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Social Innovation and Higher Education in the BRICS (1): a background overview

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BRICS Policy Center Centro de Estudos e Pesquisas - BRICS

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Summary

Executive Summary

This working paper results from the first phase of the research project on "Social Innovation and Higher Education in the BRICS" conducted by the Research Group on Innovation Systems and Development Governance at the BRICS Policy Center. This research aims to contribute to both the advancement of the scholarly debate on the engagement of HEIs in social innovation initiatives, and the promotion of more inclusive and sustainable development policies in the Global South, particularly in the BRICS.

With this in mind, first, we provide evidence on the growing interest in social innovation/entrepreneurship worldwide, and then present how scholars focused on the university's third mission have articulated the notions of "social innovation" and "inclusive innovation" in the specialized literature. After that, we provide an overview on the BRICS higher education systems with an attempt to identify how the idea of social/inclusive innovation has emerged in those contexts. Particular attention is devoted to the participation of international actors as to provide background information for further investigation in a second working paper, more specifically focused on social innovation multiscalar governance in the BRICS HEIs.

We conclude that, although innovation has been largely understood in the BRICS counties in a rather traditional sense, evidence suggests that the notions of "social innovation" and "social entrepreneurship" have been on the rise in all these countries' higher education contexts. Notably, this process features a strong international dimension, with related activities largely informed by or conducted in partnership with international and transnational actors, especially based in or originally from Europe. We advocate that more South-South collaborations must be established or strengthened as to further promote inclusive innovation and to foster more inclusive and sustainable socioeconomic development processes in the Global South.

Key-words

Social Innovation; Social Entrepreneurship; Inclusive Innovation; Higher Education; HEI; BRICS; Inclusive Development.

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Social Innovation and Higher Education in the BRICS (1): a background overview

Paula R. Cruz[1], Victor Rebourseau[2] and Alyssa Luisi[3]

1. Introduction

Social innovation and social entrepreneurship[4] initiatives involving higher education institutions (HEIs) have recently become an international trend. Their prominence stems from increased interest in innovation phenomena that go beyond the traditional focus on technological and product innovations. “Social innovation” is often defined as ‘a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals’ (Phills, Deiglmeier and Miller 2008: 36). Other such definitions include: ‘the development and implementation of new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society’s capacity to act’ (Murray, Caulier-Grace and Mulgan 2010: 3; European Commission 2013: 6); and, the European Commission (2013: 6) adds, ‘[i]t represents new responses to pressing social demands, which affect the process of social interactions. It is aimed at improving human well-being.’

Although projects and activities aimed at tackling pressing social demands are not a novelty in the history of higher education, especially among universities[5], the current proliferation of

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(4) While generally articulated in different contexts, the terms “social innovation” and “social entrepreneurship” tend to refer to similar activities and processes—so much so that there seems to be a growing consensus as to interpret them as ‘twins with the same mission’ (Brudenius 2017: 31). For the purposes of this paper, herein we adopt these terms interchangeably.
(5) The idea that universities should have—in addition to teaching and research—a ‘public service’ mission first arose in the US in the 19th century (Scott 2006). This notion has evolved in different ways around the world, and a number of related terms have been adopted to indicate a wide range of forms of academic outreach activities.

academic social innovation practices and models relate to recent transformations universities have been undergoing worldwide. In particular, such practices and models must be understood in light of their interrelations with processes of higher education reform in the context of the so-called Global Knowledge Economy (Etzkowitz and Leydesdorff 1997, 2000; World Bank 2003). However, how exactly some of these global trends have taken shape in specific institutional settings, and how higher education governance with regard to social innovation plays out in different countries, remain open questions.

This paper addresses these questions with a specific focus on social innovation initiatives at HEIs in the BRICS countries (Brazil, Russia, India, China, and South Africa). The intention is to contribute to both the advancement of the scholarly debate on this topic of growing interest, and the promotion of more inclusive and sustainable development policies in the Global South, particularly in the BRICS. With this in mind, we first provide evidence on the growing interest in social innovation/entrepreneurship worldwide (Section 2), and then present how the notions of "social innovation" and "inclusive innovation" have been articulated in the specialized literature on the university's third mission (Section 3). After that, we provide an overview on the BRICS higher education systems with an attempt to identify how the idea of social/inclusive innovation has emerged in those contexts (Section 4). Particular attention is devoted to the participation of international actors in these processes as to provide background information for further investigation in a second working paper, more specifically focused on analyzing social innovation multiscalar governance in the BRICS HEIs (see Cruz, Luisi and Rebourseau 2018).

2. The Growing Interest in Social Innovation/ Entrepreneurship

Since Professor Muhammad Yunus launched his credit delivery system project for South Asian rural communities in 1976 at the University of Chittagong, Bangladesh, and especially after the creation of the Grameen Brank in 1983, social innovation has been widely acknowledged as a promising means to alleviate poverty and promote socioeconomic development. Indeed, microcredit has even been labeled "the quintessential social innovation" (Phills, Deiglmeier and Miller 2008: 36).[6] Although the theoretical roots of "social innovation" and "social entrepreneurship" actually trace back to the late 1950s (Godin 2012), interest in these terms has skyrocketed over the past decade, resulting in their incorporation into the lexicon of international development scholars and practitioners (cf. Brudenius 2017; Grisolia and Ferragina 2015).

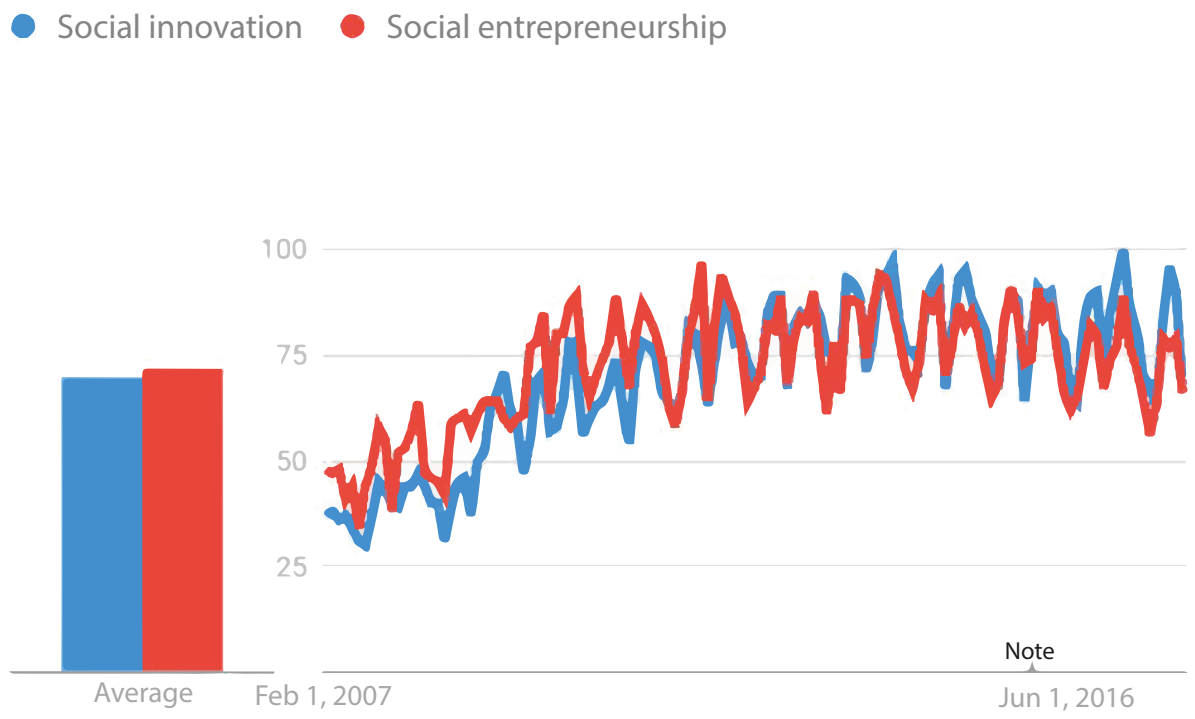
As an illustration, it is interesting to note that the frequency of web searches for these terms through Google grew steadily from 2007 to 2017, and last peaked in March 2017 (Figure 1). As Figure 2 shows, searches for "social innovation" have predominated in European countries, as well as in Australia, Canada and Brazil. In contrast, searches for "social entrepreneurship" have predominated in the United States, India and South Africa. As for the other BRICS countries (i.e.

The US notion of 'university extension' managed to spread throughout Latin America in the late 1950s and 1960s (Arocena e Sutz 2005), while expressions such as 'university lifelong learning' (ULLL) and 'community engagement' have predominated in Europe (Field, Schmidt-Hertha and Waxenegger 2016). These concepts relate to some extent to what is now called 'social innovation' and 'social entrepreneurship' in the context of HEIs.

(6) While microfinance is still promoted and adopted as an effective policy for socioeconomic development in many countries, its reach and effectiveness has been largely criticized. Bateman and Chang (2012: 28-30), for example, contend that microfinance is a vehicle for neoliberalism, acting as a "safety valve" within the globalization project, and constituting a 'very powerful "poverty trap".'

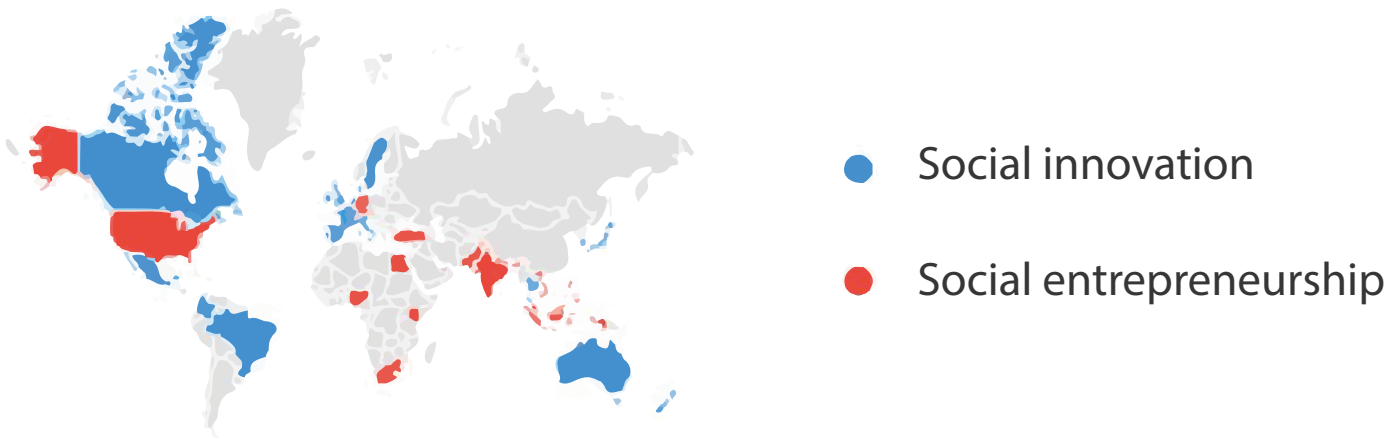
China and Russia), the apparent lack of interest might reflect the fact that Google is blocked in China, and has occasionally been blocked in Russia, wherein a different search engine (Yandex) dominates the market share.

