Degrowth and human prosperity

Potentials for a socially equitable and ecologically sustainable society

A steady state economy needs indicators that capture ecological sustainability, social inclusion and quality of life based on both objective and subjective data. Interrelations between indicators and country comparisons show the potential of increasing prosperity without raising material consumption.

By Martin Fritz and Max Koch

In the absence of evidence for absolute decoupling of gross domestic product (GDP) growth, material resource use and carbon emissions it is remarkable that most economic policy approaches do not question the priority placed on GDP growth (Jackson 2009). Assuming that the basic function of economic development is the provision of conditions for human beings to prosper in their personal and social lives, our research attempts to identify potentials for a type of prosperity where economic activity remains within ecological carrying capacities.

Our paper contributes to this undertaking in a two-fold way: First, by considering the multidimensional character of human prosperity, we discuss this concept theoretically and operationalise it in terms of ecological sustainability, social inclusion and the quality of life; second, we demonstrate the different degrees of success to which present countries are promoting prosperity in statistical analyses and identify groups of countries according to their current prosperity performance.

Prosperity in a steady-state-economy

Today there is growing evidence that Western welfare and prosperity standards are not generalizable to the rest of the planet if environmental concerns such as resource depletion or climate change are considered (Jackson 2009; Koch 2012; Koch/Fritz 2014). Herman Daly's steady-state economy (SSE) takes this into account these problems. Instead of GDP as a value index of the goods and services produced in an economy in monetary terms, the point of departure of a SSE, a primarily physical concept, is that of the lowest feasible rates of matter and energy throughput in production and consumption. Hence, in a SSE the scale of the economy does not erode the environmental carrying capacity over time.

While two basic physical magnitudes, population and artifacts (stock of physical wealth), are to be held relatively constant, mainly qualitative parameters such as "culture, genetic inheritance, knowledge, goodness, ethical codes ... the embodied technology, the design, and the product mix of the aggregate total stock of artifacts" (Daly 1977: 6–7) are free and welcome to evolve. In this context, Daly also distinguishes between growth and development, whereby the former refers to a quantitative increase of GDP, and the latter to qualitative change.

This general distinction between quantity and quality is crucial for the concept of human prosperity and many other related fields such as happiness research, sociology of consumption, psychology of well-being and more general concepts of the standard of living (see Koch 2013 for a critical review of these contributions). Supporting the argument for a SSE these studies take the same lines as degrowth economists such as Victor (2008), who has made the greatest effort to date in simulating how an advanced economy and society could cope without economic growth, Martínez-Alier (Martínez-Alier et al. 2010), Kallis (2011) and Sekulova (Sekulova et al. 2013). Our research on 34 countries investigates the links between these different approaches by analysing objective as well subjective aspects of human prosperity. It also aims at broadening the concept of a SSE beyond economic and ecological indicators as we also regard social and personal dimensions of prosperity.

Conceptualising human prosperity

Principally, human prosperity has a social and a personal aspect. We account for this distinction by measuring and analysing the social aspect in terms of the dimension social inclusion and the personal or subjective aspect of prosperity in terms of the dimension quality of life. We operationalise social inclusion as social equity, cohesion and civic participation (Table 1). In general, more equally distributed incomes and lower crime rates indicate a more equitable and cohesive society. Additionally, civic participation accounts for the citizens' chances to shape and organise their common social life. By including the voter turnout of the last national election and an OECD index that estimates the impact of the general public on state regulations and government action we cover two aspects of participation that stand for a functioning democracy in which civic engagement is effective and appreciated.

When assessing the quality of life many scholars distinguish between objective and subjective factors. Yet both are interrelated. Objective living conditions are constantly regarded as in need of improvement, since individual satisfaction with these conditions is relative and often the result of psychological ad-

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aptation processes. However, increases in material living standards can be accompanied by growing subjective dissatisfaction. We assess the objective quality of life by comparing life expectancy between countries. Many improvements of objective life conditions such as the supply with clean water and the access to health provision result in a higher life expectancy. We complement this objective aspect of life quality with two subjective indicators; first, how people subjectively assess their own health and, second, the degree to which they are satisfied with their life in general. Both items are well established questions in many social surveys. Additionally, we assess two other dimensions, which can be seen as structural pre-conditions for the latter ones: economic development and ecological sustainability. While the first refers to the degree of technology, infrastructure and material wealth a country has achieved, the second addresses the preservation of the natural basis for human activities and life itself.

