**

The politicians were first in diagnosing the situation after the crisis. They were surprised somehow what happened. President Sarkozy asked economists, scholars and providers of economic data why there were no warning signals from financial markets and from the economy about coming crisis. Therefore the first diagnosis and recovery programmes were created by governments and international organizations like the United Nations, OECD, European Union. For the purpose of this paper important is the presentation of the content of a few selected documents. The common characteristic of these documents is that in the heart of them is concept of sustainable development and green economy. Authors of presented strategies and reports are convinced that the recovery after the crisis and future development which will protect us against next crisis have to base on sustainable economy. The concept of the sustainable development and the green economy has gained importance because we need a response to the multiple crises – the climate, food, economic and social crises – with an alternative paradigm that offers the promise of growth while protecting the earth's ecosystems and, in turn, contributing to poverty alleviation. In this sense, the

transition to a green economy will entail moving away from the system that allowed, and at times generated, these crises to a system that proactively addresses and prevents them [*The Transition to a Green...* 2011].

We can find interesting ideas in the United Nations' *Global Green New Deal* and Green Economy initiative, in the European Union's programme *Beyond GDP* and the strategy *Europe 2020*. Practical suggestions how to measure economic and social development are in the Report by the Commission on the Measurement of Economic Performance and Social Progress headed by J. Stiglitz. Certain point of view is presented in the report *Enough Is Enough. Steady State Economy*. Also the newest event Rio+20 – the United Nations Conference on Sustainable Development in Rio de Janeiro, Brazil, in June 2012 – was organized around the idea of transition towards green economy. The United Nation is again bringing together governments, international institutions and major groups to discuss, among other topics, a vision of the future economy.

“Global Green New Deal” of United Nation Environmental Program (UNEP) proposed for reviving the global economy and boosting employment while simultaneously accelerating the fight against climate change, environmental degradation and poverty that a significant portion of the estimated USD 3.1 trillion in economic stimulus packages be invested in five critical areas: energy efficiency in old and new buildings; renewable energy technologies, such as wind, solar, geothermal and biomass technologies; sustainable transport technologies, such as hybrid vehicles, high speed rail and bus rapid transit systems; the planet's ecological infrastructure, including freshwaters, forests, soils and coral reefs; and sustainable agriculture, including organic production. The new picture of economy in this document shows that the sector of green economy is a priority in the future development. Twenty most advanced economies have been called to engage in a Global Green New Deal by investing at least 1 per cent of their total GDP in promoting green economic sectors [Barbier 2010]. UNEP reiterates its Global Green New Deal call, and urges governments to invest USD 750 billion of the USD 2.5 trillion stimulus package (about 1 per cent of global GDP) towards building a green economy – one that reduces carbon dependency, addresses poverty, generates good quality and decent jobs, maintains and restores our natural ecosystems, and moves towards sustainable consumption. The development of green economy means also development of clean technologies, renewable energy sources, improving energy efficiency in industry, changing the model of consumption and production for more sustainable, implement integrated product policy, green procurement, creating green jobs and finally ecological tax reform [Barbier 2010].

Also the report by J. Stiglitz [Stiglitz et al. 2009], which was prepared for the President of France, shows that the reasons why the crisis took many by surprise is failure of our measurement system not focusing on the right set of statistical indicators. Report says: “The crisis is teaching us a very important lesson: those attempting to guide the economy and our societies are like pilots trying to steering a course without a reliable compass” [Stiglitz et al. 2009].



In the European Economic Recovery Plan it was recognized that the crisis should also be taken as an opportunity to set our economy more firmly on the path to the low-carbon and resource-efficient economy. These challenges point to the need for more inclusive markers than just GDP growth. The new strategy called *Europe 2020* puts forward three mutually reinforcing priorities:

- smart growth: developing an economy based on knowledge and innovation,
- sustainable growth: promoting a more resource efficient, greener and more competitive economy,
- inclusive growth: fostering a high-employment economy delivering social and territorial cohesion [*Europe 2020*... 2010, p. 6].