Figure 1: Google Web Search (2007-2017)



Source: Google Trends[7]

Figure 2: Google Web Search, by region (2007-2017)



Source: Google Trends[8]

Brudenius (2017: 24) attributes this interest "explosion" in social innovation/entrepreneurship to 'a concern in civil society that there are increasing problems that are not solved, nor attended to, by neither the public, nor the private sector.' For example, social innovation has been regarded as a

(7) Available at: https://trends.google.com/trends/explore?date=2007-01-26%202017-12-27&q=Social%20innovation,Social%20entrepreneurship. Accessed on 17 Jan 2018.
(8) Available at: https://trends.google.com/trends/explore?date=2008-01-27%202018-01-17&q=Social%20innovation,Social%20entrepreneurship. Accessed on 17 Jan 2018.

promising tool to tackle environmental issues (e.g. Cruz, Todaro and Bizzi 2016). The rising interest in social innovation is thus linked to the recent consolidation of the idea of "governance" in the public imaginary, and more specifically to the role assigned to non-governmental and other non-profit organizations (the so-called "Third Sector") in contemporary socioeconomic development processes.

Meanwhile, governments and intergovernmental organizations, especially in the Global North, started to create strategies to support social innovation/entrepreneurship both domestically and internationally. As Brudenius (2017: 25) observes, after 'Geoff Mulgan (NESTA) deplored in 2007 that "no country has a serious strategy for social innovation comparable to strategies for innovation in business and technology" […] there has since then been a tendency to a growing commitment by governments and international organizations as to the role of social innovation and the importance of involving civil society in this work.' Examples include the creation, in 2000, of the OECD/LEED *Forum on Social Innovation* (which 'has since then facilitated international dissemination and transfer of best policies and practices in social innovation');[9] the establishment, in 2009, of the US White House *Office for Social Innovation and Civic Participation*, and of the British Council's *Global Social Enterprise Programme* (which is now active in 29 countries, has trained 17,590 social entrepreneurs, and formed over 150 partnerships across government, civil society, business and academia);[10] and a number of initiatives and programs launched by the European Union since 2010 with the main objectives of 'promoting social innovation as a source of growth and jobs, sharing information about social innovation in Europe, [and] supporting innovative entrepreneurs and mobilising investors and public organisations'.[11]

A strong internationalization strategy integrates the European Union's goals towards social innovation, as well as the UK government's promotion of social enterprise. As this paper will illustrate, the European Commission and the British Council are behind many social innovation/entrepreneurship initiatives carried out in the BRICS countries. Regarding HEIs in particular, the European Union has advocated for a new model of University–Socioeconomic engagement, intended to 'result in a new paradigm for knowledge transfer within universities, supporting the concept of social innovation as key to social development and cohesion at both a regional and international level'.[12]

As for the UK government's social enterprise internationalization strategies involving HEIs, in 2016, the British Council published a report entitled *Social Enterprise in a Global Context: the Role of Higher Education Institutions*. The report followed a research project comprising 205 HEIs in twelve countries, conducted by Plymouth University to 'understand and enhance the role of international cooperation between HEIs and social enterprises' (British Council 2016: 6). Besides presenting a set of recommendations, the report underlined the 'continued importance of the British Council's work in this area' (Ibid: 37). Since 2009, a number of programs and activities aimed at enhancing awareness on social enterprise and stimulating linkages with HEIs have been developed by the British Council in specific countries, including India, China, and South Africa, as part of its *Global Social Enterprise Programme* (see below). Notably, this program is linked to the British government's strategy to increase the exports of UK social enterprises worldwide. Indeed, by 2014, China, India and South Africa were, respectively, the second, third and ninth biggest export markets in the world reached by UK social enterprises (British Council and SE UK 2014). Moreover, India, South Africa, Brazil and Hong Kong were respectively identified as the second, fourth, fifth and seventh markets of most interest to UK current and potential exporters (Ibid).

(9) Available at: http://www.oecd.org/cfe/leed/Forum-Social-Innovations.htm. Accessed on 10 January 2018.
(10) Available at: https://www.britishcouncil.org/society/social-enterprise. Accessed on 10 January 2018.
(11) Available at: http://ec.europa.eu/growth/industry/innovation/policy/social_en. Accessed on 10 January 2018.
(12) See http://lasin-eu.org/en/what-lasin and http://www.seasin-eu.org/about-seasin/. Accessed on 17 Jan 2018.

We shall now address how the growing interest in social innovation/entrepreneurship relates to recent changes in higher education at the global scale.

3. Social Innovation and the University's Third Mission

In the mid-1980s and 1990s, the widespread enthusiasm about microcredit finance overshadowed another important dimension of Professor Yunus's groundbreaking project. In particular, the role of HEIs, especially universities, in social innovation processes remained largely neglected while developing banks' performances were in the spotlight. More recently, however, attention has been drawn to a range of different actors engaged with social innovation projects. Regarding the role of HEIs in particular, the increasing commitment to social innovation—and innovation in general—relates closely to recent global-reach changes in the higher education area. To a large extent, these transformations result from the widespread perception that, in the face of the Global Knowledge Economy, HEIs—especially universities—should play a wider and more direct role in promoting social and economic development (Etzkowitz and Leydesdorff 1997, 2000; World Bank 2003). In other words: 'Rather than "ivory towers" devoted to the pursuit of knowledge for its own sake, a growing number of industrial-economy and developing-economy governments seek to use universities as instruments for knowledge-based economic development and change' (Mowery and Sampat 2006: 211). Largely referred to as the University's Third Mission, such a role has been perceived as a new development in universities' institutional evolution, adding to its traditional teaching and research missions.[13]

Terms and conceptualizations describing the contemporary university abound, but the "entrepreneurial university" has arguably become the mainstream view. Although initially discussed in a critical way by Slaughter and Leslie (1997) as part of what the authors called "academic capitalism," it did not take long for the term "entrepreneurial university" to be articulated as a recipe for reforming universities in the early 21st century (Clark 1998; Etzkowitz et al 2000, 2008; Fayolle and Redford 2014; Foss and Gibson 2015). Clark, for example, advocated that entrepreneurially-led organizational transformation should lead universities' efforts to cope with the complexities and uncertainties of the new millennium. He conceptualized the entrepreneurial university as follows:

> "Entrepreneurial" is taken […] as a characteristic of social systems; that is, of entire universities and their internal departments, research centers faculties, and schools. The concept carries the overtones of "enterprise" – a willful effort in institution-building that requires much special activity and energy. Taking risks when initiating new practices whose outcome is in doubt is a major factor. *An entrepreneurial university, on its own, actively seeks to innovate in how it goes about in business*. It seeks to work out a substantial shift in organizational character so as to arrive at a more promising posture to the future (Clark 1998: 3-4; emphasis added).

Further definitions have been formulated since Clark's, however, the mainstream view of the entrepreneurial university still describes the concept as closely connected to the notions of "academic commercialization" (i.e. 'activities in which a university is involved, at some point, in selling to a customer for profit') and "technology transfer" (i.e. 'the process of turning scientific discoveries and inventions into marketable products') (Reddy 2011: 16). Specifically, academic commercialization encompasses activities such as the creation of intellectual property (patenting

(13) For an excellent overview of the historical evolution of the university's institutional missions, see Scott (2006).

and licensing of inventions), the establishment of specialized structures with the aim of giving support to commercialization (technology transfer offices, science parks, start-ups, and internal rules and procedures), as well as consulting services and the realization of collaborative research with government and firms. Indeed, more recent definitions, such as Fayolle and Redford's below, stress these elements as central to the concept of the "entrepreneurial university":

> The modern era acknowledges the importance of a 'Third Mission': the economic and social valorization of knowledge produced by researchers within universities, creating the need for strategies, structures and mechanisms within universities that facilitate and intensify knowledge transfer to the private sector, via various avenues: patents, licensing, and facilitating academic spin-offs and start-ups, among others. Universities also need to develop a more entrepreneurial orientation and culture, and university researchers need to become increasingly entrepreneurial […]. Finally, this new model gives a greater importance to the relationships between three types of stakeholders: governments, universities and businesses (Fayolle and Redford 2014: 2).

As Reddy (2011: 29) observes, many countries have adopted this new "policy doctrine," according to which 'universities must be encouraged not to restrict themselves to providing knowledge to existing firms but to engage in the commercialization of knowledge themselves.' In other words, the entrepreneurial university has been normally understood as a market-oriented institution aimed at offering specialized services to society, mainly through the mechanism of the knowledge and information market. This model has been reinforced and popularized mainly through Etzkowitz and Leydesdorff's (2000) Triple Helix thesis, according to which innovation-oriented interactions between universities, industries, and governments (U-I-G linkages) would foster economic growth (see also Etzkowitz et al 2000).

These ideas have nevertheless been highly controversial. Numerous critics (e.g. Giroux 2014; Martin 2011; Münch 2014; Sidhu 2006; Slaughter and Rhoades 2014; Washburn 2006) have joined Slaughter and Leslie (1997) in denouncing the detrimental effects of turning universities into market-oriented institutions, while others have sought to provide alternative models. The "developmental university" (Arocena and Sutz 2005, 2017; Brudenius, Lundvall and Sutz 2008; Brudenius and Göransson 2011) is particularly relevant here, as it connects more closely to the question of social innovation.

Adopting a Southern perspective, Arocena and Sutz (2017) argue that, while higher education marketization is increasing in the South as much as in the North, there is weak commercial demand for advanced knowledge in most Southern countries. The business sector's low contribution to R&D in those countries reflects this trend, and 'is a telling reminder that peripheral economies are not knowledge-based and innovation-driven' (Ibid: 57). For the authors, an entrepreneurial-oriented university reform with a focus on knowledge commercialization is therefore unlikely to turn universities into "engines of economic development" in the Global South. They contend that the "entrepreneurial university" rests on a narrow view of the university's third mission, and that a broader view should also address questions of equality and inclusiveness. In addition, it should encompass a wide range of interactions, not only with business and for commercial/industrial purposes, but with society at large, as to tackle pressing social and environmental demands. Arocena and Sutz (2005, 2017) advocate an expanded notion of university extension[14] (as experienced in Latin American countries, especially in Brazil) as a core feature of an alternative global model for university transformation. The "developmental university" model is characterized by universities' commitment to *inclusive development.*[15] As Kruss (2017: 224-225) defines it,

(14) University extension activities emerged in the United States in the late 19th century (Scott 2006; see also footnote 5). Like in Brazil, some US universities, such as the University of Wisconsin (famous for developing in the early 20th century the "Wisconsin Idea" on how universities should engage with the government and society), still adopt the term "extension" to refer to a number of socially-oriented outreach activities, including community engagement.

