

Science and Higher Education Policy and Scientific Inquiry: Chilean and Colombian Private Universities Compared

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Academics and practitioners usually explain the expansion of research activities at private universities through referring to so-called best practices implemented by university administrators. This mainstream practitioners' approach, represented by the classic works of Burton Clark (1998, 2004) on entrepreneurial universities and more recent studies on world-class universities by Philip Altbach and Jamil Salmi (Altbach and Salmi 2011, 2007) claim to identify administrative practices that are believed to improve financial sustainability and research capacities of universities. An alternative view, based on an instrumentalist perspective of sociologist of science Joseph Ben-David (Ben-David 1960; Ben-David and Zloczower 1962) allows focusing on the role of governments in establishing the conditions for the development of research activities in the private sector. This alternative approach can offer conceptual tools for practitioners interested in incentivizing the teaching or research profile of their universities.

I will compare these competing explanations through contrasting both the government's strategies and the scientific production of Chilean and Colombian private higher education sector. Based on the encountered similarities and differences, I claim that research production in the private sector is mainly explained by the role of governments in creating a stable market that financially supports scientific inquiry.

Differences in the Institutionalization Process

Chile and Colombia have developed remarkable different expansive trends in the institutionalization of research activities. The diverse indicators of scientific production such as articles, books, and patents provide

evidence about this contrasting development. Chilean private universities, on the one hand, increased publications from 330 in year 1980 to 3,179 in 2011 (ISI Web of Knowledge 2013). Colombian private universities, on the other hand, only published 16 papers in the SCI in 1980 and increased this number to 942 in 2011. Chilean private universities count 167 published books in the Book Citation Index-S and 13 registered patents (World Intellectual Property Organization 2013). Colombian private universities have published 38 books and successfully registered new patents.

Convergent Discourses

The differences in the engagement of universities in establishing a research infrastructure clearly cannot be explained by variances in the social rhetoric supporting research. On the contrary, both Chilean and Colombian governments and university administrators have developed rhetoric on the viewed need of developing a research infrastructure in private and public higher education sector. This statement is in the same line of a neo-institutional view to the organization of scientific activities. Neo-institutional authors writing on the topic of university research (Drori, Meyer, and Hwang 2006; Krücken 2003) have already acknowledged isomorphic trends in scientific rhetoric and challenged the coupling between the formal structures and research production.

At the governmental level, both Chilean and Colombian governments have founded in earlier stages scientific agencies with a national agenda of promoting university search: *CONYCIT* and *Colciencias* were founded in parallel in 1967 and 1968. The role of research as a main governmental strategy is outlined decades later in Chilean *FONDEYT* and Colombian Law 29, established in 1982 and 1990 respectively. More

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recently, the policy rhetoric has favored the idea of innovation. Both the policy documents of the Chilean *National Council of Innovation (Consejo Nacional de Innovación)* and the Colombian policies *Colombia Builds (Colombia Construye)* y *Sowing Future (Siembra Futuro)*, stated in 2005 and 2008 respectively, provide a main role to universities in the creation of basic and—specifically—applied research.

The viewed need of developing a research mission in universities can also be acknowledged at the university level. The research mission can be viewed in my previous analysis (Pineda 2013) on the transformations of university structures: a total of 56 and 83 private universities in Chile and Colombia, respectively, had 19 and 23 research vice-presidents and six and one technology transfer offices. My recompilation and analysis of mission statements allows us to show that half of the Chilean private universities and more than two-thirds of the Colombia peers had a research mission statement. In other words, representatives of Chilean and Colombian universities do not differ in their belief that universities from the private and public sector should adopt a research mission.

Differences in the Institutional Frameworks

Given these common patterns in the political rhetoric, the paradox raised in this paper still remains opened: how can the differences in research outputs be explained, and how can this analysis serve for drawing general conclusions about the conditions that favor the institutionalization process? I claim that the explanation relies in the differential regulatory frameworks of governments. More specifically, in the long-term policy instruments—funds for higher education, funds for basic and applied research, scholarships—that promote a market of academic competition in a select group of private universities. I will explain each of these aspects in more detail.

