

Title

Pure or hybrids, excellent or relevant - the dilemma

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Abstract

Research institutes were one of the first institutional settings for professional research, developed since the late nineteenth century in most countries, in general with missions relevant to the collective welfare and economic development. Their institutional characteristics have evolved with time linked to policy or market pressures, through reorganisations, mergers, privatisation, externalisation and spin offs, adapting to new institutional frameworks and market contexts. The diversity of the population of research institutes has further increased with the emergence of new organisations, positioned in the intermediary layer, since the 1980s, mostly hybrids, or organisations aside of the traditional actors, through the combination of different spaces and mingled relationships.

Although with a long history, these research organisations are far from being well studied, namely regarding methodologies for creating taxonomies and typologies which would allow comparability across countries. A couple of studies were done at European level to characterise the population of public and semi-public laboratories (PREST, 2002)¹ or the identification of backward drivers for change (convergence, sophistication of users, commercialisation, reorganisations, scale, domain shift, prestige... and globalisation) of institutes in the European Research Area per scientific field (Arnold et al., 2010)². In a recent study with a larger sample, the OECD (2011)³ using the same definition of the previous studies, found that RI are objects in transformation in their mission, which is widening, as well as in their institutional arrangements, including rationale, more openness to private sector (public-private partnerships) and use of business-like approaches due to reduced levels of core public funding.

Some preliminary work have been done on the hybridization process of research institutes (Laredo and Mustar 2002; Cruz-Castro et.al, 2012)⁴. Cruz-Castro et. Al. (2012) studied the degree of isomorphism of Spanish RI, using public funding and strategic autonomy of centres as explanatory variables of the convergence towards the hybrid model. Previously, Laredo and Mustar (2002) studied the hybridization process of research council centres and mission-oriented research institutes with the academic world, through their institutional trajectories, as a result of the externalization of their functions that were closer to the ones that of traditional technical centres.

The purpose of this paper is to compare the evolution of 'pure' research institutes, homogeneous in terms of institutional framework, which are part of the traditional performance sectors, with the new forms that mix public and private, excellence with mission or problem-solving. Our definition of research institutes follows the one used in

¹ PREST, 2002. *A Comparative Analysis of Public, Semi-Public and Recently Privatised Research Centres*, Final Project Report, Manchester.

² Arnold, E., Barker, K., Slipersæter, S., 2010, *Research Institutes in the ERA*. <http://ec.europa.eu/research/era/docs/en/research-institutes-in-the-era.pdf>.

³ OECD, 2011, *The transformation of Public Research Institutes*, OECD, Paris

⁴ Mustar, P., Laredo, P., *Innovation and Research Policy in France (1980-2000) or the Disappearance of Colbertist State*. *Research Policy* 31(1)(2002): 55-72

Cruz-Castro, L., Sanz-Menéndez, L., Martínez, C., 2012. *Research centres in transition: patterns of convergence and diversity*. *Journal of Technology Transfer*, 37 (1) (Feb 2012): 18-42.

the previous studies and includes the traditional research and technology organisations, government laboratories and the research institutes that are not an alias of university departments or centres. The institutions must have research as primary or secondary function. In general these organisations have strong links to one or more ministries, and tend to have a high share of public funding in their total resources.

The study is centred on the identification of the main features of the population of 'pure' and hybrids institutes and of their position in the innovation system, and compares their evolution using a rich dataset of research institutes in Portugal. The hypothesis is that the size and number of pure research institutes have been decreasing in the system and has given rise to a population mainly composed of hybrids that have created a large intermediary layer that blurs the boundaries of traditional sectors.

The analysis will be carried on eighty research institutes using quantitative and qualitative methods. The data on the institutes derives from an updated and extended version of Eurolabs database for Portugal. The data covers several dimensions: mission, functions, fields of activity, budget, public funding, employment, and data on publications and patents. Semi-structured interviews with the founders and managers and fifteen case studies were carried out to re-construct the trajectory of the organisation and determining their strategies and level of autonomy.