(15) In this perspective, the notions of "inclusive development" and "inclusive innovation" are particularly em-

> "inclusive development" […] is not "economic growth alone and not economic development alone" […] not can it be equated with a country "catching up." "Inclusive development" encompasses outcomes and benefits that are both by and for "marginalised groups," specifically those communities, households and individuals excluded from circles of social and economic power. This highlights the significance of *agency* as the characteristic that qualifies a process of inclusive development, in contrast with top-down attempts at development that do not involve local communities or do not include them as active agents in the process.

Arocena and Sutz (2017: 62) contend that the "developmental university" would contribute to inclusive development 'by means of the interconnected practice of three university missions: (1) teaching, (2) research, and (3) fostering the socially valuable use of knowledge.' With specific regard to the latter, they claim that universities should aim 'above all to cooperate with a wide variety of actors in interactive learning processes that upgrade the capabilities for producing goods and services as well as for solving problems, with priority given to the needs of the most deprived sectors' (Ibid: 62). This model seems in line with the recommendations of prominent post-colonial thinkers, such as Boaventura de Souza Santos, with regard to university reform in the 21st century. As Santos puts it:

> The extension area will have a very special meaning in the near future. At a time when global capitalism intends to functionalize the university and, indeed, transform it into a vast extension agency at its service, university reform must give a new centrality to extension activities (with implications in the curriculum and in the careers of teachers) and conceive them in an alternative way to global capitalism, giving universities an active participation in the construction of social cohesion, deepening democracy, fighting social exclusion and environmental degradation, in defense of cultural diversity (Santos 2004: 53-54, our translation).

More particularly focused on the notion of social innovation, Brudenius (2017) points out what Matheson has listed as five conditions for a successful social innovation agenda at universities:

> (1) An institutional strategic policy commitment to social innovation; (2) an inclusive, institutionalized process for mobilizing all faculties and disciplines to advance social innovation; (3) a robust and diversified approach to community engagement; (4) a university-wide commitment to employing free licensing and open-source software (F/LOSS) values and strategies to the research and innovation-transfer process; and (5) mobilization of internal and external resources to support social innovation (Matheson 2008 *apud* Brudenius 2017: 43).

The extent to which such conditions have been met, or at least included among the goals of higher education policy makers and managers, varies enormously across countries and institutions. Much research remains to be done in this regard. But the fact is that, over the last decade, social innovation projects have started to proliferate at universities both in the Global North and South. The following three examples help to illustrate this global trend. In 2000, Stanford University created the Stanford Center for Social Innovation,[16] which has become a global reference on the topic, especially since the launching of the *Stanford Social Innovation Review* (SSIR)—a highly influential academic journal intended to promote 'the best research- and practice-based knowledge' on social innovation.[17] Reporting the same trend in the United Kingdom, in June 2013, *The Guardian* announced, 'Universities begin to unlock the potential of social enterprise.' The article revealed

phasized, with inclusive innovation seen as 'the driving force behind inclusive development, a structural change process that empowers excluded groups by placing them at the center of a process of change that involves the institutionalization of mechanisms for redistribution of income and social empowerment' (Renault, de Mello and Araújo 2017: 4). The discussion of social innovation seems to be more advanced in Global North countries, wherein 'there is a concern to innovate to *avoid exclusion,*' while the discussion of inclusive innovation has echoed more prominently in the South—that is, in contexts wherein *'exclusion already exists'* (Ibid.: 4).

(16) Available at: https://www.gsb.stanford.edu/stanford-gsb-experience/news-history/history/csi. Accessed on 10 Dec. 2017

(17) Available at: https://ssir.org/about/overview. Accessed on 10 Dec. 2017.

the UK government's aim to "embed" a culture of social entrepreneurship in 40% of the English HEIs.[18] Finally, in January 2015, *Ashoka*—the world's largest network of social entrepreneurs with nearly 3,000 fellows in 70 countries[19]—founded its first university, based in New Delhi, India.[20] The university is part of a broader initiative called *Ashoka U*, which was launched in 2008 with the aim of fostering 'a campus-wide culture of social innovation'.[21]

In the next section, we investigate how the notion of social/inclusive innovation/entrepreneurship has emerged in the BRICS higher education systems.

4. Social innovation in the BRICS Higher Education Systems

Over the past decade, technological innovation and market-oriented activities have been increasingly supported in the BRICS Higher Education (HE) and Science, Technology and Innovation (STI) systems as part of governmental strategies to develop these countries domestically and to consolidate them as significant players in the Global Knowledge Economy (Fernandes, Garcia and Cruz 2015). However, social innovation initiatives in the BRICS tend to emerge as a result of particular individual or institutional efforts, in a rather fragmented way.[22] Moreover, those initiatives are generally influenced by, or developed in partnership with, people and organizations from the Global North.

At an institutional level, a closer look will show that, although most HEIs in the BRICS are not yet familiar with the term "social innovation," many of them have indeed traditionally engaged in the development and implementation of new ideas and solutions to meet social needs and have created new social relations or collaborations in response to pressing social and environmental demands. In other words, even though the term "social innovation" might be new, the concept at the core of its definition is not exactly a novelty for many HEIs in the BRICS.

Thus, in the remainder of this section, we present an overview of how the notion of social innovation relates to ideas and practices already articulated and realized in the history of the BRICS HE systems. We begin by examining some governmental top-down measures, and then provide some bottom-up examples of how HEIs have engaged in social innovation projects. We contend that renewed attention to some of these ideas and practices should help to (re)orient HE and STI public policies in the BRICS towards a broad understanding of the university's third mission and, more broadly, of the role of HEIs in fostering more inclusive and sustainable socioeconomic development.

(18) Available at: https://www.theguardian.com/social-enterprise-network/2013/jul/26/higher-education-social-enterprise-innovation. Accessed on 10 Dec. 2017
(19) Available at: https://www.ashoka.org/about. Accessed on 10 Dec. 2017
(20) Available at: http://www.ashoka.edu.in/. Accessed on 10 Dec. 2017
(21) Available at: http://ashokau.org/. Accessed on 10 Dec. 2017
(22) A partial exception is taking place in India, where the central government's goals established in the Decade of Innovation 2010-2020 Roadmap places a great deal of emphasis on inclusive innovation, and has created specific governmental bodies and mechanisms to promote inclusive innovation in the country (see item 4.3).

4.1 Brazil

Extension: a longstanding third mission in Brazilian universities

As mentioned above, the Brazilian extension system has inspired Arocena and Sutz's (2017) conceptualization of the "developmental university." Indeed, as some scholars have noted (Bachmann and Parisotto 2016; Renault, Mello and Araújo 2017), the role assigned to universities in social development in Brazil parallels the evolution of the notion of *university extension*. The first manifestations of university extension activities in Brazil occurred in the early 20th century under the influence of experiences carried out in England and in the United States, and developed concomitantly with the late-born Brazilian HE system as a whole (Forproex 2015). After decades of advances and drawbacks, university extension started to be institutionalized in the late 1960s, and was finally included in the 1988 Brazilian Constitution as inseparable from teaching and research (Art. 207). Since then, the federal government has formulated a number of plans and programs aimed at supporting university extension activities in public universities. In addition, the 1996 Law on Guidelines and Bases of National Education (Law nº 9.394) established extension as one of the main goals of Brazilian universities. Such achievements reflected to a large extent the work and discussions promoted by the Nation Forum of Pro-Rectors of Extension of the Public Universities (Forproex). Drawing on the works of the distinguished Brazilian educator and philosopher Paulo Freire, in 1987 the Forum agreed on the following definition:

> University Extension is the educational, cultural and scientific process that articulates Teaching and Research in an inseparable way and that enables the transformative relationship between University and Society. […] This flow, which establishes the exchange of systematized, academic and popular knowledge, will have as consequences the production of knowledge resulting from the confrontation with the Brazilian and regional reality, the democratization of academic knowledge and the effective participation of the community in the University's performance. In addition to instrumentalizing this dialectical process of theory / practice, Extension is an interdisciplinary work that favors the integrated view of the social (Forproex 1987 *apud* Forproex 2015: 15, our translation).

This definition sought to overcome a previously dominant notion in Brazil that university extension would merely refer to processes and practices involving academic knowledge dissemination (e.g. courses, conferences, and seminars), public services provision (e.g. aid, consultancies), and knowledge and culture promotion (e.g. events, exhibitions, expositions). In contrast, since the late 1980s, university extension in Brazil has been understood as an instrument for enhancing university–society interrelations; that is, as 'a form of "dialogical interaction" that brings about multiple possibilities for transforming both society and the public university itself.' (Ibid: 17). Created in 2003,[23] the *University Extension Program* (PROEXT) of the Ministry of Education (MEC) has supported public HEIs to develop extensions projects and programs that contribute to the implementation of public policies. MEC specifically states that PROEXT encompasses university extension with emphasis on social inclusion.[24]

To be sure, in Brazil, for an HEI to be registered by MEC as a university, it must have teaching, research *and* extension missions expressed in its statute. However, comparatively few universities make up the Brazilian HE system. According to most recent official data available (INEP 2017), in 2014 there were 195 universities, 147 university centers, 1,986 faculties, and 40 higher education institutes and centers for technological education in Brazil. Noteworthy, Brazil has one of the most privatized HE systems in the world, with the private sector accounting for 87.4% of the total of

(23) PROEXT originated from a previous program called PROEXTE. The latter was launched in 1993 and suspended three years later.
(24) Available at: http://portal.mec.gov.br/index.php?option=com_content&view=article&id=12241&ativo=488&Itemid=487. Accessed on 20 Jan 2018.

2,368 HEIs, and 72% of the 7,828 million enrollments (Ibid). Even more alarming, 'most of these institutions are for-profit[25] and controlled by large business groups' (Castro 2015: 271), with no commitment to conducting research or extension activities. In fact, apart from the public and a few not-for-profit HEIs (including prominent Pontifical Catholic Universities), most HEIs in Brazil are mere providers of low-quality postsecondary education.

Inclusive higher education policies

In spite of the gloomy picture depicted above, important inclusion-oriented initiatives were implemented by the Federal Government under the Brazilian Labor's Party presidential terms (2003 to mid-2016), including the development of a successful quota system, and the creation of two federal programs to address the issues of access and redress.

Previously adopted by particular public universities, in 2012, the Quota Act (Law nº 12.711) established that all federal public universities must implement affirmative action policies and reserve enrollments for black and brown students (ethno-racial quotas) and for low-income students coming from public schools (social quotas). Established in 2001, and significantly expanded since 2010, the Student Financing Fund (FIES) comprises a low-interest rate loan mechanism to support students to attend private HEIs. In addition, the University for All Program (PROUNI) (created in 2004) was designed to stimulate private HEIs to provide low-income students with partial or full scholarships in exchange for tax exemptions. Those governmental measures were aligned with the Federal Government's broader goal towards a significant expansion of infrastructure and student access to public higher education. This was called the Federal Universities Restructuring and Expansion Plans Support Program (REUNI), which also aimed to decrease student dropout and, more broadly, to reduce social inequalities in the country.[26]

In a historical perspective, such measures and programs significantly enlarged the access of low-income students to the Brazilian HE system, and contributed to advancing a more inclusive social development strategy in the country. However, much is still to be done, as middle- and high-income students still comprise the majority of the total student body in the Brazilian public universities. On the other hand, the success of the Quota Act has been evident in the performance of the low-income students eligible to benefit from it (the so-called *"cotistas"*). The Brazilian media has extensively reported the good and sometimes even better performance of those students in comparison with their peers (e.g. Arantes 2017; Bittencourt 2017)

Social inclusion and science, technology and innovation policies

With respect to STI policies, the Brazilian government has focused mainly on advancing the country's technological capacity and boosting innovation in the traditional sense, with a strong emphasis on fostering U-I-G linkages, establishing technology transfer offices within HEIs, and promoting technological parks (see, for example, Etzkowitz et al 2008; Maculan and Mello 2009). Despite this, some STI initiatives undertaken in the 2003–mid-2016 period reveal a certain degree of sensitivity to issues related to social inclusion.

