

WHITHER THE ECONOMY?

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The global economy is emerging painfully from the financial crisis that kicked off in 2008 in the United States and then hit Europe. The economic debate is now shifting from the urgencies of the crisis to taking a look at more distant horizons. Global warming is currently demanding investment in new technologies and changes in consumption patterns. More generally, current trends are once again raising the old but still topical question of the economic and social stability of market economies. This question has multiple ramifications: in addition to the issues of instability and financial crisis there are the dynamics of inequality and the distribution of income. Finally, with the emergence of digital technologies, technical change is posing new questions. While digital potentials are often formulated in ways that provoke anxiety, the ability of these technologies to improve our everyday lives is one of the key issues facing thinking about the economy over the next twenty years.

These new issues have evoked some recent research in economics, which this issue of *Revue de l'OFCE* tries to present and review. The issue is composed of contributions by authors who are all specialists in their field. They had the freedom to write texts in which the thinking, while certainly argued, also gives space to personal considerations that the constraints of academic rigor do not always permit to be expressed: discontent and enthusiasm are instructive for observing thought in the process of taking shape. The contributors strived to present robust results and newly emerging issues.

The purpose of the issue is therefore to both convey knowledge and pose questions. The seventeen contributions are not exhaustive but

cover most of the current debate, with a specific focus on macroeconomic issues. In addition to the diversity of subjects treated by the various contributions, there is a certain difference of “seniority” in the discipline, as young researchers striving to move the frontiers of knowledge in a precise direction work alongside more experienced researchers presenting a more topographical version of the discipline by describing what we already know.

The purpose of this introduction is not to substitute for reading the texts, which are all instructive and enlightening, but to identify points of intersection or divergence in terms of both method and economic policy measures. Four themes emerge. The first is the relationship between economics and history. The second is the question of the stability of market economies. The third is the need to rethink the coherence of economic policies. Finally, the fourth theme concerns developments in economists' tools and methods.

The Era of the Economy: Economics and History to Conceptualize Trends and Crises

When reading these texts, what is important is first and foremost a return to historical time and economic history. It is when faced with history that a situation becomes an event or a cycle or reveals a trend. Indeed, this issue shows the richness of the analysis of historical time for the subjects that animate economic debates. Thus, one big debate that divides economists concerns growth and technical progress. In the long time described by **Antonin Bergeaud**, **Gilbert Cette** and **Rémy Lecat**, there is a gradual slowdown in productivity and technical progress that could pose the risk of low growth, or even secular stagnation. This contrasts with the apparent acceleration of technical progress due to digital technology. Three explanations are presented in this issue. The first, defended by **Celine Antonin** and **Philippe Aghion**, sees in the debate on secular stagnation an ill-founded pessimism. First, errors in measurement fail to capture the ongoing change in the nature of growth. Second, some diffusion time is necessary for economies to adapt to major technological changes such as those wrought by digital technology: the best is yet to come. For their part, Bergeaud, Cette and Lecat insist on a relationship between finance and growth that can account for weak growth. The authors observe two simultaneous trends. The first is the decline in productivity gains in all countries. The second is the decline in real interest rates that has lasted

almost forty years now. The authors believe that there may be a causal relationship between these two trends. Low interest rates help to facilitate the financing of low-productivity companies and therefore induce a poorer allocation of capital. The problem then is that the financial markets are less demanding in terms of profitability in a low interest rate environment. A third explanation is put forward by **Gilles Le Garrec** and **Vincent Touzé**. They analyse the short-term adjustment constraints of economies, such as nominal rigidities or the zero bound on interest rates. As a result of the latter and the mismanagement of the crisis, the developed economies found themselves trapped for the long term in situations where growth, interest rates and inflation are all low, while unemployment is high. The poor management of demand and short-term inflation leads to a long-term economic problem. This analysis in terms of multiple regimes links the short time of economic policy to the long time of secular stagnation. An inflation-enhancing policy would help economic adjustment by restoring room for monetary policy to manoeuvre.

The debate between these three explanations of weak growth (supply, finance, demand) will continue to be lively because economic policy recommendations differ: should we support the allocation of capital or demand and, therefore, inflation? Should these two policies be managed together, as Aghion and Antonin invite us to do? Is there a trade-off between the two, as suggested by Garrec and Touzé, or are these two policies independent, thereby making it possible to focus reforms on changes that better benefit from the digital revolution, as advised by Bergeaud, Cetto and Lecat? These three texts provide the arguments in the debate.

Two contributions range from economics to history to consider how market economies produce history because of their endogenous fluctuations and economic cycles. **Michel Aglietta** and **Franck Portier** offer some of the most recent analyses, coming from very different, not to say opposed, foundations within economic thought. Franck Portier looks again at the dominant approach in economics, which sees market economies as stable processes that adapt to external shocks. As a result, the economy evolves after some shocks. Portier observes that this vision is not well founded either empirically or theoretically. There are profound destabilizing forces in market economies, including strategic interactions between the actors, households and firms. These push the latter to do the same thing at the same time,

which destabilizes the economy. As a result, the economies lead to cycles that are both endogenous and affected by random events that make fluctuations unpredictable.

