

**Title:** LOW GROW for Germany: modelling the macroeconomics of degrowth

**Keywords:** macroeconomics; degrowth; scenarios; welfare; ecological economics

**Narrative step:** strategies for transformation

**Contribution to special session:** macroeconomics of degrowth

## **Introduction**

The promise of rising prosperity fuelled by continued economic growth still serves as the dominating paradigm, not only in the so-called highly industrialized countries (HIC) but at a global level. The vision has become a ubiquitous concept in politics, business, the media and in economics, where economic growth is styled as the main economic and political troubleshooter for almost any problem. In recent years increased criticism of the pursuit of an ever expanding economy as the main economic and political goal suggests that this model must be reconsidered and that new concepts for development are required. Yet society clings to the myth of the next economic boom lurking just around the corner as an easy way out of the current economic crisis. This is highly problematic. A closer look at the critique reveals the severity of the situation:

(1) Economic growth is ecologically harmful: Since the beginning of the industrial revolution, global GDP has been growing tremendously, more than 20-fold in the last 100 years alone. At the same time, both the inputs of material and energy into the economic system and the corresponding outflows of waste and emissions have also grown (Krausmann et al., 2009), augmenting the environmental pressures, leading to phenomena like the massive extinction of species and climate change. To avoid the devastating consequences of unmitigated climate change the Intergovernmental Panel On Climate Change (IPCC) calls for an immediate and radical reduction in global emissions (Pachauri and Reisinger, 2007). Following Tim JACKSON's arguments (Jackson, 2009), the required technical improvements to decouple GDP and greenhouse gas emissions (=Green New Deal) seem quite unrealistic. Of course there is always the possibility of surprising technical improvements, leading to the necessary decoupling, but, given the actual patterns, scepticism is recommended. The implication is bitter at a first glance: if ecological sustainability is desired, GDP should not increase. This puts the Green New Deal – the core strategy of RIO +20 – into a new perspective. Green Growth denies the limits of a decoupling strategy and pretends additional consumption can be sustainable. Another view seems more plausible: sustainable consumption means less consumption. For a modern society this seems odd since its underlying economic perspective assumes that more goods stand for a higher utility and consequently raise prosperity.

Here a new perspective is helpful, leading to the second argument: (2) What if a growing GDP – after a certain level – does not increase prosperity? Many authors (e.g.: Binswanger, 2006; Daly and Cobb, 1989; Layard, 2005; Victor, 2008; Abdallah et al., 2009; Diefenbacher and Zieschank, 2010) have shown that for rich countries the positive correlation between GDP and happiness fades away. Not only from the individual perspective is GDP not the right indicator but also from a macro perspective. DIEFENBACHER and ZIESCHANK developed the National Welfare Index (NWI), a successor of the Index of Sustainable Economic Welfare (ISEW) and the Genuine Progress Indicator (GPI), which take into account the fact that GDP omits central aspects of prosperity, such as income distribution or the condition of the environment. Taking these factors into account, a decoupling of GDP and prosperity can be shown, i.e., an increase in GDP is not automatically connected to an increase in prosperity. This demonstrates the absurdity of GDP as the main indicator for societal development and underlines the need for new indicators.

(3) The last point of critique is quiet obvious but often underestimated: crucial issues for society such as social security, public debt or pensions are based on the assumption of ever increasing GDP levels and fall apart in the absence of growth. Looking at the growth rates of the German economy (as well as almost any other HIC) (Diefenbacher and Zieschank, 2010; Statistisches Bundesamt, 2013) a non-growing GDP may very well become a probable case. Indeed, with present growth

rates near zero or even less, we are already living in a degrowth era. Therefore new concepts are absolutely essential, otherwise social cohesion is in danger.

