

Laudatio to Timothy J. Kehoe
by Jordi Caballé

Academic life tends to combine long periods of monotony, in which quiet but constant work is the rule, with isolated moments to celebrate your own or other people's success as a result of that work. Today is one of those infrequent and, therefore, especially joyful times when we come together in celebration to honour one of the most prestigious members of our profession of academic economists. This is also an especially happy moment for me, as my friend Tim Kehoe has been a benchmark throughout my professional life.

I will begin by highlighting some of the biographic aspects and abundant merits of Dr. Tim Kehoe. He is currently Professor of Economics at the University of Minnesota and Adviser to the Federal Reserve Bank of Minneapolis. He obtained his PhD from Yale University in 1979, under the supervision of Professor Herbert Scarf and the co-supervision of Professor Andreu Mas-Colell. Since obtaining the PhD, he has lectured at the Wesleyan University, at the MIT, at the University of Cambridge and, since 1987, he has been a Professor at the University of Minnesota. Over this period, he has supervised 74 PhD theses. It should be stressed here that he is ranked 29th in the RePEC ranking of all academic economists worldwide as regards the subsequent research quality of his students. This proves that Tim Kehoe, through his excellent teaching and supervision, has planted the seeds of the abundant scientific production conducted by several generations of economists.

Some of the numerous articles that he has written have been published in the most prestigious journals in Economics (such as the *Journal of Political Economy*, the *Review of Economic Studies*, the *Quarterly Journal of Economics* and *Econometrica*). He has also published his research in top-level journals within the most specialized fields of tax policy (for example the *Journal of Public Economics*) and economic theory (such as the *Journal of Economic Theory*) and in other very prestigious journals in the fields of international economics and macroeconomics (such as the *Journal of International Economics*, the *Review of Economic Dynamics*, the *Journal of Monetary Economics*, etc.). Although merely anecdotal, we can also mention that eight of these publications have been written in Spanish and two in Catalan, in the *Revista Econòmica de Catalunya*, thus corroborating Professor Kehoe's links to our academic environment to which I will refer later. Finally, in order to demonstrate the undeniable impact of Dr. Kehoe's scientific work, I would like to mention that he has accumulated around 8,000 citations on Google Scholar.

Tim Kehoe is Fellow of the Econometric Society since 1991, this being one of the highest honours to which an academic economist can currently aspire. Since 1982, he has uninterruptedly received the most competitive grants of the National Science Foundation of the United States. He is currently President of the Society for Economic Dynamics, the most important association for economists doing research on the dynamic aspects of Economics.

The current regulations about Honoris Causa PhDs of the Universitat Autònoma de Barcelona consider a candidate's link to our university as an important merit. Dr. Kehoe truly deserves this merit, as since 1983 he has been a regular visitor of our Department of Economics and Economic History. His continued visits have enabled him to contribute regularly to the teaching of the IDEA graduate programme, on which in recent years he has taught an advanced course in International Trade and Finance.

His link to the IDEA programme has also allowed many students on the programme to spend short stays both in the Department of Economics of the University of Minnesota and at the Minneapolis Fed, thanks to his generous invitations. Some students from the master's degree programme have moreover pursued their PhD studies at the University of Minnesota, even with Dr. Kehoe as their thesis supervisor. This is the case of the PhD-holders Cristina Echevarría, Claustre Bajona and Antonia Díaz. Finally, I would like to mention that one of the professors of the Department of Economics and Economic History of the UAB, currently on leave of absence, Dr. Juan Carlos Conesa, had Tim Kehoe as his thesis supervisor and is a co-author of several papers with him.

As far as our School of Economics and Business is concerned, we could mention that Professor Kehoe delivered the inaugural lecture of the 2012-13 academic year. He has also been linked to several institutions in Catalonia and the rest of Spain, as he is a frequent visitor to our country, with which he has close ties. Proof of this is the fluency with which he is able to express himself in both Spanish and Catalan. Tim Kehoe is a member of the Scientific Council of the Barcelona Graduate School of Economics, has been a Visiting Professor at the Universities of Barcelona, Alicante and Pompeu Fabra and at the CEMFI in Madrid, and has been a member of various public commissions to assess Catalan and Spanish research.

He has also promoted several initiatives that affect us closely. Some of these initiatives are academic, such as the "Workshop on Dynamic Economics", which is held annually in Vigo and is already in its 21st edition. This workshop provides an incomparable environment for relaxed interaction among advanced PhD students and world-class professors in the field. Some of his other initiatives are of a more festive and/or gastronomic nature and I will not describe them in detail, although they are consistent with the bonhomie and joie de vivre inherent in his delightful personality.

I would also like to recall that Tim Kehoe has been invited speaker at plenary sessions of the former "Symposium of Economic Analysis" and the current "Symposium of the Spanish Economic Association." Tim Kehoe is indeed one of the most loyal participants in this annual scientific meeting held in Spain. Finally, he was a member of the Editorial Board of the *Revista Española de Economía* and is fellow of the Spanish Economic Association.