A first step in this direction was the creation, in 2003, of the Department of Science and Technology for Social Inclusion (Secis) at the Ministry of Science, Technology and Innovation (MCTI) (Renault, de Mello and Araújo 2017). A major development occurred in 2007, when the MCTI adopted a

(25) HEIs were allowed to become for-profit in Brazil in 1997. This largely contributed to the rapid expansion of the HE market in the country.
(26) Available at: http://reuni.mec.gov.br/o-que-e-o-reuni. Accessed on 20 Jan 2018.

2007-2010 *Action Plan*, which explicitly contemplated social inclusion. In the 2012-2015 period, a new National Strategy for STI (ENCTI) further emphasized this point and established three main focus areas: (1) *Popularization of STI and improvement of science education*; (2) *Productive and social inclusion*, including 'the development and replication of social technologies with a view to technology transfer to individual entrepreneurs and micro and small enterprises and the promotion of technological extension activities for productive and social inclusion;' and (3) *Technologies for sustainable cities*, with the purpose of improving 'the quality of life in urban areas, through the development of new methods and techniques that meet social demands, especially in the areas of education, health, housing, security, transportation, and energy' (Ibid: 86-87).

In 2011, the MCTI also launched, together with the Brazilian Innovation Agency (FINEP), the *National Program on Innovation and Assistive Technology*. Particularly directed to 'universities, research institutes and enterprises that developed research on innovation with high technological risk associated with market opportunities,' the program aimed at 'supporting the development of innovative products, methodologies, strategies, practices, and services that enhance the autonomy, well-being and quality of life of people with disabilities' (our translation).[27]

Unforeseen challenges: a huge throwback in the Brazilian social inclusion path

Despite the advances mentioned above, the current political, institutional, and economic crisis in Brazil has deeply impacted the Brazilian HE and STI systems—not to mention the social security programs. Since 2014, the *National Program on Innovation and Assistive Technology* has not released a new call for non-refundable proposals, and in 2016 Secis lost its status of Department in the now-called Ministry of Science, Technology, Innovation and Communications (MCTIC). Overall, public investments in HE, STI, and social programs have been drastically reduced, especially since 2016, when Michel Temer became President of Brazil and announced a rampant and highly controversial package of austerity measures, putting the maintenance of Brazilian HE and STI systems at risk (Cruz 2016; Agência Câmara Notícias 2017a, 2017b).

These recent setbacks reflect the overarching neoliberal mindset adopted by the current Federal Government in Brazil. This mindset has been further ingrained through the support of the World Bank, which in 2017 delivered a highly controversial and misleading report to the Federal Government recommending, inter alia, the establishment of student fees in Brazilian public universities (World Bank 2017). In the beginning of the same year, the executive secretary of MEC had already declared this intent. However, this measure has been highly criticized by experts and scholars who argue that, far from offering a solution to balance the enrolments of high-, medium- and low-income students in the Brazilian public HE system, the policy is likely to *sharpen* the system's already existing social inequalities (Cruz 2017; Druck, Filgueiras and Moreira 2017). Moreover, the decrease in public funding and the subsequent increase in tuition fees is likely to result in a large amount of indebted students, as has been observed in both Global North and South countries, such as the United States (Goldrick-Rab 2016) and South Africa (Kruss 2017; see item 4.5).

International collaborations and the rise of social innovation

Despite these setbacks in Brazilian public policies, interest in social innovation seem to be emerging in the country. Though in a very fragmented way, some universities have established social innovation labs, and support social innovation activities. The Federal University of Rio de

(27) Available at http://www.sdh.gov.br/assuntos/pessoa-com-deficiencia/observatorio/acessibilidade/programa-nacional-de-inovacao-em-tecnologia-assistiva. Accessed on 20 Jan 2018.

Janeiro (UFRJ) is a good example. Since the early 2000s, the Technological Solidarity Center (Soltec) has developed multiple initiatives addressing issues of social technology and social development. Attempts to expand Soltec's activities and embrace further research and extension projects at UFRJ resulted in the creation, in 2013, of the Interdisciplinary Nucleus for Social Development (Nides), a supplemental body of the UFRJ's Technology Center—'the main catalyst for technological activities in the state of Rio de Janeiro,' which also hosts the nationally acclaimed UFRJ technology park (Renault, de Mello and Araújo 2017: 89-91).

More recently, the term "social innovation" was officially included in UFRJ's institutional agenda. In 2017, the Social Innovation Support Unit (USIS) was created at UFRJ. The initiative is part of the *Latin American Social Innovation Network* (LASIN) project, composed of a consortium of thirteen partners, including eleven universities, in Chile, Colombia, Brazil and Panama. Under the coordination of the Glasgow Caledonian University (London, UK), LASIN is funded by the European Commission and carried out in partnership with "the world's primary network focusing on social innovation",[28] the *Social Innovation Exchange* (SIX), founded in the UK. Box 1 below presents USIS in more detail.

Besides LASIN, Brazilian HEIs have participated in a number of additional transnational networks, including the *Design for Social Innovation towards Sustainability* (DESIS), the *Fab Lab Network*, the *Learning Network on Sustainability* (LeNS), the *European Network of Living Labs* (ENoLL), among others. (see Cruz, Luisi and Rebourseau 2018, Table 2).

:: Box 1 ::

Social Innovation Support Unit at the Federal University of Rio de Janeiro (UFRJ)

Located in Rio de Janeiro, in 2017, UFRJ created its Social Innovation Support Unit (USIS). The initiative is part of the UFRJ's partnership with the European Commission's LASIN project. Following the framework developed by LASIN, USIS team includes professors, students, and technical staff from six different institutes and departments at UFRJ. It has been formally registered in MEC as an extension project aimed at establishing connections between community groups, social movements, NGOs, as well as governmental bodies in order to identify and give support to social innovations.

Its overall goal is 'to strengthen the links between university and the broader society [by] fostering a mutual learning process between university's members and social innovators.' This process 'involves the collaborative interaction between the multiple competences of the social innovators and the disciplinary areas of its university's members: design thinking, service design, product design, marketing, innovation management, videos and virtual reality, among others. It is based on the use of collaborative materials and tools, practical training, workshops and mentoring.'[29]

In 2017, USIS launched its first initiative aimed at training and mentoring social innovators in Brazil. Participants engaged in a co-creation process carried out in the format of workshops to further develop their skills towards social innovation activities. In the beginning of 2018, USIS opened its second call for social innovators. 12 projects are expected to be selected. The aim is to 'foster co-design processes involving social innovators, professors and students to produce concrete results.'

The Unit's main local partners include the Center for Cultural and Social Innovation (NICS), which is based at the Federal University of the State of Rio de Janeiro (UNIRIO) and also partakes in LASIN, and

(28) Available at: https://www.socialinnovationexchange.org/about-us/introducing-six. Accessed on 20 Feb 2018.
(29) Available at: http://lasin-eu.org/en/open-call-social-innovators-usis-ufrj Accessed on 20 Feb 2018.

the grassroots group Cariru Agricultura Urbana, which develops urban agriculture activities in the complex of favelas in Penha. USIS interacts also with international networks, such as the DESIS Network. Indeed, the UFRJ/COPPE DESIS Group has been a major articulator in the process of establishing USIS at UFRJ.

Source: Official websites (LASIN, SIGProj MEC); Cipolla (2017, interview).

4.2 Russia

Integrating teaching and research, while adding a third mission

Similar to other BRICS countries, universities in Russia were not traditionally assigned the role of conducting research, as they were limited to performing teaching activities. This division of labor was reinforced throughout the Soviet period, and, although governmental measures aimed at integrating research and teaching have been implemented since 2000, its legacy continues to be felt in the current Russian HE and STI systems. Particularly, strong opposition comes from the Academy of Sciences, which has traditionally dominated research activities in the country (Gokhberg, Kutnetsova and Zaichenko 2009; Johnson 20015; Smolentseva 2015; Gokhberg et al 2017). As with many countries around the world, in the 1990s, higher education in Russia was drastically impacted by attempted transformations following the neoliberal shock doctrine.

Neoliberal competition mechanisms still compel Russian HEIs to pursue external partnerships and additional funding sources, although, in 2000, the federal government 'began to reinvest in the higher education sector, to reassert its regulatory and steering role, and to reemphasize adherence to state academy standards, all in pursuit of system-wide "modernization"' (Johnson 2015: 298). Following the global trend of boosting HEIs' competitiveness and advancing a few selected "world-class" universities, such modernization attempts involved the development of the Russian "innovative universities." These leading universities comprise the top two tiers of the current Russian HE system, and have received federal grants to implement innovative education programs.

The first tier includes 29 National Research Universities (NRUs) aimed at advancing Russian scientific and technological capacities both nationally and internationally. They aim to provide highly qualified personnel to meet national economy needs, and also increase Russian participation in HEI international rankings. A second tier is composed of nine federal universities created through the merging of formerly specialized institutions, with the purpose of driving regional (re) development across the country. Their mission involves 'regenerating the "innovation systems" in their respective regions as well as embodying "social responsibility" by helping to design and implement new public-private partnerships in social services and the service professions' (Ibid: 305). They are also expected to create and train competitive human capital to promote regional socio-economic development and to integrate large-scale projects and programs at both regional and national levels (Gokhberg et al 2017: 294). An additional lower tier encompasses all locally-owned public and private HEIs, which are mostly intended to 'meet demand in low-priority regions and employment sectors, drawing largely on private funding' (Johnson 2015: 304).

"Innovative universities" and an emergent inclusive vision

Overall, Russian "innovative universities" exemplify a rather traditional definition of innovation, with emphasis on the generation of R&D, and the commercialization and internationalization of research

outputs (Smolentseva 2015). As we anticipated above, this is a common trend in all the BRICS countries, although India has recently shifted its approach (see below). Nonetheless, attention to "inclusive innovation" and "inclusive education" has recently emerged in Russia, at least in policy discourse. According to Gokhberg et al (2017), the term "inclusive innovation" was first used by the Russian federal government in the Strategy 2020, which comprises a set of guidelines for socio-economic development in the country. The document specifies 'inclusive innovation as a subset of socially oriented innovation activities aimed at [the] integration of socially vulnerable population groups into innovation processes,' and 'interprets inclusive innovation initiatives in education as tools providing the target groups with remote access to knowledge and skills (especially by ICT means) (Ibid: 286, 289).