Though all four dimensions are necessary for the promotion of prosperity, the relationship between them is far from being causally determined. While related research approaches include efforts to measure social progress or happiness by combining different indicators and dimensions in order to build an index that provides information about the levels of prosperity for each indicator and as a total score for each country (Abdallah et al. 2012, Porter et al. 2013), we emphasise the various feedbacks and complex interplays between dimensions and indicators of human prosperity. A lack of social inclusion, for example, often produces ecological damages due to the extra costs caused by conflict, poverty or social struggles for solidarity. In addition, a decent material living standard is often only achieved at the cost of exploiting scarce resources, polluting air and water and reducing biodiversity.

Country performances and human prosperity

In this first step, a set of cluster analyses were run in order to group 34 countries for which data were available according to similarities within their prosperity patterns. The results indicate three main groups of countries that differ significantly in their degrees of prosperity on the four dimensions (Table 2).

The first group of "highly advanced Western and Northern countries" assembles the richest societies in terms of GDP per capita. At the same time, these countries are characterised by the highest values of general life satisfaction and subjective health and the lowest degrees of income inequality and unemployment. While economic development is complemented by decent levels of social equity, this group accounts for the highest carbon dioxide emissions and ecological footprints among all countries analysed. In other words, the very rich countries such as the USA, Germany, Sweden or Belgium are united by the coincidence of a high level of economic development, social standards and perceived life satisfaction. Yet this comes at the price of an extremely unsustainable ecological performance. The second group marks the opposite end of the spectrum. It performs relatively well in terms of ecological sustainability but much worse in all other respects. Economic development continues to be at the comparatively lowest level despite the highest growth rates in the emerging markets of Brazil, Russia or Mexico. However, this growth is not accompanied by full employment; instead this group of countries suffers from the comparatively highest unemployment rates. Social inclusion and quality of life indicators are far below the first group of countries. For example, life expectancy is six years shorter and homicide rates are six times higher. While these countries fail to achieve socio-economic minimum standards that can be regarded as absolutely necessary for prosperity, CO_2 emissions and ecological footprints are the lowest among the countries analysed.

While the first two groups indicate the difficulties in combining decent socio-economic standards with ecological sustainability, the third group provides some evidence that production and consumption practices, which spare the environment to a certain extent, can be reconciled with comparatively high material living standards and principles of social equity. This group brings together Mediterranean countries such as France, Italy, Greece and Spain, East European countries such as the

Dimensions	Concepts	Indicators	Data source (Year for which data was compiled)
Social inclusion	social equity: distribution of incomes	Gini Index	The World Bank (2010)
	social cohesion: crime	Homicide rates	OECD (2008–11)
	civic participation: actual participation	Voter turnout	OECD (2008–12)
	potential of the general public for influencing political decisions	Index: Consultation on rule-making	OECD (2008)
Quality of life	objective living conditions	Life expectancy	OECD (2009–12)
	subjective satisfaction	Subjective health	OECD (2006–12)
		Life satisfaction	OECD (2006–12)
Ecological sustainability	climate change	CO_2 emissions	The World Bank (2010)
	human appropriation of ecosystems	Ecological footprint	WWF (2008)
Economic development	level of material living standard	GDP per Capita, ppp	The World Bank (2010)
	dynamic of economy	GDP growth	The World Bank (2005–10)
	labour market inclusion	Unemployment	The World Bank (2010)

Table 1: Dimensions of human prosperity and how they are measured

Czech Republic and Slovenia, East Asian countries such as Japan and South Korea as well as New Zealand. The rather diverse mix of countries, which we call "Advanced Southern and Eastern countries", is united by medium-level degrees of economic development. Yet the ecological stress caused by this development is significantly lower than in the economically leading countries and only slightly higher than in the second group of emerging markets. The consideration of social inclusion and quality of life indicators shows that income inequality is only marginally higher than in the first cluster, while homicide rates are somewhat lower. Also life expectancy is slightly higher in the third group than in the first.

Whereas these objectively measurable indicators confirm earlier studies (Wilkinson/Pickett 2010), we arrive at a somewhat different picture when also considering the subjective indicators for the quality of life dimension and civic participation. Here, the Western and Northern countries score significantly higher, whereas they are on a clearly lower level both in the advanced Southern and Eastern countries as well as in the emerging economies.

