

Submission to 5th International Degrowth Conference

Walking the Meaningful Great Transformations

Budapest, 30 August—3 September 2016

Title: Economic modelling and Degrowth

Event Type: Academic special session

Theme: 7. The wrong way round

Subcategories: Work, Energy, Environmental limits to growth and North-South environmental conflicts.

Detailed description

Special session proposal: economic modelling & degrowth

Degrowth calls for a sustainable downscaling of production and consumption, to enhance wellbeing and environmental sustainability. It is important, for the widespread acceptance of this aim, to show how and under which conditions sustainable degrowth can be achieved.

In order to gain a broad political legitimacy, the social and environmental effects of no-growth policies need to be shown and contrasted with business as usual scenarios in which the socio-environmental consequences of negative growth are tested.

Quantitative analysis and formal modelling are useful tools to provide a credible answer as well as urgently necessary in the field of degrowth studies which can be characterized, so far, by a prevalence of qualitative analysis. In this perspective, it is also important the integration of models that enclose natural resource dynamics, socio-economic variables such as employment, or energy policies.

The development of this kind of models is nowadays crucial to contrast austerity measures that have largely failed to reduce high levels of unemployment, poverty and insecurity and, at meantime, to foster economic growth.

This session will present some of the most recent advances in the field of ecological macroeconomics in which economic modelling is related to degrowth, no-growth and negative growth scenarios.

In particular, the social effects, in terms of reduction in poverty, unemployment and inequalities, as well as the environmental effects (in terms of CO2 emissions) are quantified according to different models, policies, geographical regions and future scenarios.

Results from these models demonstrate that with the adoption of adequate policies sustainable degrowth is feasible.

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Title: Overshoot in the exploitation of natural resources as studied by dynamical modeling of fisheries

Abstract: "Overshoot" is a concept that has been debated from when it first been proposed. As a specific term, it goes back to William Catton's 1980 "Overshoot" book, but the idea goes back to earlier works, including "The Limits to Growth" of 1972, with perhaps the first clear and complete description of the idea by Garret Hardin with his 1968 paper titled "The Tragedy of the Commons" (which took the title from a 1823 essay by William Forster Lloyd. Despite being in the human mindsphere for so long, the concept remains controversial to this date. Mainly, it is the result of being irreversibly against the grain of the current economic theories, which normally assume that the mechanisms of the free market lead to the optimization of economic systems. Indeed, the concept of overshoot was born outside economics and it is, rather, mutuated from biology. In modern terms, we would say that it belongs to the field of "biodynamics." The debate on overshoot is not just academic as it cuts through the sinews of the very survival of human civilization. There is little or no intermediate position between the "self-healing" vision of economists and the "self-destroying" vision of biodynamicists. The current self healing model of human economic systems is prevalent among decision makers but, if it turns out to be wrong, then humankind goes at full speed toward its own destruction. In the present communication, we do not pretend to be able to prove that the overshoot model is of absolutely general validity, but we can show how some economic systems, namely fisheries and mineral extraction, can be quantitatively described by a simple system dynamics model that has the overshoot character as its basic feature.

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Title: the role of investment in climate change mitigation for a sustainable degrowth transitio

Abstract: This paper develops a macroeconomic model to evaluate the social and economic consequences generated by the implementation of strategies for the transition to a low carbon economy. The model is designed to address both the long-run dynamics of the system in terms of economic growth and carbon emissions and the short-run effects of policies for sustainability on employment and income distribution. We use this framework to compare the results of different combinations of three strategies: the improvement in energy efficiency, the expansion of the renewable energy sector, and the progress in carbon capture and storage. Scenario analysis shows the emergence of a number of considerable tradeoffs between social, economic and environmental indicators. As a result, adjustments required to achieve the targeted reduction in carbon emissions will produce deep structural changes of our socio-economic system, a downscale in physical capital.

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Title: economic growth and employment. Can decoupling be achieved?

Abstract: There is rising evidence that past levels of sustained economic growth for OECD countries will not be achievable anymore in the future. This raises serious questions in terms of job creation as lack of growth is associated with rising unemployment and other social problems. This paper analyses the possibility of creating employment in a situation without growth. The LOWGROW model developed by Victor and Rosenbluth for Canada is applied to some EU countries case study. It is based on past trends that relate GDP, employment and energy consumption for different sector and regions, and it models the implications under a business-as-usual scenario of future employment assuming past trends in paid work productivity are applied future prospects of slow growth. Under an alternative scenario, some degrowth policy options and environmental constraints –such as work-time reduction, decrease in labour productivity, and scarcer energy supply- are evaluated. The model tests the hypothesis that employment can be decoupled from economic growth.