Following the 2014 amendments to the Federal Law on Education (N 273-FZ/2012), which established the provision of inclusive education as a State obligation, support for related policies began to materialize, especially at the municipal and regional levels. The City of Moscow is a case in point. It has established measures particularly aimed at guaranteeing the inclusion of persons with disabilities at schools and HEIs—including the provision of necessary equipment (barrier-free environment), educational assistance, and financial support (through scholarships). Other vulnerable social groups can also apply for scholarships. In addition, significant investments have been channeled to developing remote education platforms (e-learning). In fact, access to education via new possibilities opened up by Information Communication and Technology (ICT) has been a major point in Russian education policies, as the country envisions transforming Russia into an Information Society (Ibid).

Despite these governmental measures, in practice social inclusion initiatives in the Russian HE system have mostly been implemented by particular institutions as the result of bottom-up endeavors. Gokhberg et al (2017) highlight cases in which HEIs were involved in these kinds of activities. Most of these projects focus on facilitating persons with disabilities' access to higher education. These include building campus barrier-free environments, advancing traditional programs focused on persons with hearing and visual disabilities, and creating workshops and networks aimed at raising academic awareness on the topic. Examples of Russian HEIs engaging with these kinds of activities include the Far Eastern Federal University (FIFU), Lomonov Moscow State University (MSU), Tomsk Polytechnic University (TPU), Bauman Moscow State Technical University (BMSTU), and National Research University Higher School of Economics (HSE). Box 2 at the end of this section provides information on some HSE's endeavors towards inclusive education and social innovation.

Internationalization and the rise of social innovation/entrepreneurship

A strong concern with internationalization currently informs the Russian government's policies and HEIs' institutional approaches to higher education. In 2013, the Federal Government launched the *Program on the Improvement of Global Competitiveness*, which establishes as one of its main goals for 2020 the inclusion of at least five Russian HEIs amongst the top 100 world universities ranked by the Academic Ranking of World Universities (ARWU, also known as Shanghai Ranking), the Times Higher Education World University Rankings (THE), and the QS World University Rankings (QS) (Gokhberg et al 2017). This goal has come to be known as the *5-100 Russian Academic Excellence Project*. 15 universities were selected in 2013 and have, since then, received substantial governmental funding to work on improving their performance levels, as measured by the number of publications, citation impact, and level of internationalization among both professors and students. To achieve this, they put special emphasis on developing strategic plans to attract young faculty, staff, researchers and students from abroad, promoting academic mobility, increasing the number

of postgraduate programs and doctorates, and enhancing collaboration with leading international universities and research organizations (Ibid).

In 2015, five of those 15 universities managed to be ranked amongst the top 100 world universities by the THE and the QS. However, Gokhberg et al (2017: 296) point out that 'temporary achievement of this formal target does not intend a complete success of the "5-100" project,' which requires 'the creation of long-term competitive advantages, comprehensive internationalization, assuring world-class level of education process and intellectual outputs, building up robust academic reputation, [and] deep integration into STI system.' With this in mind, these universities have been annually monitored and evaluated.

HEIs in Russia have also been particularly engaged in promoting social entrepreneurship through both intramural and extramural activities. In short, social innovation/entrepreneurship has been generally promoted by inculcating a campus entrepreneurial culture in Russian HEIs. Particularly, teaching frameworks and curricula have been reformed with this purpose, while professors and students have been pushed towards creating social innovation labs and projects within their host HEIs. They have also been incentivized to engage in social entrepreneurship initiatives in partnership with businesses, governments, networks, NGOs and/or other possible actors at the local, national and international levels. For example, Lobachevsky State University of Nizhni Novgorod (UNN) collaborates closely with the Nizhny Novgorod Scientific Centre of Russian Academy of Sciences (NNSC RAS), and has established a network of 100 universities in the Volga Federal District of Russia. Ten of those universities are also involved in a transnational cooperation project with the European Union to provide infrastructural support for innovation in a wide range of fields. Since 1991, UNN has established partnerships with 95 HEIs from abroad, having resulted, inter alia, in the creation of the Russian-French University and the Russian-Italian University programs, through which students can earn double degrees. Currently, UNN is also a member of the European University Association (EUA).[30]

Another notable example of local social innovation initiatives that also carry a strong international component is the creation of Fab Labs in the Russian education system. The first Fab Lab in Russia was founded in 2011 at the NRU Moscow Power Energy Institute (MEIP), in partnership with the nonprofit education program Schlumberger Excellence in Education Development (SEED) and two prominent HEIs in the United States, namely, Stanford University and the Massachusetts Institute of Technology (MIT).[31] Currently, there are 31 Russian Fab Labs listed in the network's official website.[32] Notably, all of them also participate in the *Europe's Network of Digital Social Innovation* (DSI4EU). Currently, the DSI4EU gathers 1,943 organizations, with a total of 1,029 projects that focus on how digital technologies can be used to tackle social challenges in areas such as healthcare, education, democracy and the environment.[33] The DSI4EU initiative has been implemented by a consortium of seven partner organizations in Europe—i.e. Nesta (UK), Waag (Netherlands), betterplace lab (Germany), Fab Lab Barcelona (Spain), WeMake (Italy), Barcelona Activa (Spain) and the ePanstwo Foundation (Poland)—and is part of the *Collective Awareness Platforms for Sustainability and Social Innovation* (CAPS), which comprises a community of innovation entities that actively cooperates with the European Commission in the promotion of digital social innovation.[34]

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(30) Available at: http://eng.unn.ru/about/unn-at-a-glance. Accessed on 20 Jan. 2018.
(31) Available at: http://www.fablabconnect.com/from-the-first-fab-lab-in-moscow-to100-youth-innovation-centers-across-russia/. Accessed on 20 Jan. 2018.
(32) Available at: https://www.fablabs.io/labs?country=ru. Accessed on 20 Jan. 2018.
(33) Available at: https://digitalsocial.eu/about-the-project. Accessed on 5 March 2018.
(34) Available at: https://ec.europa.eu/digital-single-market/en/news/caps-community-meeting-and-workshop. Accessed on 5 March 2018.

Participation in other transnational networks include a recently-founded DESIS Lab at the Saint Petersburg State University (see Cruz, Luisi and Rebourseau 2018).

:: Box 2 ::

Internationalization and Inclusive Education at National Research University Higher School of Economics (HSE)

Situated in Moscow, HSE is one of the fifteen Russian universities participating in the Federal Government's 5-100 Project. It has focused on becoming a well-renowned research university over the past two decades and on enhancing its international presence through cross-border cooperation projects and partnerships. The university sees itself as 'a leader in combining Russian education traditions with the best international teaching and research practices.'

The promotion of inclusive education and social innovation initiatives is also amongst HSE's institutional endeavors. The university encourages both students and faculty staff to develop socially-inclusive and socially-innovative projects, which can potentially be awarded by the university's "Zolotaya Vyshka" annual competition. This was the case of, for example, the "HandTalking" project, which comprised the development of an internet browser for persons with vision loss. Thereafter, the project's team was invited to cooperate with leading Russian corporations in the information technology sector.

In 2014, HSE created a specific competition for innovative projects in higher education with the aim of encouraging, selecting and supporting promising innovative projects designed by faculty and research teams to meet the new challenges of the Russian education context and labor markets. Once selected, the project is launched by HSE and may be incorporated into the permanent structure of HSE's academic courses. The project selected in 2014 was particularly focused on inclusive education. It consists in providing a training course where education and rehabilitation tools are combined with the purpose of assisting children with disabilities.

Sources: HSE official website; Gokhberg et al (2017: 299-300).

4.3 India

Integrating research and teaching and the advent of "innovative universities"

Despite India's longstanding pre-colonial tradition in research and education, in the colonial period higher education in India was remolded after European universities and colleges. However, the British rulers only allowed them to conduct research on certain specific areas—such as agriculture, geology and medicine—that would be helpful from the perspective of the colony's administration (Gorur and Rizvi 2015). It was just after independence in 1947 that India began building a research infrastructure. Since then, however, research and higher education have evolved in parallel paths, independently from each other, with the vast majority of universities and colleges performing exclusively teaching-related activities. As with Russia, only recently have Indian HEIs, especially universities, been pushed towards engaging in research activities, but they still struggle with significant challenges to fully integrating research into their institutional and curricular frameworks.

Studies often highlight the size and complexity of the Indian HE system, which is the largest in the world in terms of number of institutions, the third largest in terms of enrolments, but is also remarkably unequal with respect to access, especially for persons from rural communities and of lower castes in the Indian stratified society (Ibid; Tilak 2012; Trilokekear and Embleton

2015). Moreover, until the early 2000s, higher education was strongly neglected by policymakers, disadvantaged by 'the absence of a clear, coherent and explicit long-term policy perspective […] and a vision for its development' (Tilak 2012: 1). This favored the rapid growth of the private for-profit higher education sector, which also benefited from the liberalization of the Indian economy in the early 1990s. However, as in Brazil, private HEIs in India tend not to invest in research and other types of activities other than (poor quality) teaching (Gorur and Rivzi 2015; Trilokekear and Embleton 2015).

However, since 2005, some things have started to change. The Indian government has begun to actively address higher education, and has made significant attempts to reform the system—even though some important proposals remain to be implemented. Following many of the recommendations presented by the National Knowledge Commission (NKC) and by the Yashpal Committee (respectively in 2005 and 2009), the Indian Central Government elaborated the 11th Five-Year Plan (2007-2012) and the 12th Five-Year Plan (2012-2017). Besides significantly increasing public investments, expanding the system, and reinforcing the need for reservation policies as a means to include socially disadvantaged groups in the Indian HE system (Trilokekear and Embleton 2015), those plans explicitly linked HE reforms to innovation (Gorur and Rizvi 2015: 429).

Driven by the Indian government's aspirations to transform the country into a knowledge society/economy, the plans' goals included the creation of 30 new central universities and several new institutes of technology and management across the country, in addition to 14 world-class "innovation universities" (Ibid). All Indian HEIs are now supposed to undertake some level of research in order to promote a culture of innovation that should lead to the integration of research and higher learning. Moreover, HEIs are expected to forge linkages with industry and research institutions, mainly through private–public partnerships, and to engage in collaborative relationships with both national and international stakeholders. Pressure is particularly put upon "innovation universities" to deliver those outputs, as they are supposed to enjoy more institutional autonomy to collaborate with foreign educational providers (Gorur and Rizvi 2015; Trilokekear and Embleton 2015).