Interdependencies of social, personal, economic and ecological conditions

In the second step, we carry out a correspondence analysis using the same indicators and countries. This statistical technique allows for visually depicting the latent structures and relationships of all interdependent variables within maps (Bourdieu 1984). They emerge as the result of data reduction where the information contained in all twelve indicators is condensed into two latent dimensions. Here, one of these latent dimensions stands for the material living standard and general life satisfaction in a broad sense while the other captures crucial aspects of inclusion and quality of life (see figure 1).

The positions of the indicators are shown in the map as well as the locations of three groups of countries. The originating picture can be interpreted like the different regions and distances in a geographical map. Two important results from figure 1 reinforce the findings of the cluster analyses before:

- The material standard of living (GDP) is strongly correlated with environmental stress and the subjective indicators for social inclusion. This pattern applies to the highly advanced Western and Northern countries and contradicts the policy goal of absolutely decoupling socio-economic development and environmental stress.
- Some aspects of inclusion such as consultation of rule-making and homicide rates as well as objective quality of life and GDP growth are strongly connected to each other and, at the same time, independent from environmental stress, the material living standard and subjective quality of life.
- CO_2 emissions are more distant from the region of high development than the ecological footprint. One of the reasons for this is the existence of renewable energy and its increased use in recent years. It therefore seems to be less problematic to tackle climate change than ecological strains in general.
- Following the two doted arrows in the map, the development can be tracked from emerging economies via the advanced to the highly advanced countries. It is striking that the first development phase proceeds largely parallel to the second dimension: the objective quality of life increases together with social inclusion while environmental stress does

	Highly Advanced Western and Northern Countries: Australia, Austria, Belgium, Canada, Denmark, Finland, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland, United Kingdom, USA	**Emerging Economies:** Brazil, Chile, Estonia, Hungary, Mexico, Poland, Russia, Slovak Republic, Turkey	**Advanced Southern and Eastern Countries:** Czech Republic, France, Greece, Israel, Italy, Japan, Korea, New Zealand, Portugal, Slovenia, Spain
Gini (Index for income inequality)	29.34	39.28	31.35
Homicide (rate per 100,000 persons)	1.39	7.89	1.26
Voter Turnout (% of registered eligible voters)	74.57	67.44	69.36
Consultation in rule-making	8.24	5.73	6.95
Life expectancy	80.98	74.97	81.25
Subjective health (% stating good or very good on a 5 point scale)	77.00	58.11	62.55
Life satisfaction (means on a scale 0–10)	7.28	5.92	6.14
CO_2 (tons per capita)	10.44	6.69	7.82
Ecological footprint	6.04	3.70	4.61
GDP ($ per capita, ppp)	41,627.58	18,342.77	29,489.78
GDP growth (average per capita growth from 2005–10)	0.69	2.92	1.05
Unemployment (% of total labour force)	7.24	10.23	8.85

Table 2: Mean values of prosperity indicators in the three country groups, source: own calculations

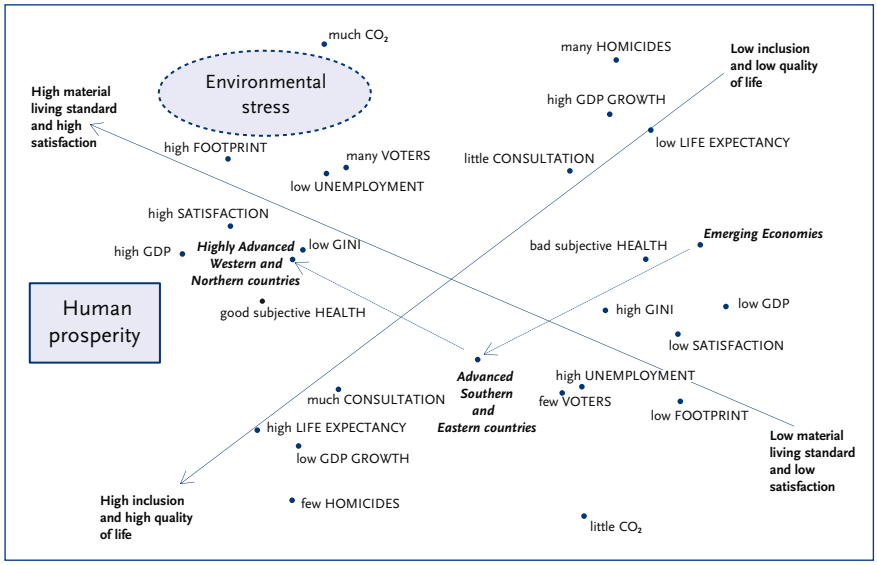

Figure 1: Mapping human prosperity, economic development and ecological sustainability – visualisation of the principal dimensions of a correspondence analysis, source: own calculations

not grow significantly. In contrast, the second development phase proceeds in parallel with the first dimension: while there is almost no progress in the objective quality of life, subjectively perceived quality is increasing at the cost of falling ecological sustainability!

