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## Address at the presentation of the 18th King of Spain Economics Prize

Banco de España Pablo Hernández de Cos <sup>Governor</sup> Good evening, Your Majesty, Minister, members of the Governing Council of the Banco de España, dignitaries, members of the panel, ladies and gentlemen.

Firstly, I would like to thank Your Majesty for officiating at today's King of Spain Economics Prize award ceremony. It is an honour for this institution to have Your Majesty here again.

As you may know, the King of Spain Economics Prize was established in 1986 by the *Fundación José Celma Prieto*. I also wish to thank the foundation's president, Javier Celma, for having continued the generous patronage his father began.

For this eighteenth edition of the award, the panel, which I had the honour to preside, was made up of Álvaro Rodríguez-Bereijo (Deputy Chair), Juan Velarde Fuertes, José Ramón Álvarez Rendueles, Rodolfo Martín Villa, José Luis Feito and Julio Segura.

After its deliberations on 8 November last year, the panel decided to award the King of Spain Economics Prize to Professor **Manuel Arellano** for his outstanding research and teaching.

Manuel Arellano is considered one of the world's most influential economists of recent years in the development of econometric tools.

Born in Elda (Alicante) in 1957, he holds a degree from the *Universidad de Barcelona* and a PhD from the London School of Economics. He began his professional career at the University of Oxford and at the London School of Economics, and has been a professor of econometrics at the *Centro de Estudios Monetarios y Financieros* (CEMFI) since 1991.

Throughout his career, he has been a prolific teacher and researcher, for which he has received a long list of acknowledgements. I shall mention just a few of the most noteworthy ones.

Professor Arellano has been editor or co-editor of some of the most prestigious international academic journals, such as the *Review of Economic Studies* and the *Journal of Applied Econometrics*.

He has been the president of the Econometric Society, the most prestigious international society in the field of economics. He is a member of that society, in addition to being an international honorary member of the American Academy of Arts and Sciences.

He has also been president of the European Economic Association and of the Spanish Economic Association, and a member of the Scientific Council of the European Research Council.

In 2012 he was awarded the King Jaime I Economics Prize. He is currently Chair of the Scientific and Technical Committee of the Spanish State Research Agency.

Professor Arellano's research has centred on the area of microeconometrics. Specifically, he has made a decisive contribution to the development of tools to estimate statistical

models using panel data, where records of individuals, households and firms are available over time.

The seminal work by Professor Arellano, together with Steven Bond and Olympia Bover, made it possible to develop innovative methods for appropriately processing and harnessing such data. And this has enhanced economists' ability to respond more robustly to a diverse range of important economic matters. Included here are employment dynamics, firms' productivity, economic growth, changes in income and consumption, and the impact of certain public programmes and policies, to name just a few of their practical applications.

These contributions have also become more important over time. Nowadays one of the main pillars for transforming the economy, and society in general, lies precisely in technology's capacity to generate, store and process data. In the 1980s, when Professor Arellano began his research in this field, little panel data were available. But today, they are widely available and used in the vast majority of empirical economics studies. They are also therefore the basis for economic policy decision-making.

His publications have had such an impact on all areas of applied economics that he was named Clarivate Citation Laureate in Economics in 2018. Indeed, his 1991 article with Stephen Bond in the *Review of Economic Studies* presenting a model for estimating dynamic models in the presence of individual heterogeneity, known as the "Arellano-Bond" estimator, last year became the first publication in history to be cited 10,000 times in the Research Papers in Economics (RePEc) repository.

But, aside from his important research work, Professor Arellano's role in furthering economics in recent decades has also included being a real catalyst for new generations of researchers through his methods and teaching. Indeed, one of his books, *Panel Data Econometrics* (Oxford University Press, 2003), has become one of the main postgraduate econometrics texts at the best universities in the world. In the same vein, he has also carried out noteworthy work supervising PhD theses and mentoring dozens of prestigious researchers currently at institutions across the world (including the Banco de España), some of whom are with us here today, either in person or watching via the livestream.

I would also like to dedicate a few words to his more personal qualities. Those of us who know Professor Arellano would point out that his humility and altruism surpass even his academic merits.

Humility, because he is driven by intellectual curiosity and a desire for learning, rather than by any personal interest in amassing achievements or publications, even though his contributions to economics make them inevitable.

And altruism, because he is always ready to listen and give words of encouragement to his colleagues and students, whom he has a genuine interest in helping, even when that means less time to dedicate to his own projects.

I mention all this to show his strong personal commitment to excellence in the service of improving society. On more than a few occasions in recent centuries, despite its notable

figures, Spanish science has been characterised as lacking the cohesive elements that would make greater success possible through collective effort.

Well, Professor Arellano, along with certain other internationally renowned economists, decided in the late 1980s to combine their efforts and dedicate their professional life to making Spain a true centre of global excellence in economics teaching and research.

I am referring to CEMFI, the success of which cannot be understood without the work and life-long dedication of Manuel Arellano, under the direction of its first and so far only director, Rafael Repullo, who is also with us today.

The impact of this collective effort could be approximated perfectly well by applying the very econometric tools that our prize winner has decisively contributed to developing. But, to be able to fully gauge exactly what it means to Spain to have a centre of excellence of this calibre, it is perhaps still necessary for one of the disciples he has inspired to make another breakthrough in our capacity to extract information from data, like the one made when Professor Arellano developed his methods.

Be that as it may, prizes like the one he is receiving today provide public recognition of the scale and significance of his individual contributions and of the collective achievements in which he has participated.

Your Majesty, thanking you once again for your presence at this ceremony, it only remains for me, with your permission, to ask the prize winner to step up to receive the 18th King of Spain Economics Prize.