Performance-Based Funding

A first central difference among the studied countries is the emphasis on performance-based funding through mechanisms that create a market for acquiring

further resources. Clearly, Chile has introduced a series of funds, which have been of crucial importance to enhancing scientific inquiry in a way that other countries in the region have seen as unnecessary. The mechanisms of the Chilean government for funding state-supported public and private universities and the competitive funds established by science policy have followed an underlying technical rationality that pressures universities to compete with each other. The government has directed these resources toward training new professors, establishing research infrastructure, and maintaining research projects, directed these funds.

In turn, the Colombian governmental discursive shift has not been coupled with the creation of strong mechanisms that support the transformation of universities into places of inquiry. This governmental discourse has been prone to adopt the terminology of new best practices but limited in the actual promotion of research activities, thus showing the “artificial character” (Uricoechea 1999, p. 20) of Colombian universities. Under these conditions, private universities have tended to develop more along the lines of the traditional teaching-oriented universities of the region.

Elitist Structure

A second explanatory factor is the differences in governmental decisions regarding the accumulation of resources in a selected group of universities. In this respect, the different governments have been inclined to choose a group of public and private universities to compete for research funds—what I call an elitist form of funding. This strategy has been carried out through governmental support of research at the universities of the so-called universities of the council of rectors (CRUCH) since 1954. This policy strategy explains the progressive way in which a select group of nine private universities, along with the 16 public universities (out of a total of 59 universities) has, over the decades, assembled a critical mass of experts capable of carrying out high level scientific inquiry. Government support for the development of research infrastructure at this group of private universities was augmented by a further differentiation of the CRUCH universities for the

provision of funds through the *Basal Performance Fund* (*Fondo Basal por Desempeño*) in 2012.

In Colombia, discussions about scientific policy strongly have been inclined to favor a democratic steering regarding resources for the different regions of the country. This conception is observed in the creation of the so-called regional commissions for science and technology (Decree 585 of 1990). Ever since, the debate about allocation of resources for research has tended to question the governments' commitment to a harmonious development of science across the country. This democratic rationale pursuing a balance of opportunities to the so-called "research groups" at universities has lead public attention to focus on the gaps between more and less industrialized regions of the country, rather than the national gaps at a global level. Most recently, the criteria established to steer the additional resources provided by the government through Law 1530 of 2012 also follow this democratic *rationale*.

Stability

A third very important aspect that can be highlighted from the comparison of Chile and Colombia is the stability of research funds. In Chile, government funds directed toward strengthening the scientific activities of public and private universities can be traced to the *University Building and Research Fund* (*Fondo de Construcción e Investigaciones Universitarias*) in 1954 and continued to be directed by the FONDECYT in 1982 and the subsequent programs in the 1990s. Thus, the government's relationship to scientific activity has clearly been far from *laissez faire* (Bernasconi 2003). The effects of this long-term policy stability are in line with the work of Douglass North (North 1990), who argues that permanence of rules and laws is a fundamental element in the development of markets.

In Colombia, additional funds for scientific infrastructure have fluctuated historically and depended on external credits (Jaramillo, Botiva, and Zambrano 2004). The varying funds provided by the Colombian government do not allow universities to count on governmental support for long-term projects. Colombian higher science

policy has been highly permeable to policy fads adopted by successive governments.

Conclusions

In this paper, I developed a similar line of reasoning as the one followed by classic works of sociologist of science Ben-David (Ben-David 1960; Ben-David and Zloczower 1962) in order to explain the differences in the patterns of institutionalization of research of different developed countries. I followed this research tradition and argued that scientific productivity of the private sector can be explained through analyzing the conditions permitting scientific productivity. This way, I tackle the widespread assumption that private universities may develop a research mission solely by becoming more entrepreneurial and adopting supposed best-practices of research governance (Altbach 2007; Clark 1998).

Further research might investigate whether the aspects I have identified for the development of scientific inquiry can be generalizable to other sectors and geographic areas. It would be desirable, though, that they take into account a broad range of indicators of scientific production. This allows acknowledging the different dimensions of the institutionalization process and avoiding the trap of reporting the process solely based on the perception of the adoption of a political discourse, which I proved can be loosely-coupled to the daily lives at universities. Further research could also comprise the financial and regulatory frameworks in which universities are located. I believe that research following these guidelines may successfully contribute to the identification of the conditions under which university research develops. In this way, future research may also broaden the practitioner's view about the social desirability of fostering governmental support for research activities across private higher education, or only in a selected group of (private or public?) universities.

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