



Facultatea de Științe Economice și Gestiunea Afacerilor

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> Cluj Napoca April 6, 2017

## **Ceremony of awarding**

the title of

## Doctor Honoris Causa

**To His Excellency** 

## **Professor Xavier Sala-i-Martin**

Department of Economics, Columbia University

## Laudatio

Dear Professor Xavier Sala-i-Martin, Professor Ioan Aurel Pop, Rector of the Babeş-Bolyai University, Professor Ioan Chirilă, President of the Babeş-Bolyai University Senate, Dear Guests,

It is a great honor to introduce you the academic achievements of Professor Xavier Sala-i-Martin in the field of economics. Xavier Sala-i-Martin is a Jerome and Matthew Grossman Professor of Development Economics at Columbia University. He is an astonishingly accomplished economist, leader in the field of economic growth and convergence, poverty and income inequality.

Related to economic growth, his publication together with Robert J. Barro in the Journal of Political Economy (1992) simply titled *"Convergence"* is one of the most influential papers in the last 25 years in economics. A fundamental question in the literature of growth is whether poorer countries or regions grow faster than richer ones. The empirical evidence presented in this seminal paper is mainly supportive of absolute convergence for U.S. states. However, when moving with the analysis to a cross section of countries, the authors find that convergence occurs only conditional on keeping constant variables such as initial school enrollment rates and the ratio of government consumption to GDP.

More generally put, the conclusion would be that convergence for developing countries can be observed in data only after controlling for a number of variables which are proxies for so called "steady state characteristics".

The findings of the paper "*Convergence*" has been very influential in several circles: within the policy circles related to the creation and development of the European Union, among economists working in the field of economic growth, among researchers of other professions who, by continuing this groundbreaking work, contributed to the creation of the interdisciplinary field best known today as "*convergence studies*". This paper represented the main motivation for a large string of subsequent studies. Strictly research or with the purpose of policy making, all these studies tried to understand which "steady state characteristics" are actually constraining the growth: human capital investments, institutions, geography etc.

In 1997 Prof. Xavier Sala-i-Martin provided another marvelous contribution to the field of empirical growth: the paper *"I just ran two million regressions"*, as titled in the final version published in the American Economic Review. The author starts from the remark that growth theory is actually silent when it comes to provide much guidance in the search of empirical economists for the "true" explanatory variables of growth.

In his own words, "whether it has a temporary or a permanent effect on growth, we all agree that level of technology affects the growth rate". However, in a macroeconomic sense, there are many things that can be thought as "level of technology" (market distortions, distortionary taxes, degree of monopoly, maintenance of property rights, attitudes towards work, weather etc.) and, quoting Sala-i-Martin again, "a good theorist could make any of these variables look like an important theoretical determinant of the rate of growth". Indeed, this is equivalent to saying the theory is silent about what "true" explanatory variables should be a priori introduced in an empirical model. Moreover, even where the theory is very clear about the key determinants of economic growth, like human capital or efficiency of government, it is not clear a priori which of the multitude of the imperfect measures of these variables is better.

Hence, a natural question arises: since we do not know from theory the "true" variables which should be considered for an econometric model, then what are the variables that are really correlated to growth?

An initial answer to this question was represented by the paper of Levine and Renelt (1992) published in the American Economic Review, which pointed towards the pessimistic view that "nothing can be learned from the empirical growth literature because no variables are robustly correlated to growth". However, departing from the extreme bound analysis of Levine and Renelt, Xavier Sala-i-Martin invested a great deal of time and

effort to analyze the entire distribution of the estimates of the coefficients of a particular variable. The conclusion was strong and optimistic for the empirical growth literature: besides the traditional neoclassical key determinants of growth, there is a substantial number of variables robustly correlated to growth.

Prof. Xavier Sala-i-Martin also spent effort in constructing economic models to provide a theoretical background for the empirical findings on convergence. The paper *"Capital mobility in neoclassical models of economic growth"* (American Economic Review, 1995), coauthored with Robert J. Barro and Gregory Mankiw, provides an open-economy version of the neoclassical growth model which conforms to the empirical evidence of slow but significant conditional convergence. The key feature of this open-economy model is that capital is only partially mobile: borrowing is possible to finance accumulation of physical capital but not accumulation of human capital.

Another paper which combines elements of endogenous growth with the convergence implications of the neoclassical growth model is *"Technological Diffusion, Convergence, and Growth"* coauthored with Robert J. Barro (Journal of Economic Growth, 1997). The countries are of two types in this model: innovators (technologically leading economies) and imitators (followers). Followers converge towards the leaders because copying is cheaper than innovation over some ranges. However, any tendency for copying costs to increase (because of the limited capacity to absorb technological innovation, due to attitudes, acceptance, ability to put in practice etc.) reduces followers' growth rate and generating a pattern of conditional convergence.