Conclusions and policy challenges

Our empirical results largely confirm previous studies that question the feasibility of absolutely decoupling socio-economic development and environmental stress. However, this applies more to the ecological footprint than to carbon emissions, since the latter are less associated with GDP. Policy strategies that support the investment in and the use of renewable energies could further assist this trend towards dissociation between economic development and carbon emissions.

With respect to degrowth strategies and their capability to achieve a more ecologically sustainable and socially equitable society our findings highlight that it is crucial to distinguish between objective conditions and subjective orientations within the multidimensional concept of prosperity. Decent objective conditions can be established at scales of socio-economic development that are compatible with ecological sustainability. While this strengthens supporters of a SSE, people's perceived life satisfaction appears to be a more complicated matter.

Our analyses suggest that the degrees of civic and democratic participation as well as income equality may play an important intervening role here. Therefore, we conclude from the present study that, for most countries, significant prosperity potentials do not consist in the further expansion of material living conditions and consumerism beyond objectively necessary and reasonable standards but in the provision of increased political co-determination. The advantage of this provision may not only lie in more satisfied citizens but also in the fact that increased democratic participation has no negative effects for the environment. Human prosperity would in fact increase in terms of all four dimensions and a socially inclusive, green and economically developed society with a high quality of life could emerge.

References

Abdallah, S./Michaelson, J./Shah, S./Stoll, L./Marks, N. (2012): The Happy Planet Index: 2012 Report. A global index of sustainable well-being. London.

Bourdieu, P. (1984): Distinction: A Social Critique of Judgement and Taste. Cambridge.

Daly, H. (1977): Steady State Economics. San Francisco.

Jackson, T. (2009): Prosperity without Growth: Economics for a Finite Planet. London.

Kallis, G. (2011): In Defence of Degrowth. In: Ecological Economics, 70. pp. 873–880.

Koch, M. (2012): Capitalism and Climate Change. Theoretical Analysis, Historical Development and Policy Responses. Basingstoke.

Koch, M. (2013): Welfare after Growth: Theoretical Discussion and Policy Implications. In: International Journal of Social Quality 3, 1/2013. pp. 4–20.

Koch, M./Fritz, M. (2014): Building the Eco-social State: Do Welfare Regimes Matter? In: Journal of Social Policy 43, 4/2014. in press.

Martinez-Alier, J./Pascual, U./Vivien, F. D./Zaccai, E. (2010): Sustainable De-growth: Mapping the Context, Criticism and Future Prospects of an Emergent Paradigm. In: Ecological Economics 69, 2010. pp. 1,741–1,747.

Porter, M. E./Stern, S./Artavia Loria, R. (2013): Social Progress Index 2013, The Social Progress Imperative.

Sekulova, F./Kallis, G./Rodriguez-Labajos, B./Schneider, F. (2013): Degrowth: From Theory to Practice. In: Journal of Cleaner Production 38. pp. 1–6.

Victor, P. A. (2008): Managing without Growth: Slower by Design, not Disaster. Cheltenham.

Wilkinson, R./Pickett, K. (2010): The Spirit Level. Why Equality is Better for Everyone. London.

WWF (2012): Living Planet Report 2012. Gland.

AUTHORS + CONTACT

Martin Fritz is a social scientist and researcher at the European Data Laboratory for Comparative Social Research.

Martin Fritz, GESIS – Leibniz Institute for the Social Sciences, Unter Sachsenhausen 6–8, Cologne, Germany. Email: martin.fritz@gesis.org, Phone: +49 221 47 694 572.

Max Koch, PhD is Professor at Lund University and works on synergies between climate change and social policies.

Max Koch, Lund University, Faculty of Social Sciences, Department of Social Work and Social Welfare, Box 23, 22100 Lund, Sweden. Email: max.koch@soch.lu.se, Phone: +46 462 221 268.