Michel Aglietta begins his contribution by recalling the difference between logical time in economic models and historical time, which always contains a degree of uncertainty. This leaves room for financial speculation, generating recurrent crises whose different phases have been described by historians. As a result, economies are marked by financial cycles that have a horizon of 15 to 20 years. Aglietta presents the relationship between finance and macroeconomics by describing the stages of financial cycles as well as the various economic policy measures that can prevent the contagion of financial instability spreading to the real economy. For Aglietta, destabilizing behaviours are the result of mimetic behaviours, which are presented as an anthropological invariant. For Portier, similar behaviours are the product of economic mechanisms and are therefore contextualized. Other differences, presented below, separate the authors, but both find themselves thinking about the production of endogenous cycles in market economies where finance and capital accumulation play a central role. In addition, both authors differentiate economic policy measures according to the state of the financial cycle.

A third question raising the ability of economists to think in the long term involves the issue of the environment and ecology. This is dealt with by two contributions, one by **Katheline Schubert**, and the other by **Gissela Landa**, **Paul Malliet**, **Frédéric Reynès**, and **Aurélien Saussay**. There is no longer any doubt that the issue of global warming is one of the key issues for the coming decades. Economists studying scarce resources, externalities, and the sustainability of economies need to be pioneering new tools to link the long time of global warming with the short time of public decision-making. However, as Katheline Schubert notes, “environmental issues occupy a very small place in macroeconomic models, as their study remains largely the preserve of microeconomics and the public economy. We can even say that short-term macroeconomists are not interested in it, or more precisely that their potential interest is confined to the question of the macroeconomic impact of oil shocks.” In both academic journals and textbooks, the environmental issue remains marginal. Landa, Malliet, Reynès and Saussay show that the difficulties in this field of study stem, at least in part, from the difference in the tools used to think about

environmental issues. They present the two classes of models used: integrated evaluation models, at the frontier of economics and the natural sciences, and computable general equilibrium models, which are more anchored in economic modelling. It is interesting to note that the main shortcoming of these models, which the authors try to overcome through their own efforts, is their complexity, which renders the results less transparent, and therefore less convincing for analysts and public decision-makers. The introduction of different temporalities therefore has a cost in terms of complexity. If broader horizons are to be embraced, a great deal of simplification is needed to identify the essential causalities.

The introduction of historical time, understood either as long time or the study of historical events, is finally taking place in many contributions. **Cecilia García-Peñalosa** studies the dynamics of inequality over time, in terms of both the distribution of “wages/profit” and wage inequalities. It is through the prism of long time, especially since the work of Anthony Atkinson, Thomas Piketty and Emmanuel Saez, that the issue of inequality has gathered renewed interest by unveiling new trends. **Anne Épaulard** analyses the link between finance and the economy. In particular, she puts private debt at the heart of the lessons that can be drawn from a historical study of financial crises. However, the manoeuvring room for economic policy to avoid excess private debt is slim, while the effectiveness of macroprudential measures remains to be demonstrated, and the monetary instrument may simply be too brutal. Finally, **Patrick Artus** examines the problems of divergence within the euro area. For the most part, his analysis is based on the observation of historical trends in key variables, an approach that can be described as informed historical narratives, as they are not based on particular models but on mechanisms identified in the economic literature. This type of analysis has the merit of giving a large space to the data and allowing a great deal of freedom to suggest causalities that go beyond correlations. The relative disadvantage is that the freedom of analysis comes at the cost of weak demonstrative power, which may leave room for alternative analyses.

For this reason, this issue of *La Revue de l'OFCE* begins with a text by **Pamfili Antipa** and **Vincent Bignon** that documents the return to long time and to economic history. The authors describe economic history as a place of reasoned intellectual debate. They describe three ways of producing economic history. The first is cliometrics, the application of

a precise economic theory to the study of history. The historian thus proceeds from economics to history. An example of this approach is found in elements of Aghion and Antonin's text in this issue, describing the lessons of the Schumpeterian approach to the theory of growth. A second way of producing history is to construct long series, which allow a quantification of history specific to economic history and then to bring out regularities and ruptures. This approach dates back to the *Annales* school and its systematic formulations. The long time for the evolution of prices and wages to think about the difference in development between Europe and China is a prime example. The work of Bergeaud, Cette and Lecat reflects this process. A third way of doing history is to approach it as narrative or analytical narration using economic theory (or the contributions of other disciplines) to transform events into causes. Michel Aglietta's work on financial crises provides an example of this.