The motor of this strategy is sustainable growth which will help to decouple economic growth from the use of resources, support the shift towards a low-carbon economy, increase the use of renewable energy sources, modernize our transport sector and promote energy efficiency. The crisis made us aware that “business as usual” is not possible anymore.

For this new strategy GDP is not a compatible indicator. There is a lack of comprehensive environmental indicator that can be used in policy debates alongside GDP. Such a single measurement for the environment would help foster a more balanced public debate on societal objectives and progress. The European Commission intends to present a pilot version of an index on environmental pressure in coming years.

The global financial crisis rocks people’s faith in business and governments. The main challenge was to rebuild trust and find answers for many of the tough questions society faces. The *Vision 2050* project has been a collaborative effort of the 29 companies, supported by the World Business Council for Sustainable Development (WBCSD) secretariat, the wider business community and regional network partners around the world. The goal was to see what the sustainable development would mean for business and markets in general and what can be done for better future. The impression was that business-as-usual cannot get us to sustainability or secure economic and social prosperity; these can be achieved only through radical change, starting now. Born of environmental and economic crises and spread by education and the media, these initiatives encourage “One World – People and Planet” behaviour in society and individuals [*Vision 2050*... 2010, p.10] Finally, we finish the global discussion about the economic crisis and the future of economy by presenting main topics of the United Nations Conference on Sustainable Development in Rio de Janeiro in June 2012. The objective of the conference was to secure renewed political commitment for sustainable development and address new and emerging challenges. The moment could not be more fitting. We are on the cusp of the first environmental limit – climate change and the first economic reality of a global resource limit as demand for oil outstrips supply. The Conference was focused on two topics: (a) a green economy in the context of sustainable development and poverty eradication; and (b) the institutional and financial framework for sustainable development [UNEP 2011].

Greening the economy means mainstreaming the environment into economic development. The term “green economy” is not consistently defined as it is still an emerging concept. A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. One of the possible answers to the multi-dimensional crisis is the concept of green economy. There is shared awareness that broad, systemic and long-time vision is necessary. And in fact the concept of a green economy has become a centre of policy debates in recent years.

## 5. The concept of green economy – the new model

There is a “growing recognition that achieving sustainability rests almost entirely on getting the economy right.” It also emphasizes the crucial point that economic growth and environmental stewardship can be complementary strategies [*The Transition to a Green...* 2011]. The concept of green economy should be seen as consistent with the broader and older concept of sustainable development, which has been mainstreamed into the work of the United Nations. The specificity of the broader concept is associated with both its *holistic* character, as it encompasses the three pillars of development – economic, social and environmental – and its particular focus on inter-generational equity [Ocampo 2011, p. 16].

As has already been noted, what is essential to the concepts of green economy and green growth is the understanding that the benefits of environmental sustainability outweigh the costs of investing in and protecting the ecosystems, so that it is possible to have a win-win or “double dividend” strategy of growth with environmental sustainability, and even win-win-win or “triple dividend” strategy that also includes poverty eradication and broader improvements in social equity [Ocampo 2011, p. 19]. This is interesting from the point of view of policy makers, because they have to deal with many dimensions of the crisis and the idea of sustainable development is offering the path to transform economy but also to support citizens and environment.

Green growth is closely related to the concept of a green economy which UNEP defines as one in which “growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services” [*Global Green...* 2011].

There is a growing debate among scholars about the importance of green economy concept for future development policy. Below the author presents few of them: “The concept of a green economy is crucial for guiding policies for sustainable development, since it goes to the heart of the matter: organize economies in ways that fit local and global ecological prerequisites and long-term dynamics” [Mol, Sonnenfeld, Spaargaren in: Fulai et al. 2011, p. 65]. “A ‘green economy’ concept is an essential step towards the transition to a resilient and sustainable economy. However, it does not go far enough as long as it does not address the dilemma of

economic growth: every expansion of economic activity implies more stress on the planet's ecosystems" [Pirgmaier in: Fulai et al. 2011, p. 67].