### **Macroeconomic alternatives: first steps**

Looking at the role of economics regarding the ongoing financial crisis, it becomes clear that the prevailing world view is part of the problem: the belief that free markets are efficient and lead to the best results once they are unleashed have provided the intellectual basis for politics at least since the late 70s, early 80s. W. STREECK, Managing Director of the Max Planck Institute for the Study of Societies (MPIfG), points out that the efficiency of markets is part of most politicians and citizens world-view, preparing the ground for the crisis. An earlier questioning of mainstream economic theories, especially when they serve as guiding principles for societies, might have prevented the present crisis (Streeck, 2009). Concerning growth, the situation is quite similar. Here, it is not the belief in efficient markets but the faith in unlimited economic growth that is “*both possible and desirable*” (Kerschner, 2010: p. 1) and is persistent in most people's minds. (Welzer, 2011). Therefore adjusting the analytical framework of economics with regard to the interaction of the economic and the ecological systems seems mandatory to overcome the current, growth-oriented society and open the exploration of degrowth scenarios. A promising approach can be found in ecological economics (Commons/Stagl, 2005) with H. DALY's metaphor of a “*full world*” (Daly, 1999), illustrating that the economy can only expand until it reaches prevailing natural limits. Consequently the focus is not on monetary flows but on (stocks and) flows of matter and energy from one system to the other. By using the analytical framework of ecological economics the focus on (money based) GDP-growth is abandoned. Instead the perspective of a development within the natural limits of the ecosystem is taken. The challenge lies in finding answers to the question how society must develop to function on a sustainable level and which indicators can measure such a state. Concerning GDP, it can only serve as a first approach, as SCHNEIDER ET AL. put it: “*what happens to GDP is of secondary importance; the goal is the pursuit of well-being, ecological sustainability and social equity*” (Schneider et al., 2010: p. 512). For the macroeconomics of degrowth this means that the theoretical context of ecological economics needs to be introduced into any model applied. From a macroeconomic point of view there is an urgent need to develop models implying these indicators (SERI, 2010) and mapping possible perspectives of a steady-state and/or degrowth development (e.g.: Kerschner, 2010; O'Neill, 2011). One approach is presented by the Canadian economist P. VICTOR (2012) who, explores scenarios of a transition to a degrowth society. In his LOW GROW model he shows that under certain conditions like the radical shortening of the working week and a shift in investment from private to public goods a stable development with a non growing or even declining GDP is possible. This present paper applies VICTOR's Model to the German economy. Giving consideration to the theoretical background of ecological economics, further indicators of absolute natural limits are introduced into the model. The model explores Victor's scenarios within the German context and adds further settings, following amongst others the current German debate (Paech, 2012; Schneidewind/Zahrnt, 2013).

### **References**

- Abdallah, Saamah et al., 2009. The unhappy planet index 2.0: why good lives don't have to cost the Earth. London: New Economics Foundation.
- Binswanger, M., 2006. Die Tretmühlen des Glücks: Wir haben immer mehr und werden nicht glücklicher. Was können wir tun? Freiburg: Herder Verlag.
- Common, M.S., Stagl, S., 2005. Ecological economics. Cambridge: Cambridge Univ. Press.
- Daly, H.E., 1999. Uneconomic growth in theory and fact. The First Annual Feasta Lecture, Trinity College, Dublin, 26th April.
- Daly, H E., Cobb, J.B., 1989. For the common good. Boston: Beacon Press.
- Diefenbacher, H., Zieschank, R., 2010. Wohlfahrtsmessung in Deutschland. Ein Vorschlag für einen

nationalen Wohlfahrtsindex. Dessau-Roßlau: Umweltbundesamt.

Jackson, T., 2009. Prosperity Without Growth: Economics for a Finite Planet, 1st ed. Earthscan Publications Ltd., London: Sterling.

Kerschner, C., 2010. Economic de-growth vs. steady-state economy. *Journal of Cleaner Production* 18, 544–551.

Krausmann, F., Gingrich, S., Eisenmenger, N., Erb, K.-H., Haberl, H., Fischer-Kowalski, M., 2009. Growth in global materials use, GDP and population during the 20th century. *Ecological Economics* 68, 2696–2705.

Layard, R., 2005. Die glückliche Gesellschaft. Kurswechsel für Politik und Wirtschaft. Frankfurt am Main: Campus Verlag.

O'Neill, D.W., 2012. Measuring progress in the degrowth transition to a steady state economy. *Ecological Economics* 84, 221-231.

Pachauri, R.K., Reisinger, A., (Hrsg.), 2007. Climate change 2007: Synthesis Report. Geneva: IPCC.

Paech, N., 2012. Befreiung vom Überfluss: Auf dem Weg in die Postwachstumsökonomie. München: Oekom.

Schneider, F., Kallis, G., Martinez-Alier, J., 2010. Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. Introduction to this special issue. *Journal of Cleaner Production* 18, 511–518.

Schneidewind, U., Zahrnt A., 2013. Damit gutes Leben einfacher wird. München: Oekom.

Statistisches Bundesamt, 2013. Volkswirtschaftliche Gesamtrechnungen, Fachserie 18, Reihe 1.4. Wiesbaden: Statistisches Bundesamt.

SERI und Cambridge Econometrics. 2010. A Scoping Study on the Macroeconomic View of Sustainability. Final Report for the European Commission, DG Environment. Cambridge: Cambridge Econometrics.

Streeck, W., 2009. Man weiß es nicht genau: Vom Nutzen der Sozialwissenschaften für die Politik. MPIfG Working Paper.

Victor, P.A., 2012. Growth, degrowth and climate change: A scenario analysis. *Ecological Economics* 84, 206-212.

Welzer, H., 2011. Wie das Wachstum in die Welt und in die Seelen kam - Mentale Infrastrukturen. Berlin: Heinrich-Böll-Stiftung.