The Coherence of Market Economies: Heterogeneity, Aggregation and Instability

A second theme runs through the contributions in this issue: the issue of the stability of market economies. The financial crisis that began in 2008 revealed that market economies could become deeply unstable and that unprecedented monetary and fiscal policies were needed to restore jobs and growth. The inability to foresee or even to understand this crisis on the part of most economists has brought the profession into profound disrepute. The question of stability brings up an even deeper question, which is to understand how the sum of uncoordinated decisions by households, firms and financial actors can lead to a satisfactory economic order. Hence the question facing economics is to understand the *aggregation of heterogeneity*. As the three contributions by Michel Aglietta, **Rodolphe Dos Santos Ferreira** and **Jean-Luc Gaffard** pointedly note, the majority of pre-crisis macroeconomic models in fact assumed the stability of the economy as a working hypothesis for studying representative agents, thus removing the question from view simply by hypothesis.

The modern treatment of heterogeneity in economics has accelerated dramatically since the crisis as a result of access to data and the diffusion of digital technologies. Two contributions summarize milestones in this work. The contribution of **Édouard Challe** takes up a very lively debate in the United States that unfortunately has too little pres-

ence in Europe: Does macroeconomics lack scientificity in its relationship to the data?

Some criticism states that it has not passed the empirical turning point of other domains of economics (economics of education, of work, of development) and because of this provides non-falsifiable and therefore unscientific theories. This question is all the more important as some empirical work (experimental and quasi-experimental work) makes it possible to start from the heterogeneity of microeconomic behaviour to build theories.

Edouard Challe's answer is that interdependencies cannot be studied in isolation. It draws on three examples to show that moments like economic crises cannot be safely sliced up into separate problems. The accumulation of empirical results is necessary but not sufficient for economic analysis. The first example is the liquidity trap. The spectacular growth of central banks' balance sheets has little effect on the economy due to the complexity of inflationary expectations. The second is the destabilizing role of precautionary savings. In wanting too much to protect against uncertainty, economic actors all cut their spending at the same time, which destabilizes the economy. The third is the effect of public spending on economic activity and, at its core, the issue of fiscal multipliers. There is a big difference between local multipliers (estimated using geographic data) and global effects due to economic interdependencies. In these three cases, the microeconomic lessons do not tell us much about the global consequences.

A second example of the lessons of the modern treatment of heterogeneity is the analysis by **Paul Hubert** and **Giovanni Ricco** of the role of information in economic coordination. Here again, the subject of information brings up the deepest issues in economics. Hayek based the superiority of market economies over other forms of social organization on their ability to aggregate the heterogeneity of information. Hubert and Ricco revisit this question from a resolutely empirical angle. Diverse models of imperfect and scattered information are now available. What do we learn when we compare these with the data? What is gained empirically (and scientifically) from the inevitably complex modelling of the heterogeneity of information? The authors use advanced econometric techniques to show that the effect of monetary and fiscal policies changes radically when the heterogeneity of information is taken into account. In particular, central banks must consider

their communications as an element of economic policy because they change the nature of the information available to the public.

A more radical approach to the treatment of heterogeneity is defended by **Mauro Napoletano**, who summarizes the recent results of a current in economics called agent-based models (ABM). For Napoletano, it is the interaction between economic agents that is essential, even primary. This should lead to agreeing to simplify behaviour by introducing a very limited rationality and then considering the economy as a large dynamic system that can only be simulated on a computer. It's a time of mourning for analytical solutions and small models; it's time to move away from reductionist strategies that seek to simplify the real to find causalities and proceed directly from complex environments. The author shows that these models can reproduce instabilities, cycles and inequalities between agents (households and businesses) that are close to the data. These models are spreading in the academic world as well as among economic institutions. They do, however, pose the difficult question of the nature of understanding in economics. Is the reproduction of aggregated facts sufficient to validate a model? Should we not be concerned about the realism of the hypotheses and behaviours lest we find ourselves able to reproduce everything without being sure of the generality of the possible recommendations? These questions will concern the profession for years to come.

In addition to the theme of aggregation, another theme marks many contributions. It is the inadequate treatment of a central actor: *the company*. Rodolphe Dos Santos Ferreira considers the weak modelling of corporate behaviour and the nature of competition in macroeconomics to be a major source of discontent with the way the profession is going. This finding is shared by Jean-Luc Gaffard and Michel Aglietta, who lament the simplistic modelling of the company as the only financial asset, which prevents a deep contribution concerning the notion of capital. The importance of the company is strongly emphasized by Antonin and Aghion, who situate it at the heart of the Schumpeterian dynamic. Finally, Bergeaud, Cette and Lecat argue that we cannot understand recent trends in productivity gains without thinking about innovation within companies and the allocation of capital between companies. The importance of the company can also be seen in Cécilia Garcia-Penalosa's contribution, which treats it as an essential institution for understanding the dynamics of inequality.

