

Between crisis and development: which role for the bio-economy (and bio-economists)

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The metaphor of the economic cycle, that is the natural fluctuation of the economy between periods of expansion and contraction, is as old as modern economic thought and dates back at least to early nineteenth century when authors as Sismondi (1819) provided the first systematic exposition of economic crises. However, the recent years – featuring first the commodity price spikes, followed by the great recession and a very slow and highly uneven recovery in different regions of the world – have marked a dramatic change in the way lay people as well as economists look at recent developments in the economy. Acknowledging that “this time is different” (Reinhart and Rogoff, 2009) and we are perhaps entering a “new normality” (Krugman, 2013) of “secular stagnation” (Summers, 2013) are the ideas the current debate is focusing upon.

Why is it so? One reason, probably the most important one, is the length of the global economic crisis and its apparent inertia to any effort to get rid of it. The other one is the very long period of macroeconomic (and price) stability – the so called “great moderation” – preceding the 2007-08 economic turmoil. We do not know when and how the current economic conditions will be overcome, but what we do know is that they are changing profoundly our lives and have already had significant welfare and distributional effects all over the world. This is very likely to permanently redesign the loci of economic activity at global, regional and country level as well as at sectoral level within a given economy.

The reshaping of the economic landscape brings about a series of consequences for the bio-economy as well as bio-economists, linked to the double meaning of crisis, which is at the same time a threat and an opportunity, as always in economic history. Indeed, the global economic crisis has changed the relationships between bio-based activities and economic development. On one side, the more traditional food and agricultural production has been suffering, because of the drop in the final and intermediate demand of agro-food products. On the other side bio-economic activities act as social safety nets, creating employment opportunities, reducing vulnerability of the poor and delivering a multiplicity of environmental services.

At the same time, the recent crisis-induced changes have reinforced an already ongoing process of “renaissance” of agricultural economics (Sexton, 2013) and, at a broader level, the blossoming of bio-economics. Indeed, after a couple of decades of complacency among policy makers and the public at large that we had solved the food problem, the recent commodity price spikes as well as the global economic crisis brought back at the

top of the policy agenda the role of agricultural economics and policy, and the role of agricultural economists as researchers and key policy advisors to decision makers.

To what extent, where and how the crisis has changed those relationships and what role bio-based activities can play in the economic recovery towards a sustainable development path were the overall objectives of the Second AIEAA Conference held in Parma (Italy) on 6-7 June 2013. The Conference gathered more than seventy papers addressing an array of research and policy relevant questions such as: Is agriculture playing a buffer role against the global crisis? How the crisis has changed the pro-poor features of agricultural growth? What are the impacts of crisis on poverty and food insecurity? What are the impacts of crisis on rural-urban disparities and horizontal and vertical inequality? What are the impacts of crisis on migration and remittance flows? What strategies have been implemented by households, firms and farms to cope with the shocks? What is the role that bio-economy activities can play in recovering and future economic development strategies?

The BAE editor invited some of the speakers to revise and submit their own papers for publication in this BAE special issue. This is not meant to be an exhaustive account of all the topics debated in Parma¹; nevertheless it represents a significant essay of the wide range of topics discuss at the Conference, covering issues such as food commodity price volatility and institutional arrangements to manage risk in commodity markets, structural and economic dynamics in Italian farming sector, the spatial allocation of EU rural development funds, and the impact in terms of water requirements of agro-energy corps.

In particular, Sarris makes a thorough assessment of the state of the art on the food price volatility and food security conundrum. Specifically, the author defines what food price volatility is about and shows that the major risks for a food importing developing country involve not only large and unpredictable price variations but also trade finance as well as import contract enforcement. Finally, the author suggests how to design institutions and policies to assist developing countries better cope with the risks of commodity market volatility.

The purpose of the paper by Revoreda-Giha and Zuppiroli is twofold: analyze whether futures markets are still useful for hedging (analyzing the European wheat futures markets and the Chicago Board of Trade's wheat contracts as a comparison), and testing whether the increasing presence of speculation has made futures markets divorced from physical markets. The results show that hedging with futures markets is still an effective option for reducing price risk, particularly in short term hedges.

Salvioni *et al.* investigate the structural change and economic dynamics of farms pursuing diversification strategies (i.e. pursuing multifunctionality through non-farming activities) vs. differentiation strategies (i.e. adopting product differentiation through a quality certification) in Italy. The most important outcome is that only diversified farms show a significant improvement in labor productivity expressed as income per worker, while the labor productivity performances of differentiated farms are not that good.

Camaioni *et al.* try to assess the coherence of EU rural development fund allocation with the real characteristics of EU rural space. In doing so, that authors go beyond the usual dichotomous definitions and approaches, proposing a composite and comprehensive

¹ The interested reader can download all Conference papers at <http://ageconsearch.umn.edu/handle/149623>. Paper presentations are also downloadable at AIEAA website (www.aieaa.org).

measure of rurality and peripherality, the so-called Peripherality Indicator. Using this indicator the EU rural development policy appears less “rural” than stated in the political intentions. In relative terms (per unit of land and, above all, of labour), urban and central regions tend to be more supported than more rural and peripheral ones.

Finally, Donati *et al.* present an integrated model for the economic and environmental assessment of natural resources use when new activities (i.e. bioenergy crops) are introduced into the farm production plan. The model integrates a standard positive mathematical programming model with the AquaCrop model developed by FAO. The results of the simulations show that this model can help policy makers in assessing the impacts of changes in farm production plans on farm profitability, land use and water consumption and the sustainability of new market/policy scenarios, such as the 2014 CAP reform which emphasizes environmental objectives in agricultural policy.

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