UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

DISCUSSION PAPERS

CAN GREEN GROWTH REALLY WORK AND WHAT ARE THE TRUE (SOCIO-) ECONOMICS OF CLIMATE CHANGE?

No. 222
July 2015

UNITED NATIONS

CAN GREEN GROWTH REALLY WORK AND WHAT ARE THE TRUE (SOCIO-) ECONOMICS OF CLIMATE CHANGE?

Ulrich Hoffmann

No. 222
July 2015

Acknowledgements: The author would like to extend particular thanks to Frank Grothaus, Jörg Mayer, Chandran Nair, Gunnar Rundgren and two anonymous reviewers for their helpful comments for improving the manuscript. An abridged version of this paper has been prepared for a forthcoming book of the United Nations University on a critical review of the green growth concept. A more elaborate version has just appeared as e-paper, issued by the Heinrich Böll Foundation in Germany.

UNCTAD/OSG/DP/2015/4

Comments on this paper are invited and may be addressed to the author, c/o the Publications Assistant, Macroeconomic and Development Policies Branch, Division on Globalization and Development Strategies, United Nations Conference on Trade and Development, Palais des Nations, CH-1211 Geneva 10, Switzerland; e-mail: gdsinfo@unctad.org.

UNCTAD Discussion Papers are available on the UNCTAD website at http://unctad.org.

JEL classification: Q50, Q54, Q56

Contents

List of figures

List of tables

CAN GREEN GROWTH REALLY WORK AND WHAT ARE THE TRUE (SOCIO-) ECONOMICS OF CLIMATE CHANGE?

Ulrich Hoffmann*

Abstract

Many economists and policymakers advocate a fundamental shift towards "green growth" as the new, qualitatively-different growth paradigm, largely based on enhanced material/resource/energy efficiency, structural changes towards a service-dominated economy and a switch in the energy mix favouring renewable forms of energy. "Green growth" may work well in creating new growth impulses with reduced environmental load and facilitating related technological and structural change. But can it also mitigate climate change at the required scale (i.e. significant, absolute and permanent decline of greenhouse gas (GHG) emissions at global level) and pace (i.e. in no more than two to three decades)? This paper argues that growth, technological, population-expansion and governance constraints as well as some key systemic issues cast a very long shadow on the "green growth" hopes. One should not deceive oneself into believing that such an evolutionary (and often reductionist) approach will be sufficient to cope with the complexities of climate change. It may rather give much false hope and excuses to do nothing really fundamental that should bring about a U-turn of global GHG emissions. The proponents of a resource efficiency revolution, re-structuring of economies and a drastic change in the energy mix need to scrutinize the historical evidence, in particular the arithmetic of economic and population growth. Furthermore, they need to realize that the required transformation goes far beyond innovation and structural changes to include better distribution of income and wealth, limitation of market power of economic agents that promote biased approaches to GHG reduction, and a culture of sufficiency. Climate change calls into question the global equality of opportunity for prosperity (i.e. ecological justice and development space) and is thus a huge developmental challenge for all countries, but particularly for the global South and a question of life and death for some developing countries.

---

* Ulrich Hoffmann is Chief Economist, Research Institute on Organic Agriculture (FiBL), Switzerland. Until the end of 2014 he was Senior Trade Policy Advisor to the Director of the International Trade Division and Editor-in-Chief of the UNCTAD Trade and Environment Review in the UNCTAD secretariat. The views expressed in this paper are those of the author and do not necessarily represent the position of FiBL.

I. INTRODUCTION

In the run-up to the Rio+20 Conference in June 2012 and the United Nations Climate Summit on 23 September 2014 virtually everyone (from multilateral agencies to politicians, to businessmen, and to NGOs) advocated a fundamental shift towards "green and inclusive growth"[1] as the new, qualitatively-different growth paradigm,[2] which would considerably improve the energy efficiency of the economy and lead to drastic changes in its energy and material mix (replacing exhaustible by renewable materials), with corresponding structural changes.[3] "Green growth" advocates argue that such paradigm change would unleash new wealth creation and employment opportunities; provided that there was sufficient investment and companies had better information and supportive incentives. In other words, the impression occurs that the "green growth" concept is flawless, just the enabling conditions for it are lacking.[4] "Green growth", which should be rather seen as a process of structural change, may indeed create some new growth impulses with reduced environmental load, in particular at the microeconomic level. But can it also mitigate climate change at the required scale and pace (i.e. a significant, absolute and permanent decline of green-house-gas (GHG) emissions in a historically very short period of time) at macroeconomic and global levels?

The reality check below casts a long shadow on the "green growth" hopes. Our analysis argues that the arithmetic of economic and population growth, energy/resource/materiel efficiency limits related to the rebound effect (the phenomenon that efficiency increases tend to boost, rather than reduce overall energy/resource/material consumption) and horizontal shifting of problems, governance and market constraints, as well as systemic limits call into question the hopes of de-coupling GHG from economic growth. Rather, one should not deceive oneself into believing that such an evolutionary (and often reductionist) approach will be sufficient to cope with the socio-economic complexities related to climate change (and some other global environmental problems, such as loss of biodiversity). "Green growth" may give much false hope and excuses to do nothing really fundamental that should bring about a U-turn of global GHG emissions. The approach is largely reduced to a technocratic and technology-fetishized one, because changing technologies is much easier than altering societies and their socio-economic drivers.

"Green growth" proponents need to scrutinize the historical macro- (not micro-) economic evidence, in particular the arithmetic of economic and population growth, the colossal reductions required in the GHG-emission intensity of economic growth as well as the significant influence of the rebound effect. Furthermore, they need to realize that the required transformation goes far beyond innovation and structural changes to include better distribution of income and wealth, limitation of market power of economic agents that promote biased approaches to GHG reduction, and a culture of sufficiency.[5] Against this very background, an attempt is made below to elaborate on the true economics of climate change. Global warming also calls into question the global equality of opportunity for prosperity (i.e. ecological justice