International Economics 134 (2013) 29–55

Contents lists available at SciVerse ScienceDirect

International Economics

journal homepage: www.elsevier.com/locate/inteco

Green growth: From intention to implementation ☆

Pierre-André Jouvet [a,b,*], Christian de Perthuis [b,c]

[a] Paris Ouest Nanterre University, EconomiX, France
[b] Climate Economics Chair, France
[c] Paris-Dauphine University, France

ARTICLE INFO

Available online 26 June 2013

JEL classification:
O44
P48
Q56

Keywords:
Green growth
Environmental economics
Political economics

ABSTRACT

The economic crises seems blinding the governments and major economic actors toward environmental troubles. Nevertheless, the impacts of population growth and economic expansion have now the potential to disrupt important regulatory functions of global ecological systems. Green growth involves transforming the production and consumption processes in order to maintain or restore these regulatory functions of the planet's natural capital. It requires that environmental facto rs be treated as an essential factor of production and not merely an externality. In practice, this transition depends on advances being made in four areas: widening the concept of efficiency; energy transitions; inclusion of the value of natural capital in economic life; and a revision of the scale of risks within the financial system whose innovations for allocating resources at low cost to green growth would be greatly facilitated by effective pricing of environmental pollution.

☆ The authors would like to thank the reviewers of this paper for their relevant comments and suggestions as well as the editor. The authors would also thank Johanna Etner (Paris Ouest University), Jean-Marie Chevalier (Paris-Dauphine University), Dominique Bureau (Secretary of Ecology, Sustainable Development and Energy) and all the Climate Economics Chair. Opinions expressed here remain those of the authors.

* Corresponding author at: Paris Ouest Nanterre University, EconomiX, France.
E-mail addresses: pierre-andre.jouvet@chaireeconomieduclimat.org, pjouvet@u-paris10.fr (P.-A. Jouvet), christian.deperthuis@chaireeconomieduclimat.org (C. de Perthuis).

2110-7017/$ - see front matter © 2013 CEPII (*Centre d'Etudes Prospectives et d'Informations Internationales*), a center for research and expertise on the world economy. Published by Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.inteco.2013.05.003

1. Introduction

Symbolically, the price of oil peaked in July 2008 and in September 2008 the bankruptcy of the investment bank Lehman Brothers triggered a shock wave in the global economy. The recession of 2009 – the largest since the Great Depression of 1929 – sanctioned three decades of unbridled expansion of the financial sector. The world has discovered that the largest economy was built from the debt of millions of American households and forgets the price of oil peack. The mobilization of States and their central banks have taken huge packages of private debt, preventing the collapse of the financial system. President Obama can claim to have avoided the worst during the first year of his term. But the balance of the recovery is disappointing as they repay their debt, U.S. households are spending down, which anemia macroeconomic demand. The euro crisis amplified the difficulties in Europe. On the old continent, the severity of the adjustment imposed to Mediterranean countries and Ireland has plunged back into recession and the German locomotive remains lagging behind in the global economy. As a result, there is a reduced capacity for additional government intervention.

In this context, nobody is ready to pay for the nature as shown by Rotillon (2008) and the priority, shared by all our policies and all major economic actors, is the return to growth. This point outweighs everything else, and in particular the nature of the targeted growth. The first presidential campaign of Barack Obama had focused in autumn 2008 on two social projects: the extension of health protection (Patient Protection and Affordable Care Act: "Obamacare") and the regulation of greenhouse gas emissions. The 2012 campaign focused only on one point: who, between Obama and Romney, would be most able to boost the economy and create jobs? French presidential campaign in spring 2012 had the same shrinking concerns. In the debates between Hollande and Sarkozy, ecology was almost totally out. International life is in tune with the tightening of the field of vision. In 2009, the Heads of State must be in a climate conference like Copenhagen and that seemed to still be a major challenge for policymakers. In 2012, the most important conferences are those where one seeks to save the euro, to defend the quality of sovereign debts, repair the economic and financial machine to find usual growth. Climate change, ecology, the color of the growth, will be seen later.

If the debate is not new to the environmental limits of our planet, it should have its place in a situation where the effects of global warming become visible, resources are being depleted and the system seems to reach its limits. Indeed, since the Sumerians, it has been known that growth driven by the accumulation of environmentally predatory capital eventually destroys itself: thanks to their knowledge of irrigation, the Sumerians originated writing, law and cities. But because it failed to master drainage, the vital complement of irrigation in arid areas, their civilization vanished as result of the soil becoming unproductive through the accumulation of salt. The people of Easter Island suffered a similar fate: after felling the last tree, they abandoned their island with its huge granite statues set in a lunar landscape. In a mineral environment, only stone can survive. Is our growth, like that of the Sumerians, in the process of faltering due to insufficient natural resources or the planet's limited capacity to absorb pollutants?

Green growth has been presented as a way of enabling growth to escape such limit situations, an alternative to the negative growth (or stagnation) to which the continued use of historical models would lead us (see Hallegatte et al. (2011) and Hallegatte and Fay (2012)). This type of representation has two main challenges.

The first is that it is extremely perilous to lay down the physical limits to growth. When Malthus's celebrated Essay on the Principle of Population (1798) appeared, Britain had 20 million inhabitants and the entire world a billion. Malthus believed that population growth then would quickly come up against the scarcity of farmland. The United Kingdom now has 61 million inhabitants and the planet seven billion; on the whole, humans are much better nourished now than in Malthus's time. Over the past 200 years, humanity has made technological progress unimaginable at the dawn of the 19th century. Have we become any more far-sighted, any more able to foresee the technological breakthrough of the 21st century?

The second challenge is that the conceptions of green growth describe an outcome without providing any indication as to the conditions required to attain it. As a result, it becomes possible to imagine as many green growths as non-green growth paths and even sometimes to disguise them,