

2018, WEA On Line Conference

**The 2008 Economic Crisis Ten Years On
in Retrospect, Context and Prospect**

Discussion Forum: from October 15th to November 30th, 2018

The Green Economy: a Technological option against economic crisis?

Edoardo Pizzoli

Abstract

The global economic crisis is long-lasting and seems without prospects. The ‘green economy’ proposes an alternative basket of products with respect to the standard one that is actually available for consumption in the 21st century industrial economies.

Is it the green economy a smart solution for an alternative growth path that brings with it a sustainable economic development?

Institut national de la statistique et des études économiques (STATEC)

13, rue Erasme - L-2013 Luxembourg

Tél.: (+352) 247-84219 74239

edoardo.pizzoli@statec.ec.etat.lu

1. Introduction

The present paper raises several questions related to the possible evolution the economic crisis in current economic and political context. What seems emerging as new in the mainstream attempt to govern the difficulties is the proposal of the so called ‘green economy’ and the linked sustainable development policy strategy. This is evident in actual EU policy strategy by European Commission and documents published by UN agencies.

In the following paragraphs a brief introduction to the argument is provided to address some of the critical issues that should be investigate by economic research in the future.

2. What is a green economy?

‘What and how to produce’ into the economy is a canonical question for economic science and normally the answer is based on basic human needs, consumerism, enterprises supply of commodities to the market and political choices. To find out which possible options are actually available, it is necessary to get inside the black box of the production technologies at the specific historical time (Rosemberg, 1983). Going backwards from final consumption to the origin of the production chains of the economy, several of the producible goods and services can be identified as ‘preferable’ products for their environmental impact throughout its life cycle (ISO, 2018). These products imply, by definition, a reduction of human impact to the nature, at the time of production or consumption, with respect to other products actually produced (UN, 2014). Their productions identify industries and economic activities that have environmental positive effects concerning environmental protection and natural resources management (Eurostat, 2001, 2014).

The ‘green economy’ proposes this basket of ‘green products’ to be produced in alternative with respect to the standard one that is currently offered in industrial economies. This is a prospective of a structural change of the economy that implies a different growth path and, as a result, an alternative economic development scenario at world level.

3. New economic policy prospective for a green conversion

At international level in the last decades, after important climate changes and scientific results, there was a growing consensus on the need to transform the world economy to reduce CO₂ emissions and natural resources degradation.

Examples of international policy actions, grown after several international meetings, are the UNEP Green Economy initiative (UNEP, 2017), the OECD project on green growth (OECD, 2011) and the European Commission commitment to move towards a green economic policy (Eurostat, 2017; EEA, 2018).

As UNEP says in his homepage “*we promote the transition to economies that are low carbon, resource efficient ...an alternative to today's dominant economic model. Over the past decade, the concept of the green economy has emerged as a strategic priority for many governments*” (www.unenvironment.org).

Many and an increasing number of countries, regions and, at local level, urban and rural administrations are implementing plans or single actions to contribute for a green conversion. This seems to be an historical trend at the beginning of the 21st century.

4. A missing history of green technologies

Technologies, as already largely documented, had an historical evolution across the different eras of humanity development with some important jumps and acceleration that allows a, even if arbitrary, division in phases (Buchanan, 2018). They are characterized by the dominant materials and sources of power of the period, and their application to production.

An enormous acceleration of Western technological development has characterized the recent centuries. Specifically, since the eighteenth century producers and scientists have become systematically linked, allowing technology to flourish (Mokir, 2008).

Nowadays technology is intended as the utilization of natural phenomena and regularities for human purposes. In practice this allowed to humanity to develop over time systematic techniques for making and doing things, all of them having some kind of impact on the environment. Despite this necessary consequence, some of the products are preferable compared to others for their reduced impact throughout its life cycle (UN, 2014). These products can be labeled as ‘green’ and they should allow defining ‘green’ or ‘greener technologies’ in a geographical region at a specific historical time.

Unfortunately there is no history of green technologies and it is unknown if they have evolved towards a lower environmental impact throughout human civilizations. What is known is that market, together with geopolitical choices, has been the driver of changes at least since the first industrial revolution in Britain. Some technologies have been preferred in the enterprises’ investments for their capacity to reduce costs and increase labour productivity, no matter to negative externalities to the environment or human health. Relative prices are the regulator and driving of business choices and so cheaper technologies were preferred if allowed companies to be more competitive on the market and to produce higher profits.

Currently, science proposes some solutions that could be greener than those actually used if relative prices will change or policy makers decide to intervene in the market.

