## Jean Tirole – an outstanding economist

By Jean-Luc Gaffard

Jean Tirole, this year's winner of the Bank of Sweden's Prize in Economic Sciences in Memory of Alfred Nobel, is an exceptional economist. This is reflected in the academic quality of his published works, both in the discipline's major journals and in books where he builds on his own research to engage with the major issues facing economics in the field of industry, regulation and finance. It is also reflected in his clear determination to address genuine issues that are important to an understanding of the functioning of market economies and in his concrete proposals for public policy to deal with this. It is also reflected in the way he explores these issues through developing powerful new analytical tools. And finally, it is reflected in the modesty of the judgments he renders on his results and their practical implications, a modesty befitting a true scientist.

It is fashionable in some circles to pigeonhole economists in one category or another, usually to stigmatize them. Jean Tirole is no exception to this parlor game. Detractors of the field of microeconomics, which focuses on company strategies, would have him more accustomed to frequenting the media than his research desk, and to be a defender of theses that could be termed free market if not ultra-liberal, more or less a sycophant of the markets and a fighter against government action. Nothing could be further from the truth.

Jean Tirole explores the functioning of markets populated by companies that are seeking to exploit their market power to mislead regulators whose choices are affected by a lack of information and by the existence of specific political constraints. He deals seriously with the fact that information is incomplete, that market situations and behaviors are imperfect, and that rational bubbles might even arise. If in the face of the crisis, everyone is now calling for stimulating R&D, developing vocational training, and expanding public investment, everyone should also be aware that the results are subject to the prevailing forms of organization, which are subtle and varied mixtures of competition and cooperation at the heart of the contracts between private and public actors on the various markets. This is what the work of Jean Tirole has drawn to our attention, along with the discussion that is needed about methodology and the choice of tools and standards that government should use.

Jean Tirole and his friend and co-author Jean-Jacques Laffont, who died too young, with whom he would likely have shared the prize awarded to him today, set themselves the task of analyzing the relationships that link business and State in the key sectors of telecommunications, energy and transport, while trying to determine the conditions in which these are socially efficient. These two are worthy successors of a prestigious French tradition, that of the French "economic engineers" - including Clement Colson, Marcel Boiteux and Maurice Allais – who as both researchers and engineers worked to establish the place and role of government in the functioning of a market economy. It is a tradition of public economics that the two nevertheless revolutionized by showing, through the new tools they used, that protecting the public interest assumed an ability to understand the detailed functioning of markets that differ greatly from one another and at the same time the shortcomings of a state that is neither omniscient nor spontaneously benevolent. In doing this, they emphasized the complexity of situations and, consequently, the complexity of contractual rules \_ complexities that it would be illusory and dangerous to ignore. They were able to highlight the true nature of a market economy in which the State, far from replacing the market, helps it to function properly through targeted interventions. In this respect, and in a domain that they made their own, that of analyzing companies and markets, they were part of a stream of social philosophy much like that developed by Keynes.

Does this mean that no criticism can be made of the work done? This is surely not the approach of the author himself, who knows that scientific progress grows out of controversy and debate so long as this is conducted according to fair play by researchers with proven expertise. The impossibility of setting out general rules is undoubtedly a weakness of an approach in industrial economics that Franklin Fisher (1991) [1] characterized as a theory that takes the form of examples and risks only producing taxonomies, which could mean that anything can happen, making it difficult to establish guidelines for public policy. This approach cannot dispense with the image of the heterogeneity that characterizes market economies, without which it is, in any event, vain to imagine effective public policy. Furthermore, many studies by Jean Tirole have the virtue of adjusting the specifications of the theoretical models to the particular configuration of the industries, businesses and technologies under study. Other approaches are undoubtedly possible, which would break with the hypothesis of agents practicing intertemporal optimization in a world of rational expectations. They would insist on the sequential nature of the choices made by trial and error in an uncoordinated economy, even in a state of bad equilibrium, due to the significance of innovation, which implies both the irreversibility of investment decisions and incomplete knowledge of the future configuration of the markets. Taking board this aspect of industrial reality would mean on recognizing that it is just as important to understand how firms acquire knowledge - incomplete knowledge at that - about the reactions of their competitors as it is to establish the impact of this. Following a line of thought that is rooted more in Marshall and Hayek than in Walras and Cournot, it would be possible to provide another perspective on the

functioning of market economies and the role of collusion and of networks, which could sometimes lead to different recommendations for public policy. It would also be necessary that the approaches chosen, which would be geared more toward the issue of coordination than of incentives, would have the robustness needed to enrich if not outright challenge established theory. This is what Jean-Jacques Laffont impressed on me during a long conversation we had while awaiting our respective flights that had been delayed by a strike – a situation not irrelevant to our discussion.

[1] See "Organizing Industrial Organization: Reflections on the Handbook of Industrial Organization", *Brookings Papers on Economic Activity. Microeconomics*, vol. 1991 pp. 201-240.