Inclusive innovation as the Indian Model of Innovation

For the purposes of this paper, it is particularly important to stress the occurrence of what Gorur and Rizvi (2015: 430) see as a *shift* in the Indian government's policy orientation towards innovation. In the Decade of Innovation 2010-2020 Roadmap, the Central Government explicitly refers to "inclusive innovation" as the "Indian Model of Innovation." Since its release, this model has been adopted to guide the country's development strategy up to 2020. According to the 2010-2020 Roadmap,[35] inclusive innovation refers to 'innovations that meet the need of people at the bottom of the pyramid, in which they participate and which they can own. These should be affordable, without compromising quality. They should also use frugal processes and resources to ensure sustainability [and] transform [India] from a knowledge-producing economy to a knowledge-sharing society that will have relevance to many parts of the world.' To help implement this roadmap, India's Prime Minister set up a National Innovation Council (NInC) to 'create a cross cutting system to provide policies, recommendations and methodologies to boost innovation performance in the country with a focus on Indian Model of Innovation.' As Gorur and Rizvi summarize,

> Where the discourse in 2003 emphasized India's role, on the global stage, in the knowledge economy and visibility through patents and publications, the new policies and strategies bring much more sharply into focus a solution-oriented approach to address large national, regional and

(35) Available at: http://innovationcouncilarchive.nic.in/index.php?option=com_content&view=article&id=36:decade-of-innovation&catid=7:presentation&Itemid=8. Accessed on 05 Mar 2018.

> global issues […] alongside the focus on the global stage and the knowledge economy, there is an explicit call for a focus on interdisciplinary innovation that go beyond the conventional notions of R&D and include innovations […] focused on the needs of those at the bottom of the economic pyramid (Gorur and Rizvi 2015: 430).

As part of this new National Strategy, in 2014, NInC and the Ministry of Micro, Small and Medium Enterprise (MSMEs) launched the India Inclusive Innovation Fund (IIIF) to become operational in 2015 (British Council, SE UK and ODI 2015: 18). It was designed as a 'for profit entity, combining social returns with (lower-than-usual) financial returns [to] invest in innovative, low-cost products and services to the poor: education, health, agriculture, water and sanitation, energy.'[36] In this framework, Indian innovation universities are supposed to focus on problematic issue areas facing the country, while seeking innovative knowledge-based solutions to tackle them.

Underlying this move towards benefitting the "bottom-of-the-pyramid" is the fact that education has traditionally been seen as a public good in India. However, the country faces huge challenges with respect to creating the necessary research training and capacity building in Indian HEIs to tackle pressing social and environmental demands. This is especially due to the historical lack of research skills at Indian HEIs. To address this challenge, the Indian government has proposed a number of specific measures, such as awarding scholarships and fellowships to encourage problem-solving and innovative thinking among students; attracting qualified personnel from abroad (both non-resident Indians and foreigners); and greatly incentivizing HEIs to establish partnerships and collaborations, both nationally and globally (Gorur and Rizvi 2015; Trilokekear and Embleton 2015).

For example, following one of the Indian government's goals to be accomplished nationally, in 2015, three Design Innovation Centres (DICs) were set up at the Panjab University (PU), IIT Kanpur (IITK), and the School of Planning and Architecture (SPA).[37] These universities proposed working in fields ranging from medical devices and restorative technology, water, energy and waste management to architecture and planning involving shelters and social design. As new DICs are established, they are expected to strengthen relations and coordinate their actions through the Design Innovation Centres Network. These initiatives are part of the government's broader efforts to facilitate the creation of innovation ecosystems at HEIs in India.

International collaborations and the rise of social entrepreneurship

Among initiatives involving international collaborations, the *UK-India University Programme on Social Enterprise* stands out. In 2014, the British Council invited several public and private Indian HEIs to get together with five UK HEIs (namely, UnLtd UK, Southampton University, Plymouth University, Northampton Business School, and the Glasgow Caledonian University), besides some corporates and social enterprises, in order to 'explore ways in which higher education can foster growth of social enterprise sector' (British Council 2014: 1). As part of the British Council's *Global Social Enterprise Programme*, the idea was to create a program to help 'develop UK-India networks in social enterprise education and create a "hub" with expertise knowledge and resources for a more meaningful engagement' as a way to scale up the British Council's work in social enterprise in India (Ibid: 1). Recommendations resultant from this dialogue included the creation of a collaborative *Social Enterprise Network with a focus on Higher Education* with the support of the United Kingdom (Ibid).

(36) Ibid.
(37) Available at: http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/NIDI-PAB-4-min.pdf. Accessed on 05 March 2018.

One year later, the British Council published a report co-authored by the UK think tank Overseas Development Institute (ODI) and the Social Enterprise UK (SE UK) focused on the policy framework for social enterprise in India (see British Council, SE UK and ODI 2015). The authors acknowledged that, as far as they were aware, references to the term "social enterprise" did not appear in any policy or programs implemented in India at the national or state level, but highlighted that a forthcoming policy announced by the Ministry of Skill, Development and Entrepreneurship (MSDE) would bring social entrepreneurship and grassroots innovations to the fore. Indeed, only a few months prior to this publication, the MSDE announced that the already existing National Policy on Skill Development required a "fresh look," and launched the current National Policy on Skill Development and Entrepreneurship.[38] This new policy framework, inter alia, encourages universities to create social entrepreneurship courses within academic curricula, 'including through online distance education, to actively promote social entrepreneurship in the country;' and to support the development of new start-up ventures, especially through incubation and innovation hubs. It is expected that 3,000 college-based Nodal Entrepreneurship Hubs (E-Hubs) will be established to deliver entrepreneurship education (MSDE 2015: 36-41).

The development of new start-up ventures through student incubators is among the main kinds of activities currently carried out by Indian HEIs with regard to social innovation/entrepreneurship. According to the British Council and the Socio-Economic Research and Information Observatory (SERIO) at Plymouth University, by 2016, there existed 'more than 80 student incubators across Indian HEIs' and that, although they 'do not tend to focus exclusively on social enterprise, evidence suggests that a large proportion of the incubates are enterprises with a social impact' (British Council and SERIO 2016a: 5). Besides this, since 2007, there have been 'a growing number of HEIs embedding social enterprise into the academic curriculum and collaborating on local and international research opportunities' (Ibid: 5). These types of activities have been carried out, for example, at the Indian Institute of Management, Calcutta (IIMC) and at the Xavier Institute of Management, Bhubaneswar (XIIMB). Box 3 below provides information on social enterprise activities developed at the Centurion University of Technology and Management.

The abovementioned events illustrate how the relations between India and the United Kingdom with regard to promoting social enterprise and building a friendly ecosystem for social enterprise growth in the Indian context have played out recently. This process has included a particular focus on fostering linkages between social enterprises and HEIs and promoting a campus social entrepreneurship culture in Indian HEIs. Besides these bilateral relations, the growing participation of Indian HEIs in transnational networks dealing with social innovation/entrepreneurship (e.g DESIS, LeNS, ENoLL, Fab Labs) further suggests how these concepts have emerged in India in articulation with international actors.

This is not to suggest, however, that a kind of imposition is taking place. On the contrary, in general, the Indian society seems to be alert to renewed forms of colonialism/imperialism. Indeed, Trilokekear and Embleton (2015: 327) highlight how the concept of the "world-class university" has been "indigenized" in India, as part of a broader two-way globalization process in which 'domestic issues get internationalized and international issues get nationalized' in the country. To be clear, what we want to suggest here is a tendency, equally identified in the other BRICS countries, for social innovation/entrepreneurship in Indian HEIs to operate within a complex, multiscalar type of governance. We explore this hypothesis elsewhere (see Cruz, Luisi and Rebourseau 2018).

(38) Available at: http://www.skilldevelopment.gov.in/National-Policy-2015.html. Accessed 05 Mar 2018.

:: Box 3 ::

Gran Tarang at the Centurion University of Technology and Management (CUTM)

Located in Odisha, Eastern State, CUTM incorporates social enterprise in both its academic curriculum and extracurricular activities. In particular, CUTM has been committed to supporting marginalized communities in underserved rural and urban areas across India by addressing their needs through its social ventures. The Gram Tarang initiative comprises several of such ventures, including Gram Tarang Inclusive Development Services (GTIDS) and Gram Tarang Employability Training Services (GTETS).

GTIDS' work involves facilitating access of rural populations in India to affordable financial solutions. 65% of India's population resides in rural areas scattered across vast territories with intermittent population density. Related to this is the fact that about 60% of the population does not have any access to banking or other forms of formal financing services—a fact that largely restrains economic growth and social development in rural India. With this in mind, GTIDS has worked with the support of various national banks and technology partners to provide financial services to persons living in over 25,000 rural villages in twelve states. To date, GTIDS has trained 8,000 Business Correspondent Agents (BCAs) who have opened more than 8.4 million no-frills accounts. The BCAs are recruited in their own villages and are provided with laptops, smart card readers and other banking technology to enable them to run a local banking system with access to loans, savings accounts and other transactions.

GTETS provides skill training and vocational education to young people in underserved urban communities across India, with a focus on improving their employment and career prospects in the organized sector. It receives seed funding from the National Skill Development Corporation, a public-private partnership linked to the Ministry of Skill Development & Entrepreneurship (MSDE). Its partners include a range of governmental bodies and public education institutions, as well as for-profit companies. GTETS has trained over 70,000 young people, with a placement record in gainful employment reaching 80% of the youth trained.

According to CUTM, the Gram Tarang initiative acts as an 'Action Research Project, converging teaching with training and production.' It is part of university's efforts to 'create a social entrepreneurial ecosystem and a meaningful framework for education delivery at the university,' while also contributing to increasing its visibility at the national and international levels and widening the scope of its partners.

Source: Official websites (CUMT, GTIDS, GTETS); British Council and SERIO (2016a: 14)

4.4 China

The integration of teaching and research and the advent of university-run enterprises

As with Russia and India, for a long time, conducting research and providing postsecondary education were assigned to different institutions in China. In 1949, the Chinese government adopted the Soviet model and established a number of specialized universities focused on pedagogical practices, while a separate network of public research institutes were assigned to conduct R&D activities under the control of a central agency. The China Academy of Science (CAS) was created after the model of the Academy of Sciences of the USSR and, like the latter, exercised direct control over research institutes and supportive organizations. Unlike in Russia, however, teaching and research came to be integrated in the Chinese context already in the early 1980s. Since then, a number of programs have been implemented by the Chinese Government to foster collaborations between universities and research institutions. This process has been accompanied by a series of

measures designed to incentivize relations also with enterprises, both domestic and foreign ones (Mok and Yue 2015). In 1992, the government launched the 'enterprise–university–institution cooperation' project, resulting in a rapid increase—especially since 1999—of technology transfer and patent license contracts between universities/research institutions and enterprises (Wang and Zhou 2009).