At this point of my intervention I feel obliged to emphasize the following fact. The knowledge spread through Prof. Sala-i-Martin's papers to those working in the field of economic growth and convergence is remarkable and it is indicated by the impressive number of relevant citations for each published article. He is one of the most cited economists in the world, present in the top of every ranking of this kind. Within the same context it is also worth mentioning that his graduate textbook "Economic Growth" has influenced an entire generation of master and doctoral students of the best universities in the world.

In his work in the field of poverty and income inequality, Prof. Sala-i-Martin continuously challenged the existing literature and practices regarding the estimation of the world distribution of income, global poverty rates and income inequality. In the paper *"The world distribution of income: falling poverty and...convergence, period"* (Quarterly Journal of Economics, 2006) he estimated the world distribution of income between 1970 and 2000 by combining national accounts GDP per capita (to anchor the mean) with survey data (to pin down the dispersion). The results are thought-provoking. Poverty rates in 2000 were between one-third and one-half of what they were in 1970 for four specific

poverty lines which were considered in the study, while there were between 250 and 500 million fewer poor in 2000 than in 1970. Eight indexes of income inequality implied by the estimated world distribution of income showed reductions in global inequality during the 1980s and 1990s. The paper *"Parametric estimation of the world distribution of income"* coauthored with Maxim Pinkovskyi (NBER working paper, 2009) is in the same spirit as the previous mentioned paper. New estimates of world distribution of income were provided, which were then used to estimate poverty rates and measures of income inequality.

The conclusions of such studies offer a new point of view in contrast with the one of the United Nations and the World Bank, which used to believe that although poverty rates were falling, the total number of poor people was increasing, and individual income inequalities were also rising. Xavier Sala-i-Martin claims all these measures are falling.

The wonderful imagination and originality of Prof. Sala-i-Martin in economic research is completely revealed in the paper "*Lights, camera...income! Illuminating the national accounts-household surveys debate*", which is coauthored with Maxim Pinkovskyi (Quarterly Journal of Economics, 2016). Based on the assumption that the measurement error in nighttime lights is unrelated to the measurement errors in either national accounts or survey means, the authors obtained estimates of weights on these two components in an optimal proxy for true income. These weights are very large for national accounts and very modest for survey means. Consequently, the null hypothesis that the optimal weight on surveys is greater than the optimal weight on national accounts was generally rejected, while the null hypothesis of zero optimal weight on surveys generally failed to be rejected. Again, the conclusion is a strong: the estimates of the world poverty based on national accounts are supported by the results relative to the estimates based on survey means, when comparing them to the evolution of satellite-recorded nighttime lights.

The same interest in using nighttime lights (collected through The Defense Meteorological Satellite Program Operational Linescan System) to assess existing measures of economic activity is manifested in the NBER working paper *"Newer need not be better: evaluating the Penn World Tables and the World Development Indicators using nighttime lights"* (coauthored with Maxim Pinkovskyi, NBER Working Paper no.22216, May 2016).

Probably one of the dearest regions to Prof. Xavier Sala-i-Martin is Africa. He devoted much of effort to study income distributions, poverty rates and inequality indices for African countries, as well as providing policy advice. In the paper *"Africa is on time"* (published in 2014, Journal of Economic Growth) Sala-i-Martin and Pinkovskyi proved that African poverty is falling rapidly, the growth spurt decreased income inequality instead of increasing it, and moreover African poverty reduction is remarkably general, in

the sense that it cannot be explained by a large country, or even by a single set of countries possessing some beneficial geographical or historical characteristic.

In terms of publications with implications for policy, we can say again without hesitation that Sala-i-Martin is a world leader economist. Along with Elsa V. Artadi, he is the author of the *"Global Competitiveness Index"* which measures the set of institutions, policies, and factors sustaining current and medium-term levels of economic prosperity of a country. It is used since 2004 in the Global Competitiveness Report published by the World Economic Forum, an index that ranks around 140 countries by their level of economic competitiveness.

It should be an obvious thing by now that the entire professional activity of Prof. Xavier Sala-i-Martin is under the auspices of excellence. This statement is advocated by all his academic positions, other professional positions, by the uncountable number of awards, fellowships and grants. Regardless of the challenges encountered throughout his carrier so far, whether academic or more enjoyment related like football, Xavier Sala-i-Martin reveals his longing for excellence. The period spent at F.C. Barcelona is an indubitable proof alongside with all the academic achievements mentioned above.

We, Babeş-Bolyai University thank Xavier for the honor of accepting our distinction of Doctor Honoris Causa!

Thank you Prof. Xavier Sala-i-Martin!

Assoc. Prof. Cristian Litan Vice-rector of the Babeş-Bolyai University