"The 'green economy' concept is useful to the extent that it engages policymakers, economists and businesses in critical dialogue with other stakeholders to compare alternative pathways for development. The comparison should then consider economic criteria alongside social, political, cultural and ecological criteria, and how 'business-as-usual' development and more sustainable alternatives trade off" [Downs in: Fulai et al. 2011, p. 64]. By recognizing that the economy is a subsystem of human society which is itself a subsystem of the environment, the green economy concept helps to prioritize sustainable development and resource management on decision makers' agendas, influencing their thinking and giving them a mandate to ensure that our economic activities do not exceed environmental tipping points [Polzin, Kostka in: Fulai et al. 2011, p. 66].

## 6. Financial framework for green economy

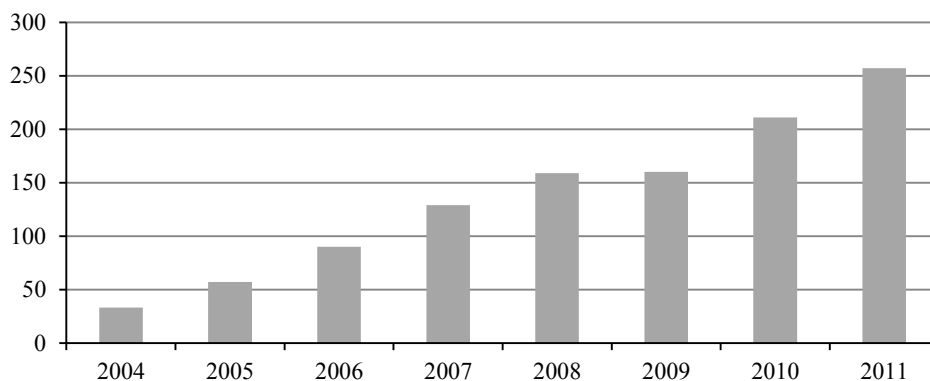
The first financial support for green economy after recent crisis was established by the meeting of G20 states in 2009. It was a 3 billion USD fiscal stimulus package for recovery of economies during the crisis. The part of financing (750 million) was directed to promote green economy (clean technologies, renewable energy, energy efficiency, sustainable transport). Next steps were initiatives of OECD and UNEP to create a financial framework to support the transition towards green economy. UNEP's *Green Economy Report* estimates that 2 per cent of the global GDP (currently USD 1.3 trillion per year) is needed to finance it by 2050.

We know that governments play a crucial role in the recovery process during the crisis. So the fiscal policy and public finance can also be key drivers of a country's transition to a greener economy. It is growing awareness that the greening of economy requires also the participation of private finance. Public finance can focus on reorienting existing public resources from brown to green economic activities, while private financial institutions can direct greater flows to assets that sustain and enhance financial, environmental and social values in economy. S. Kapoor says: "Finding public money for green investment is very hard if not impossible at the time of crisis, when even basic provision of healthcare and education services is also being cut. Green expenditure is often wrongly seen as a 'luxury' item to be funded in good times only. While the bulk of green investments by volume will come from the private sector, public investment is a critical catalyst. Public money is crucial in galvanizing follow-on investment from the private sector, for example in R&D, risk-sharing or co-investments in projects that provide marginal return at the current carbon price or seem too risky from a purely financial perspective" [Kapoor et al. 2011, p. 15].

Recent storms demonstrate that conventional, business-as-usual investment trends may reduce economic resilience in the future by locking in a carbon-intensive

path which leads to costly environmental damage. Greening global growth is necessary to avoid costs of brown economy. It also requires a combination of public resources and public support to promote private-sector engagement, and increasing investor confidence [*The Green Investment...* 2013, p. 9]. We observed recent transformation of financial sectors, which is adopting itself to the new trend of greening finance. The process is powerful and fast. It means the about USD 5 trillion of global green investment is required per year to 2030 in various sectors to secure future growth [*The Green Investment...* 2013, p. 12].