Besides being strongly encouraged to establish joint research centers and to sign contract agreements with enterprises, Chinese universities have also actively engaged in commercializing their research outputs themselves, especially through the establishment of their own university-run S&T enterprises. These have become a strong tendency among Chinese universities since the early 2000s. Tsinghua University is a case in point, with scholars starting to commercialize their research achievements already in the early 1980s. By the end of the 1980s, the University began to standardize its S&T enterprises management model, and in 2001, it finally established its own limited company, Tsinghua Holdings Co. Ltd (Ibid: 105). Tsinghua University has developed a complex technology transfer system which facilitates interactions with more than 190 enterprises from both from China and abroad to 'speed up the process of converting technological achievements into productive capability, and to enhance support for the enterprise development.'[39] Besides the business sector, the University has signed strategic research collaboration agreements with both local governments in China,[40] and foreign universities in Australia, Canada, United States, Russia and Japan.[41]

The Tsinghua case illustrates a common trend regarding how the university's third mission has been commonly understood and performed in China. Arguably, more than any other BRICS country, and despite the fact that governmental bodies keep a high degree of interference in HEIs affairs, China's approach to the university's third mission clearly aligns with the mainstream view on the entrepreneurial university, with an extraordinary amount of emphasis put on pursuing tangible economic benefits, combined with a strong pragmatic and utilitarian view on knowledge production (Wang and Zhou 2009; Zha and Hayhoe 2015). This current orientation is partially explained by the fact that governmental funding has been dropping over the last decade, pushing Chinese universities to seek out external sources of revenue, including tuition fees, bank loans, and contracts with a range of nongovernmental local, national and international actors, especially enterprises. Moreover, although the private sector in the Chinese HE system is still small, it is growing fast. It is now expected to grow even faster in the upcoming years, as a new law has recently allowed private HEIs in China to become for-profit, while also giving them full autonomy to set tuition fees and legally declare dividends (Yu 2017).

HE reforms started in China in the late 1980s as part of the Chinese Government's strategy to make the country economically competitive in an increasingly knowledge-based global market (Mok and Yue 2015; Zha and Hayhoe 2015). In the late 1990s, the perception that the nation's economic growth required an increased number of well trained, more qualified workers led the Chinese Government to raise its total investments in higher education—mainly by setting up new institutions and remodeling existing ones—and to implement policies aimed at rapidly increasing the number of enrollments, in order to achieve massification. This process also involved the transfer of more responsibilities to local governments at the provincial level—an attempt aimed to foster closer integration between HEIs and local economies (Zha and Hayhoe 2015).

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(39) Available at http://www.tsinghua.edu.cn/publish/newthuen/newthuen_cnt/research/research-3-2.html. Accessed on 05 Mar. 2018.
(40) Available at: http://www.tsinghua.edu.cn/publish/newthuen/newthuen_cnt/research/research-3-1.html. Accessed on 05 Mar. 2018.
(41) Available at: http://www.tsinghua.edu.cn/publish/newthuen/newthuen_cnt/research/research-3-3.html. Accessed on 05 Mar. 2018.

Since the mid-1990s, the central government has also launched specific pro-excellence projects (i.e. Projects 211 and 985) to turn some selected universities into "world-class" institutions, and providing them with significant additional funding. Governmental financial support varies according to HEIs' relative position in the Chinese HE system. This can be described as a five-tiered system: at the top, there are nine "vice-ministerial" universities forming the C9 League; these are followed by 30 other "Project 985" universities (comprising 22 other "vice-ministerial" plus eight centrally administered universities); below them are dozens of "Project 211" universities (which nonetheless make up only 6% of China's regular HEIs); a lower tier includes those centrally administered universities that failed to make it to the 211 and 985 lists; finally, at the bottom are all remaining local and *mini ban* Chinese HEIs (Mok and Yue 2015: 450-451).

Promoting entrepreneurship education

Given the overall decrease in governmental funding, competition has risen sharply among Chinese HEIs struggling to attain an elite "211" status. However, the adoption of a strong quantitative, managerialist approach to assessing HEIs' performances and efficiency levels in China has led scholars and university managers to center too much attention on generating tangible outputs (Zha and Hayhoe 2015). This has often diverted them from focusing on issues of quality and equity, and on the development of truly "innovative minds" (Ibid: 345). In order to foster innovation within HEIs and also to tackle the growing unemployment rate of university graduates—a phenomenon that followed the process of higher education massification in China—the Chinese Government has adopted a number of strategies and measures to promote a campus entrepreneurial culture in Chinese HEIs (Mok and Yue 2015).

Following recommendations of international organizations, such as UNESCO, ILO, OECD, the World Bank, and the World Economic Forum, promoting *entrepreneurship education* has become a major topic orienting HE reforms in China (Ibid). This has included curricular and course program reforms, the creation of campus entrepreneurship centers, open research platforms, and a number of extracurricular or co-curricular activities aimed at fostering an entrepreneurship spirit among students, especially by promoting training programs—such as ILO's Know About Business (KAB) program—and business plan competitions—such as the "Challenge Cup" National Business Plan Competition (BPC), which was introduced in China after the US BPC model (Ibid: 446-449). Most suchlike initiatives are nevertheless the result of policy copying—rather than policy learning—processes drawing on "good or best practices" from abroad, without proper contextualization to the Chinese reality (Ibid: 460).

Such pro-entrepreneurship reforms are part of the Chinese Government's broader and long-term strategy to transform the country from a "global economic power" into a "culturally strong power" at the global level. Advancing entrepreneurship education has thus been seen as a key driver 'to achieve sustainable and inclusive social development' (Ibid: 444), and ultimately transform China into a knowledge-based society (Wang and Zhou 2009). However, Zha and Hayhoe (2015) point out that the current environment surrounding Chinese HEIs rather encourages a 'lack of university spirit', that is, a lack of 'independent spirit and focus on academic pursuits by the faculty and students':

> the students are driven by a need to earn all kinds of credentials and certificates in order to prepare themselves for tough competition in the job market, while professors are attracted by various "shortcuts" to power and influence […]. University leaders, for their part, are often distracted from their fundamental responsibilities [as they] pursue all kinds of tangible interests, ranging from integrating themselves with the government to running enterprises (Zha and Hayhoe 2015: 347).

Facing challenges to social inclusion, quality and institutional diversity

Scholars have also highlighted the dangers facing Chinese universities with respect to preserving their public service mission. As Wang and Zhou (2009: 107) argue, '[a] further development of the technology in the university may result in economic benefits for enterprises, but not for the university and society, implying that the university is not living up to its public service role.' Similarly, Mok and Yue (2015: 459) contend that along with getting involved in entrepreneurial activities within HEIs, enterprises 'should also facilitate successful entrepreneurs and business practitioners to dedicate time and effort to teaching out of a sense of contribution to society and as part of their social responsibility.'

The need to address issues of quality and equity has been acknowledged by the Chinese Government in the National Outline for Medium and Long Term Educational Reform and Development (2010-2020), also called Blueprint 2020. This document particularly emphasizes the need to promote equality, equity, and diversity in Chinese HEIs. It even sets educational equity as a fundamental guiding principle for the further development of the Chinese HE system (Zha and Hayoe 2015: 343). This suggests the emergence of a policy framework more sensitive to the promotion of social/inclusive innovation.

International collaborations and the rise of social innovation/entrepreneurship

Empirical evidence suggests that social innovation/entrepreneurship initiatives are currently on the rise in China. In December 2010, Duke University professor J. Gregory Dees (who has been internationally recognized for developing social entrepreneurship as an academic field) delivered a speech[42] in Beijing and highlighted that, although social innovation/entrepreneurship was a relatively new concept in China, there was a general desire and ability among different leaders to move forward in supporting it. He further recommended that 'University professors and leaders should educate students to be effective social entrepreneurs, and they should conduct research to draw out the lessons learned from the activities of social entrepreneurs. Scholars should also advise public and private leaders on policies and strategies for supporting social innovation. Universities should consider incubating new social ventures that emerge out of the work of their faculty and students.'

Social innovation initiatives in the Chinese HE system include, for example, the creation of philanthropic research institutes in prestigious Chinese universities. Officially established in July 2016, the China Institute for Philanthropy and Social Innovation at Renmin University of China was the fourth institute of this kind to be created in China with the purpose of leading philanthropic research and promoting philanthropic innovation 'through academic research, personnel training, practice consultancy, social advocacy, and decision-making participation.'[43] Previous philanthropic research institutes were established at the Beijing Normal University, Sun Yat-Sen University, and Tsinghua University. Another example is the Yenching Social Innovation Forum hosted by the Yenching Academy of Peking University. Since 2016, the Forum has worked as a global network for young innovators under the guidance of leaders in both public and private sectors. It aims to 'foster collaboration, transnational understanding, and innovative learning' in order to 'develop and share solutions to some of the most pressing social problems facing China and the world.'[44]

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(42) Available at: https://centers.fuqua.duke.edu/case/wp-content/uploads/sites/7/2015/02/Speech_Dees_SocialEntrepreneurshipAGoldenOpportunityforChinatoShowGlobalLeadership_2010.pdf. Accessed on 05 Mar. 2018.
(43) Available at: http://www.chinadevelopmentbrief.cn/news/china-institute-for-philanthropy-and-social-innovation-established-in-beijing/. Accessed on 05 Mar. 2018.
(44) Available at: https://www.ycasocialinnovation.org/mission/. Accessed on 05 Mar. 2018.

As with India, the British Council has been a major actor engaged in introducing and promoting social enterprise in mainland China and Hong Kong. In 2009, British Council China launched the *Social Enterprise Programme* (2009-2016), which was 'designed to provide aspiring and existing social entrepreneurs with skills training, mentoring, access to UK expertise and social investment opportunities.'[45] As a supplement to the Program, the *Young Changemakers Program* was implemented in 2011 in partnership with the China Youth Development Foundation. It aimed to 'cultivate younger generations to provide social services,' and also to help 'university students set up their own social enterprises and establish links with UK social enterprises by providing international exchange opportunities.' In addition, academics and researchers from Hong Kong's eight government-funded universities integrated the *Inter-University Social Entrepreneurial Taskforce*, a collaboration convened between the British Council and the Education for Good (CIC). The taskforce operates along with an international advisory board of members from the University of Oxford (UK), European Business School (Germany), Stanford University (USA) and Ashoka University (India), and provides 'a platform for local universities to learn from each other's experiences and from global best practice in integrating social entrepreneurship and social innovation into their courses and programmes.'[46]

Findings from a study conducted by SERIO/Plymouth University for the British Council further suggest a high-level of importance attributed by Hong Kong HEIs to international collaborations focused on social enterprise. Most of the HEIs that responded to this research reported that 'their work with social enterprise(s) had included some element of international activity, such as supporting the development of incubation facilities; micro-financing; involvement in international events; knowledge exchange; and rural construction activities' (British Council and SERIO 2016b: 7). Moreover, in comparison with the general trend identified by the researchers in eleven other countries, the Hong Kong HEIs provided far more recognition of international communities as beneficiaries of their interactions with social enterprises. As noted the report, 'This potentially is a reflection of the efforts of Hong Kong institutions in working internationally; sharing global practice and conducting cross-disciplinary research' (Ibid: 9). Notably, all responding HEIs in Hong Kong reported to be actively engaged with social enterprises and to support social enterprise extracurricular activities. The majority of them also indicated to have social enterprise courses included in their academic curricula. Examples of these kinds of initiatives include the *Hong Kong Social Enterprise Challenge* at the Chinese University of Hong Kong, the *HKU Social Entrepreneurs' Network* at the University of Hong Kong (HKU), and *Project Flame* at City University of Hong Kong (CityU). The latter is detailed in Box 4 below.