5. Changing technologies allows sustainability?

Based on the previous perspective and the possibilities available to present societies, different scenarios can be foreseen and many questions arise. The first question is: can be possible to find a solution to actual global crisis going into the black box of

production possibilities of the economies and changing the production set? Is green economy a smart solution for an alternative growth path that allows also a sustainable economic development?

A field of economic research, starting from the academic teaching and publications of Schumpeter, identified in technology the critical dimension of economic change (Schumpeter, 1911). Technological innovation can drive the economy 'possibly to growth', anyhow to business cycles. The long run sustainability of the economy and eventually of its development depends from many factors and there is no guaranty that a conversion toward greener technologies will allow such a result. Furthermore, the issue of sustainability can be seen from different point of view.

A shift in the production bundle of the economy could be a technology solution to the 'environmental sustainability' problem but maybe not a solution to the 'economic sustainability' in capitalistic based economies. Changing productions and technologies involved can create new occasions of business and revitalize a depressed economy in the short run. New and more efficient products and productions substitute previous ones, stimulating further research and development and industrial applications. A substitution effect can revitalize the economy through renovated final consumption and investment of products. Supply will create its demand. Capitals will move to the new promising sectors of the economy keeping high the profits and investments.

The drawback to this scenario is the crisis in industries and geographical areas where the non-green productions are based. Unemployment is expected with the introduction of new, normally labor saving, technologies. A reorganization of the production among old and new companies, factories and geographical areas is involved stimulating capitals, materials and human mobility.

What will be the net effect of this process of development? The overall process of technological innovation and reorganization of the economy will be sufficient to find out a durable solution to recurrent difficulties of capital valorization? Financial capital and the international financial system can find a stability if policy makers and key economic players persist in this direction (Duménil et al, 2006)? This is an open question that requires a further effort of economic investigation to give an answer to the sustainability issue.

6. A reaserch agenda for 21st century: issues and proposals

Several questions have been identified in this paper related to the proposed 'green' possibility as a way-out to global economy persistent crises. Furthermore, the sustainability of green economy, under different points of view, is uncertain. The issues at base of the questions are very demanding in term of research while some policy proposals would be desirable.

A project of investigation has been launch in central Europe to study the implications of such a possible change in the economic development model of European Union and, globally, of UN members' countries. Which policies at supranational level should be sustained at integration to national level? Researchers, interested in these issues and

wishing to find out answers to the deriving questions, are invited to join this research network writing to the author, proposing comments and any suggestion.

References

- Duménil, G. and Lévy, D. (2006) *La Finance Capitaliste: Rapports de Production et Rapports de Classe*, in *La Finance Capitaliste*, Presses Universitaires de France, Paris, France. www.cepremap.fr/membres/dlevy/dle2006c.htm
- Buchanan, R.A. (2018) *History of technology*, Encyclopædia Britannica, Chicago, U.S. www.britannica.com/technology/history-of-technology
- EEA (2018) *National Policies and Measures on Climate Change Mitigation in Europe in 2017*, Copenhagen, Denmark. www.eea.europa.eu
- Eurostat (2001) *Classification of Environmental Protection Activities 2000 (CEPA 2000)*, Luxembourg. ec.europa.eu/eurostat/ramon/nomenclatures
- Eurostat (2014) *Classification of Resource Management Activities (CReMA)*, in Regulation (EU) No 538/2014, Luxembourg. eur-lex.europa.eu
- Eurostat (2017) *Sustainable Development in the European Union*, Monitoring Report on the Progress Towards the SDGS in an EU Context, Luxembourg. ec.europa.eu/eurostat/documents
- ISO (2018) *Ecolabelling ISO 14024:2018*, Environmental labels and declarations -- Type I environmental labelling -- Principles and procedures, 2nd edition, Geneva, Switzerland. www.iso.org/standard/72458.html
- Mokyr, J. (2008) *Technology*, in Palgrave Macmillan (eds) *The New Palgrave Dictionary of Economics*, Palgrave Macmillan, London, U.K. www.palgrave.com/us/campaigns/dictionary-of-economics
- OECD (2011) *Towards Green Growth: A Summary for Policy Makers*, Paris, France. www.oecd.org/greengrowth
- Rosenberg, N. (1983) *Inside the Black Box. Technology and Economics*, Cambridge University Press, U.K.
- Schumpeter, J. (1911) *Theorie der wirtschaftlichen Entwicklung*, Verlag Duncker & Humblot, Leipzig, Germany.
- UN (2014) *System of Environmental-Economic Accounting 2012 — Central Framework*, New York, U.S. seea.un.org/sites/seea.un.org/files/seea_cf_final_en.pdf
- UNEP (2017) *Green Industrial Policy: Concept, Policies, Country Experiences*, UN Environment Report, Nairobi, Kenya. www.unenvironment.org/explore-topics/green-economy