The global new investment in renewable energy (Figure 1) shows the tendency in public and private sector of growing green orientation. A number of green markets have emerged as a result of increased public and private investments. Also examples of green markets and financial instruments emerged in the past decade. They include: carbon finance, green stimulus funds, microfinance, green bonds and thematic funds such as international and national climate funds, green infrastructure, real estate funds and socially responsible equity funds (Table 2).



**Figure 1.** Global new investment in renewable energy, 2004–2011 (in USD billion)

Source: own elaboration based on: Bloomberg New Energy Finance, <http://about.bnef.com>.

To summarize: a global green economy transformation will require substantial financial resources [UNEP 2011, pp. 588, 589]:

1. Additional investments required will likely be in the range of 1 to 2.5 per cent of global Gross Domestic Product (GDP) per year from 2010 to 2050. A considerable amount of investment will be needed in energy supply and efficiency, particularly in greening the transport and buildings sectors.

2. Financial investment, banking and insurance are the major channels of private financing for a green economy. The financial services and investment sectors control trillions of dollars that could potentially be directed towards a green economy. More importantly, long-term public and private institutional investors, banks and insurance companies are increasingly interested in acquiring portfolios that minimise

environmental, social and governance risks, while capitalising on emerging green technologies.

3. The rapid growth and increasingly green orientation of capital markets, the evolution of emerging market instruments such as carbon finance and microfinance, and the green stimulus funds established in response to the economic slowdown of recent years, are opening up space for large-scale financing for a global green economic transformation.

4. The role of the public sector is indispensable in freeing up the flow of private finance towards a green economy. The governments and multilateral financial institutions should use their own resources to leverage financial flows from the private sector and direct them towards green economic opportunities.

5. Public finance is important for triggering a green economic transformation, even if public resources are significantly smaller than those of private markets. Development finance institutions can allocate significant proportions of their new lending towards financing green economy transition projects.

## 7. Conclusions

To summarize all issues we can ask the question what is new in debate about green economy, why we hope to get something unusual? The answer was given by T. Bigg from Boston University: “green economy is a term used by new and surprising sets of actors. Incorporation of ‘green stimulus’ elements in the financial recovery packages in 2008–2009 was not driven by an environmental lobby, but by economic calculations of the potential for job creation and economic resilience. Within many countries, anticipated scarcity in access to fossil fuels and ‘rare earth’ minerals (to pick just two examples) are driving policy and technological efforts to shape alternative futures. Private sector actors are anticipating major shifts in markets and resource availability, and planning for much lower carbon intensity production as a result. In short, the economics of scarcity and uncertainty are stimulating significant efforts to develop alternative, ‘greener’ business models and patterns” [Bigg 2011, pp. 28, 29]. There is a common interest of governments and business to finance transition to green economy. Especially the state policy and actions are important, without them the power of private sector is useless. The state role as a rule-setter and enforcer is crucial for the successful implementation of green economy. The economy-as-usual cannot get us to sustainability or secure economic and social prosperity; these can be achieved only through radical change, starting now.

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## FINANSOWANIE TRANSFORMACJI DO ZIEŁONEJ GOSPODARKI W EUROPIE

**Streszczenie:** Globalny kryzys finansowy sprawił, iż powszechne stało się przekonanie, że powrót do stanu sprzed kryzysu jest niemożliwy, że konieczna jest nowa koncepcja rozwoju dopasowana do zmieniającej się globalnej gospodarki. Debata zbiegła się w czasie z tworzeniem nowej strategii rozwoju Unii Europejskiej *Europa 2020* i miała znaczący wpływ na jej kształt. Centralnym elementem strategii, przenikającym wszystkie inne jej aspekty, stała się koncepcja zrównoważonego rozwoju i idei zielonej gospodarki. Wprowadzenie zielonej gospodarki wymaga stworzenia nowych instrumentów finansowych w sektorze finansów publicznych, mających kluczowe znaczenie w tej sprawie, a także aktywizacji finansów prywatnych w firmach, na rynku finansowym i w bankach.

**Słowa kluczowe:** zrównoważony rozwój, zielona gospodarka, zrównoważone finanse, kryzys globalny.