To sum up more concretely, three sources of instability for market economies can be seen in the contributions:

1. The first covers finance in the broadest sense. Four mechanisms are presented:
 - the uncertainty of the valuation of financial assets, with the recurrence of bubbles and financial crises (Aglietta);
 - the still more destabilizing role of the excessive indebtedness of the private sector (Épaulard);
 - the contribution of precautionary savings to economic instability (Challe, Portier);
 - finally, the potentially inadequate level of the interest rate: either too high and therefore limiting the economic recovery (Challe) or too low and contributing to the misallocation of capital (Bergeaud, Cette and Lecat).
2. The second source of instability concerns the distribution of the wealth created and the dynamics of inequality (García-Peñalosa): do market economies produce unsustainable inequalities?
3. Finally, the environmental issue cannot be overlooked: global warming and the depletion of resources and of biodiversity concerns much more than just the viability of market economies.

The Tools of Economists

It is interesting to go more deeply into the influence of digital technology on the economy, not so much to raise the question of the productivity gains to be expected, but to show the changes in the profession of the economist. Antipa and Bignon highlight the new fields being opened up to economic history by the digitization of archives. This is giving much wider access to historical documents, requiring different tools to process this new mass of information. Cecilia García-Peñalosa and Édouard Challe point out how the use of computers has considerably increased the complexity of economic models so as to simulate greater heterogeneity. Likewise, the econometrics of Hubert and Ricco becomes possible only thanks to computers' calculating power. Finally, Mauro Napoletano goes further and proposes that large-scale systematic computer simulations that introduce statistical uncertainties (Monte Carlo) can be considered to be an accepted analysis of economic models, rather than their analytical study. The data, the data processing capabilities, the size of the

models that can be simulated are increasing extraordinarily. While we can ask what tools can be developed to test a theory, the relationship can also be reversed: what theories can be developed to make the most of all these tools?

Economic Policies

Most of the contributions in this issue of *La Revue de l'OFCE* refer to economic policy recommendations, whether that means monetary policy (Épaulard, Hubert and Ricco), corporate governance (Aglietta), fiscal policy (Challe, Saraceno, Portier, Gaffard), structural reforms (Bergeaud *et al.*), taxation (Aghion and Antonin, García-Peñalosa), or the reform of the euro zone (Artus). However, as many contributors point out, what matters is not just specific recommendations but the overall coherence of a set of economic policies. Policies do indeed interact strongly. Caricatural economic debates between “supply/demand” or “monetary/fiscal” policy thus generate a high intellectual cost, because it is precisely the intersection of these policies that needs to be thought out.

As **Francesco Saraceno** explains, a period finished in 2007 with the end of a consensus that had reigned since 1980. This consensus was based fundamentally on the stability of market economies. While both short-term frictions and nominal rigidities do indeed create inefficient fluctuations in employment, it is economic policies founded on rules (and not discretionary policy decisions) that will facilitate a return to economic efficiency. The greater financialisation of the economy should have only beneficial effects, especially as regards the allocation of capital. The crisis has opened the eyes of economists. The debate over financial regulation, the support for demand during the recession and structural reforms destroyed the old consensus, without of course any fanfare. Francesco Saraceno is calling for an eclecticism in economic policy that should be the guiding principle of economic policy recommendations.

This eclecticism must, however, be anchored in a solid conception of the complementarities between economic policies. One initial complementarity concerns the need for a policy of support for demand when policies are put in place to increase productivity (increasing the educational level and the mobility of labour and capital). This view seems to be shared by almost all the contributors.

A second set of complementarities comes from the reform of the euro zone. Patrick Artus discusses the policies needed to solve the euro zone's main difficulties. At least three complementarities appear. The first concerns the need for fiscal transfers and fiscal federalism as well as trade integration that promotes industrial specialization. The second is the coordination of fiscal policies in the euro zone to avoid excessive fluctuations in demand due to externality effects. The last is the coordination of labour market policies to minimize the dangers of diverging unemployment rates or wages, both upward and downward.

This issue leaves room for debate on economic policies. It undoubtedly demonstrates the need for a stronger link between economic thought, in all its diversity of methods and themes, and economic policy decisions. Rather than bring the debate about economic policy choices to a close, it opens it.

Each of the contributions can be read independently. For ease of reading, these are presented while taking into account the proximity of the themes. The *Revue* begins with historical considerations, then addresses the issue of the stability of economies and finishes with questions of economic policy.

The authors know how difficult it is to write short and synthetic texts rather than long and detailed ones. These eighteen contributions could not have been gathered without the scientific and editorial work of Sandrine Levasseur, editor-in-chief of *Revue de l'OFCE*. Finally, the *Revue* enjoys a high-quality team capable of ensuring the formatting and preparation that allows rapid publication.