I will now offer a selective summary of the research carried out by Dr. Kehoe. Over his career he has tackled several topics of study within the general framework of dynamic economics and macroeconomics, making in all of them essential contributions that have made them easier to understand for our profession.

The study of the determinacy, uniqueness and regularity of the equilibria in dynamic economies and, in particular, in economies of overlapping generations is a line of research that Dr. Kehoe addressed from when he finished his thesis in 1979 until 1992. His contribution made it possible to extend to a dynamic environment the results on these same questions that had been tackled by, among others, the Nobel prize-winner Gerard Debreu in the context of static economies. In this dynamic environment, the equilibria are no longer points of the Euclidean space but rather paths (that is, sequences indexed by time) of prices and quantities. The regularity of equilibria is an essential property since it allows us to use, in

a justified manner, the techniques of comparative statics to characterize the effects of changes in the values of the exogenous variables of the economic model under study. Tim Kehoe's contribution is based on the use of a technique originating in differential topology (the index theory) to solve a question that is very complex from a technical viewpoint. Dr. Kehoe was, without a shadow of a doubt, the most prestigious researcher from this area of study during the period for which it was the centre of attention of theoretical economists.

Applied general equilibrium is another area of research to which he has been devoted and in which the benchmark researcher is precisely the supervisor of his PhD thesis, Herbert Scarf. His articles on applied general equilibrium cover a period which goes from 1982 to 1995. In these articles, Dr. Kehoe applies the techniques of general equilibrium to explicitly quantify the impact of different economic policy changes, whether concerning energy prices, general price control or tax reforms, in different countries such as Spain or Mexico, a country to which he is also closely attached. Here, I would like to highlight his article published in 1988 in the *European Economic Review* on the tax reform carried out in Spain, in which the co-authors are the current rector of our university, Ferran Sancho, a UAB Professor, Clemente Polo, and a former Professor from our university, currently at the University of Barcelona, Antonio Manresa, together with Pedro Javier Noyola.

Since 1992, Dr. Kehoe has published frequent articles (one with the former UAB student Claustre Bajona) on international trade and, in particular, on the welfare and macroeconomic effects of the several trade liberalization processes that have taken place in the world. The assessment of these processes is generally positive, despite the sectoral reallocation that they have triggered. In this field, Dr. Kehoe has especially analyzed the implications of the North American Free Trade Agreement (NAFTA) signed between Canada, the United States and Mexico.

Dr. Kehoe also made a crucial contribution to the analysis of debt and liquidity constraints in his articles with David Levine published in the *Review of Economic Studies* in 1993 and *Econometrica* in 2001. In these articles debt and liquidity constraints, which are essential to understand many macroeconomic phenomena, are generated endogenously starting from an explicit consideration of the role of both the seizable collateral of the individuals who apply for credit and the potential future exclusion from the credit market in the event of default. This endogenous characterization of credit restrictions starting from the individual rationality constraints was at the time completely innovative and had a transcendental influence on that literature.

At the end of the 90s, Dr. Kehoe wrote, together with Harold Cole, a series of articles which changed the way in which economists approached the problem of sovereign debt crises. In particular, they emphasized the possibility of crises induced by the loss of confidence in governments and how that loss of confidence was confirmed by subsequent events characterized by a reduction in the real investment level. In one of my favourite articles from that literature, published in the *Review of Economic Studies* in 2000, Kehoe and Cole characterize the conditions under which these self-fulfilling debt crises can appear. In other articles, these same authors illustrate how their model helps to explain the financial problems faced at that time by countries such as Mexico or some East Asian countries.

To end this summary of his research, I would like to say that, since 1996, Tim Kehoe has become one of the international leaders in the study of economic recessions. His approach is based on the behaviour over time of the amount used of production inputs and on the efficiency of this use. From this approach it is thus possible to reach the general conclusion that recessions always tend to be accompanied by reductions in productivity and that these reductions end up triggering financial crises. The results of this pioneering literature are largely included in the book "Great Depressions of the Twentieth Century", which Dr. Kehoe, together with the Nobel prize-winner Edward Prescott, published with premonition in 2007. In particular, Tim Kehoe personally analyzed the recessions of countries such as Mexico, Finland and Argentina.

We can thus conclude, both from his extremely prestigious academic merits, which are certified by the importance of his scientific contributions and teaching, and from the links to our university and to the Catalan and Spanish academic community, that Dr. Timothy Kehoe is an economist who fully deserves the PhD honoris causa granted by our university.

I therefore have the pleasure, honour and privilege to request the Honourable Rector of the Universitat Autònoma de Barcelona, to bestow the PhD honoris causa on Mr Timothy J. Kehoe.