



# THEME WORK

SUB-THEME:

***ECOLOGICAL MACROECONOMICS AND TRANSITION***

TITLE OF WORKSHOP



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## **Transition to sustainability: Italian scenarios towards a low-carbon economy. Giovanni Bernardo, \_Simone D'Alessandro**

- i) Which policies can be currently applied to our economies to make the big transition socially sustainable?
- ii) It is possible to maintain and improve the high level of the provision of services and public goods of our society making a big structural change towards a new sector, which we may call the —commonsII?

### **ABSTRACT**

This paper analyzes different policies that may promote the transition to sustainability, with particular focus on the energy sector. We present a dynamic simulation model where three different strategies for sustainability are identified: reduction in GHG emissions, improvements in energy efficiency and the development of the renewable energy sector. Our aim is to evaluate the dynamics that those strategies may produce in the economy, looking at different performance indicators: rate of growth, unemployment, fiscal position, GHG emission, and transition to renewable energy sources.

## **The Transition of Mindset in Economics - A Model for Non-Growth**

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### **ABSTRACT**

The search for the roots of the doctrine of unlimited growth leads to the traditional anthropocentric world view where the human has to relate himself only to a given nature. This dualism between a human with unlimited technological power and a static nature is not able to explain such phenomena as stagnating happiness indexes, continuous food and resource insecurity, health problems and climate change. A more holistic world view would position the human into



a dynamic system in which all elements influence each other. Modern models of economic growth like the Solowmodel have made evident that growth on a longer time scale is only possible due to technological process and increasing productivity. But the fact that there is a trade off between resource efficiency and labour/capital productivity underlines the need for a new understanding of technological process. In many cases a disintensification that increases the necessary manual labour can reduce environmental and social costs to a greater extend than the initial increase.

Taking these reflections into account this paper introduces a new model of economic growth which extends the neoclassical model of growth in two important points. The first consideration is that the value of economic output is very much influenced by the status of the environment. The availability and scarcity of resources, the biospherical conditions for growing, the (in)stability of natural cycles all have consequences in a production function that reflects the value of satisfaction, i.e. happiness, more adequately. Therefore environment or nature is considered as an input factor in the production function. The second consideration relies in the fact that nature has the ability to recover at a certain rate and that it also deteriorates depending on the impact that has our economy. The negative impact is expected to rise with a growing economy but can be slightly restricted by using less intensive technologies.

An analysis of this model leads to the conclusion that every growing economy reaches a state of instability where natural depletion causes an ongoing crisis. At this point technological progress and productivity growth can no more counterbalance the effect that depletion has on the economy. This condition consists until the shrinking economy reaches an output level of sustainability where human-caused deterioration is once more as small as nature's capacity to recover. Under these circumstances technological progress does not generate further growth but only substitutes nature with items of artificial production due to depletion.

As the unwilling decline in economies that continue producing above the level of sustainability is unpreventible, an argument can be made for degrowth. It makes sense to degrow in a controlled manner to avoid the much more catastrophic depletion crisis. In that manner a richer biosphere can be maintained which allows a much less intensive technology for the same output. A less intensive technology denotes a higher probability to decrease also the impact per output. In conclusion degrowth helps to raise the level of sustainability and actually leads to a higher sustainable output in the long long run than unlimited but dangerous growth.



## **Full Employment & Degrowth: The Social and Ecological Sustainability of The Job Guarantee,**

**B.J. Unti**

The Degrowth Declaration of the 2008 Paris conference called for the “development of policies and tools for the practical implementation of degrowth”. The Job Guarantee (JG) is one such policy. This paper demonstrates how a JG program may be used to achieve both full employment and degrowth. Traditional Keynesian and Post Keynesian policies provide useful tools for addressing some of the inherent social and economic flaws of capitalism such as involuntary unemployment, poverty and inequality. However, these policies fail to account for environmental limits. As such the solutions they offer all rely on increasing aggregate demand, stimulating higher levels of economic growth and throughput. By contrast, a JG program embodies special features that dissolve the apparent contradiction between employment and the environment: between economic and ecological prosperity.

Section two of this paper examines Keynes’s diagnosis of and solution to the problem of unemployment in terms of effective demand. It is shown that the principle of effective demand has important and paradoxical implications for economic growth and the environment. Section three builds on Keynes’s insight regarding the central role of money in a capitalist economy. It is argued that monetary production ( $M - C - M'$ ) is not only the root cause of unemployment, but also the driving force behind ecological crisis. Section four surveys the theoretical foundations of the JG via a discussion of modern monetary theory (MMT). MMT explains why a sovereign currency government can always “finance” a JG. The fifth section compares the JG and alternative paths to full employment grounded in MMT in terms of their environmental implications. The final section of the paper considers the possibility using a JG to achieve degrowth.

### **TACKLED ISSUES:**

- Inadequacy of current views/institutions and technologies to sustain well-being in the future;
  - Nature in the Solow model: no growth in the long run economical and ecological crisis; A central conclusion of the standard-Solow Model is that an economy tends to reach an equilibrium state of balanced growth after some time: “If the initial capital stock is below the equilibrium ratio, capital and output will grow at a faster pace than the labour force until the equilibrium ratio is approached.” This means that the capital labour and the capital-output ratio both converge to a constant value. Given a constant capital-output



ratio both capital and output have to grow with the same pace. In this section we shall outline a model of growth that considers the environmental → necessary model that consider conditions which are partly influenced by human activity and the limit of natural resources;

- Post-Keynesian model: job guarantee, through monetary policies; job guarantee work is not monetary;
- Buildings 1985 bathtub theorem accumulated stock pick exceed demand;
- If we as humans are unable to recognize our position in the world consciously, technology becomes determinant of its truth. Becoming conscious of this non-truth is the primary effort of the transition of mindset in economics.
- Energy transition towards a low carbon economy
- Investment in renewable energy: future energy availability ad change in power relations
- Banks and money outside mainstream mechanisms of credit creation

## ANSWERED QUESTIONS

- Isn't it limiting to use current macroeconomics tools and models to foresee different vision of the world?
- Mathematics can be an useful language to communicate.
- Networking and cooperation among different disciplines need complex approach. Political wiliness is crucial
- Reserves of unemployed people are maintained by private interests
- Non monetary benefits are important
- System dynamics take into account uncertainty and work on scenarios;
- Parameters come from empirical data;

## UNANSWERED QUESTIONS, MESSAGES AND COMMENTS

How about global economic structures/policies? How to introduce degrowth aspirations into global trade?

- why is sufficiency or degrowth not a strategy for sustainability?
- if government issue local currency to pay for JG workers' salaries, how are they going to solve the problem of inflation? Is this theory only valid for US?
- What is the link between globalization and de growth?



- Models and data: what is the empirical background? Inflation?
- How can we address macroeconomics in the small scale to achieve changes? What's the role of local initiatives?
- How to enhance and motivate political will?
- How is a democratic path to be build to change M.E.?