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Environmental Innovation and Societal Transitions

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



Macroeconomics, financial crisis and the environment: Strategies for a sustainability transition

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ARTICLE INFO

Article history:

Received 7 December 2012

Received in revised form 8 January 2013

Accepted 8 January 2013

Available online 14 February 2013

Keywords:

Financial–monetary system

GDP information

Macroeconomics

Positive and negative feedbacks

Productivity trap

ABSTRACT

We raise fundamental questions about macroeconomics relevant to escaping the financial-economic crisis and shifting to a sustainable economy. First, the feasibility of decoupling environmental pressure from aggregate income is considered. Decoupling as a single environmental strategy is found to be very risky. Next, three main arguments for economic growth are examined: growth as progress, growth to avoid economic instability, and growth to offset unemployment due to labor productivity improvements. For each, we offer orthodox, heterodox and new responses. Attention is paid to progress indicators, feedback mechanisms affecting business cycles, and strategies to limit unemployment without the need for growth. Besides offering an economy-wide angle, we discuss the role of housing and mortgage markets in economic cyclicity. Finally, interactions between real economic and financial–monetary spheres are studied. This includes money creation, capital allocation and trade-offs between efficiency and operating costs of financial systems. Throughout, environmental and transition implications are outlined.

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1. Introduction

Reading the growing literature on sustainability transitions, one can notice the absence of any information or insights on macroeconomics. This is surprising as well as unfortunate: surprising, because the macro or landscape level is supposed to play a major role according to the influential multi-level perspective on transitions (Geels, 2011); unfortunate, as many of the dynamic processes that make up a transition are macroeconomic in nature and have been studied extensively in macroeconomics. Transferring knowledge from this field to transition studies is likely to increase our understanding of how to respond to barriers and opportunities for transitions. A lack of understanding of macroeconomic complexities easily results in the design of policies that are ineffective.

In particular, the study of transitions has paid little attention to conflicts between core environmental and macroeconomic objectives, even though these can slow down or obstruct sustainability transitions. As such conflicts have occupied a central place in ecological economics (Daly and Townsend, 1993; Harris and Goodwin, 2003; Victor, 2008; Harris, 2009; Jackson, 2009; Hueting, 2010; Kallis, 2011; van den Bergh, 2011), insights obtained here can benefit the study of sustainability transitions.

Without denying the importance of micro level analysis of small-scale experiments and niche innovations, it has to be acknowledged that the macroeconomic landscape has a tremendous impact on the behavior of consumers, producers and investors. This landscape may have to change to enable a quick transition, which is needed to respond to urgent environmental problems, especially at a global scale. But things are more complex, as the landscape is not independent of the underlying levels. In fact, we have both top-down and bottom-up causation (van den Bergh and Gowdy, 2003), creating a system of many feedbacks which is impossible to be completely grasped intuitively. This means that the 'microfoundations project' in macroeconomics (Weintraub, 1977; Janssen, 1993) is too simple, as it only focuses on bottom-up causation. Without understanding well the complete two-way interactions, unrealistic expectations about the feasibility, direction and speed of a transition may result.

One might think that macroeconomics does not offer clear insights, as it is a collection of different schools, which represent often inconsistent, even opposed, views on how the macroeconomy functions. However, the internal heterogeneity of macroeconomics makes sense – it is a clear response to the economic complexity and lack of experimentation with which macroeconomics struggles. This is made evident again in the fierce debates within macroeconomics on the causes of, and the solutions to, the current financial-economic crisis. But this disagreement does not mean that no useful insights are available. Diversity of insights is worth more than no insights, and from current and past debates between representatives of different schools one can learn a lot. Not considering macroeconomics seriously runs the risk of overlooking existing ideas that may be essential to transitions thinking, or at best reinventing the wheel. Of course, a critical eye is needed to select and interpret theories and insights from macroeconomics for the purpose of enriching transition thinking. In our view, combining mainstream views with openness to heterodox criticisms and perspectives has to be an integral part of the learning process.

Few studies have addressed this interface of sustainability, transitions and macroeconomics. Although the tension between economic growth and environmental quality was recognized decades ago and an "environmental macroeconomics" was called for (Daly, 1991), the synthesis of macroeconomics and sustainability thinking still stands as a major challenge (Harris and Goodwin, 2003).

In this article we touch upon several fundamental macroeconomic issues that are relevant to the aims of escaping from the current crisis and making a transition to a sustainable economy. Since most mainstream macroeconomists believe that environmental problems have to be addressed by decoupling environmental pressures from economic growth ('green growth'), we first look in Section 2 at the opportunities this strategy offers. Next, Section 3 enters into the wider growth debate by studying arguments for continued economic growth and strategies that may help to reduce the dependence of economic stability on growth. This involves considering the connections between labor productivity, economic stability, GDP, welfare indicators and sustainability transitions. Besides economy-wide phenomena, we study sectoral issues that strongly influence economic dynamics and, thus environmental impacts, such as the connection between housing and mortgage markets. In Section 4, we proceed by investigating selected mechanisms of the financial system. This subsystem

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