To be sure, the Government of Hong Kong has been actively involved in promoting a culture of social innovation/entrepreneurship in the territory. Besides being the main source of funding for social enterprises in Hong Kong (British Council and SERIO 2016b: 5), the government has been particularly engaged in prominent international projects aimed at promoting social innovation worldwide. For example, in the process of expanding the UK *Social Innovation Exchange* (SIX) initiative globally, in 2012 SIX Asia was launched in Hong Kong. The first SIX Asia meeting involved social innovators and civil servants, and '"heavily influenced" the establishment of the Hong Kong social innovation fund, enabling more innovators in Hong Kong to access finance and support' (SIX 2015: 17). Following South Korea, Hong Kong was the second location in Asia— and one of the first in the world—to engage in the SIX network.

As with Hong Kong, the increasing participation of mainland Chinese HEIs in social innovation transnational networks (such as DESIS, LeNS, ENoLL and Fab Lab) further suggests the existence of

(45) Available at: https://www.britishcouncil.cn/en/uk-china-social-enterprise-social-investment-partners. Accessed on 05 Mar. 2018
(46) Available at: https://www.britishcouncil.hk/en/programmes/society/skills-social-entrepreneurs/inter-university-social-entrepreneurship-taskforce Accessed on 05 Mar. 2018

a strong international component in many social innovation-oriented activities currently undertaken by Chinese HEIs (see Cruz, Luisi and Rebourseau 2018, Table 2).

:: Box 4 ::

Project Flame at the City University of Hong Kong (CityU)

Supporting social enterprise is part of CityU's mission statement. The university is committed to embedding the concepts of social innovation and social entrepreneurship through an cross-disciplinary approach that includes offering accredited social enterprise courses and engaging the university's community with social innovation and social enterprise both though curricular and extracurricular activities.

Created in 2012, Project Flame comprises a network of more than 30 members from 18 academic and administrative support units in CityU, and operates under the university's strategic plan to provide a "Discovery-Enriched Curriculum" to students. It enables students to contribute to society as change-makers by developing 'positive mindsets and skills in social innovation, creativity, entrepreneurship, and solution-seeking across disciplinary boundaries.'

The Project fosters social innovation and entrepreneurship by providing incubation space, research and knowledge transfer on related topics, and through proactive collaborations with a range of local and international partners spanning academia, governmental bodies, for-profit and not-for profit organizations, and other civil society arrangements. It also provides students with overseas scholarships and facilitates the exchange of innovative ideas, practices and social interventions. Prominent partners include Education for Good (CIC), which collaborates with the British Council in the Inter-University Social Entrepreneurial Taskforce, and the International Federation on Ageing (IFA).

Project Flame has started a number of social enterprises. Hand2Spot is a case in point. It is a platform for commercializing second hand items among CityU students and staff. Through Project Flame, CityU has also hosted social entrepreneurs in residence and connected them with students through lectures and workshops, and promoted international knowledge exchanges and collaboration through seminars and collaborative research projects.

Sources: Official websites (Project Flame, IFA, Hand2Spot); British Council and SERIO (2016b: 14).

4.5 South Africa

An ungrateful legacy

Higher education landscape in South Africa inherited a profoundly unequal structure established during the Apartheid regime. In 1994, the South African binary HE system comprised 36 HEIs that better served white students, both in terms of quantity of institutions and education quality. In addition, the English-medium universities and the Afrikaans-medium universities (both kinds reserved for whites) enjoyed much higher levels of autonomy and academic freedom than their Bantustan counterparts, which were kept under the strict control of the state with respect to 'who admit, whom to teach and what to teach' (Cross 2015: 359).

This binary system was composed of 21 universities and 15 technikons. Universities were assigned to provide 'training in and practice of science (in the broad sense of the word which included all scholarly activities), including research, and mainly the general side of the spectrum of vocational preparation,' whereas the technikons concentrated on 'training in and practice of

technology including development, and the specific side of the spectrum of vocation preparation, that is, preparation for specific occupations' (Ibid: 357). However, since 2004, the system has been restructured through a process that involved mergers and the creation of new types of institutions. Currently, the South African public HE system comprises 11 traditional universities (including a top-tier of five research universities with higher academic reputations), 6 comprehensive universities (a new type of HEIs), and 5 universities of technology (which substituted the former technikons) (Kruss 2017: 226). In addition, there has been a proliferation of private HEIs, which are 'mostly concentrated on further education and training, and restricted to commercial and business curriculum and do not pose any significant competition to the public sector' (Cross 2015: 360).

Tackling inequalities through access and redress

Higher education reforms in South Africa began during the transition to a democratic regime. Since 1994, a strong concern with issues of access and redress has been at the center of the HE political agenda. However, in practice, the South African HE system still presents acute institutional differentiation and funding disparity. Moreover, the system continues to reproduce the country's huge social and racial inequalities, and has yet to become truly inclusive (Cross 2015; Kruss 2017; Pillay 2015).

In 1994, the African National Congress suggested the creation of the National Commission on Higher Education (NCHE) to investigate the South African entire HE system and then draft a policy framework on education and training. The NCHE's report was released in September 1996, and served as the base for the creation of the 1997 White Paper on the Transformation of Higher Education and the 1997 Higher Education Act, which together set the national vision for higher education in South Africa.

According to Cross (2015: 362-363), key aspects of this vision comprised (1) *increased participation and access* (i.e. 'expansion of enrolments, feeder constituencies and program offerings guided by the principles of equity and redress as well as alignment with the South African demographic realities and developmental concerns'); (2) *greater responsiveness to societal interests and needs* (i.e. 'engagement with the challenges posed by the South African context: elimination of racial discrimination and oppression, social justice and equal opportunity,' issues that should be 'reflected in the content, focus and delivery modes' of HE programs 'as well as in the institutional missions and policies'); and (3) *cooperation, partnerships and efficiency* (i.e. more linkages and partnerships between HEIs and a broader range of actors, including 'commercial enterprises, parastatals, research bodies and NGOs, nationally and regionally,' with emphasis on 'new partnerships and cooperative ventures among regional clusters of institutions to optimize the use of human and infrastructural resources').

These proposed reforms were accompanied by the establishment of specific governmental bodies created to advise and assist the national Department of Education in policy formulation and implementation matters (i.e the Council of Higher Education (CHE), created in 1998), as well as to assess the quality of higher education throughout the country (i.e. the Higher Education Quality Committee (HEQC), also created in 1998).

Student fees as a hurdle for inclusive education

However, the full realization of the goals established by the Central Government since 1994 has been hindered by both traditional and new constraints. Regarding the issues of access and redress,

massification has been achieved through the enlargement of formal access to higher education, and there has been a significant increase of enrolments by black African students (from 40% in 1993 to 70% in 2014). However, Kruss (2017: 228) observes that 'financial constraints on students coming from black working class families, many the first to enter higher education, [has resulted in] high drop-out rates, low graduation rates, extended periods to obtain qualifications, and a "churn" of students in and out universities as their circumstances improve or worsen.' In 1995, the government created the National Student Financial Aid Scheme (NSFAS), which has since then offered low-interest rate loans and bursaries for a first qualification of students that cannot afford higher education. NSFAS operates through the university, and the allocation of resources is 'based on a calculation of the total number of black (those classified African, Coloured and Indian) students and the cost of tuition and residential fees' (Ibid: 233). The number of students contemplated by this funding mechanism has grown steadily, raising from 40,002 beneficiaries in 1995 to 135,208 in 2009 (Ibid: 234). However, as Kruss (Ibid: 234) points out, 'there is widespread consensus that the amount per student is not sufficient to cover full costs […], leading students to accumulate debt.'

Indeed, student dissatisfaction with the current HE landscape in South Africa became evident in 2015, when the #FeesMustFall student movement started to denounce ongoing exclusion practices in the HE system, and demanded more adequate funding mechanisms. Even though higher education is viewed in South Africa as a public good and the primary responsibility of the state, the balance between (i) government subsidy, (ii) student and tuition fees, and (iii) third stream funding (i.e. a mix of donations, bequests, alumni, industry (UILs), commercialization, research funding etc.) has shifted over time, with the relative proportion of third stream income declining, state investments remaining nominally static, but dropping in real terms, and tuition fees increasing substantially (see Kruss 2017, Figure 10.3). Kruss explains that the real decline in the public subsidy per student followed a new public funding formula introduced in 2004, in which public expenditures were based on government priorities, rather than on the actual cost of providing education. Further combined with the variability of third stream sources, this situation has put a significant amount of pressure on HEIs to annually raise student and tuition fees as an alternative source of revenue. As denounced by the #FeesMustFall movement, this has in turn increased student debt, and particularly affected the poorest and more vulnerable groups, especially in rurally located and historically black HEIs (Ibid: 323).

From community service to community engagement

Besides concerns with access and redress, the 1997 White Paper and the Higher Education Act intended to stimulate greater responsiveness to societal interests and needs from HEI's, and foster their collaborations and partnerships with a range of different actors. Although the 'tendency has been for innovation policy mechanisms and funding allocations to focus primarily on scientific excellence, university responsiveness to economic needs and promoting global competitiveness' (Ibid: 236; see also Pillay 2015), since the late 1990s, a strong emphasis has been put on the notion of *community engagement*.

In 1997, the Joint Education Trust (JET) received a grant from the Ford Foundation to conduct a survey on community service in South African higher education. According to Lazarus et al (2008: 60), this survey found out that most HEIs in South Africa included community service in their mission statement; however, few of them had 'an explicit policy or strategy to operationalize this component of their mission statement.' Moreover, while most HEIs had 'a wide range of community service projects,' these projects were generally 'initiated by innovative academic staff and students and not as a deliberate institutional strategy and certainly not as a core function

of the academy.' These findings led the Ford Foundation to provide JET with an additional grant to launch the *Community – Higher Education – Service Partnership* (CHESP) initiative in 1998. Designed to 'provide direction and support for embedding community engagement in South African higher education,' CHESP started as a pilot initiative carried out in collaboration with the South African national Department of Education and its affiliated governmental bodies. Lazarus et al (2008: 61) elucidate that 'the intention of this collaboration was to ensure that the pilot initiatives supported by CHESP were strategically positioned to inform national policies regarding community engagement with the expectation that community engagement activities would proliferate once such policies were put in place.' Furthermore, once the required policies were formulated, CHESP would become a building capacity agent within HEIs with the aim to implement those policies.

Since then, *community engagement* has been defined in the South African HE policies 'not as one of the three silos of higher education along with teaching and research, but an integral part of teaching and research—a mechanism to infuse and enrich teaching and research with a deeper sense of context, locality and application' (Ibid: 62). In short, community engagement can be defined as 'the combination and integration of service with teaching and research related and applied to identified community development priorities' (Ibid: 63). Community engagement in higher education can assume multiple forms. "Service learning" was strategically adopted by CHESP as an entry point for starting to embed community engagement in the South African HE system (Ibid: 64). The pilot program selected 256 accredited academic courses which included Service Learning in 12 HEIs.[47] CHESP's role was to support the conceptualization, implementation, monitoring, evaluation and research of those courses. Participant HEIs received grants that were linked to six specific outcomes:

> (1) conducting institution-wide audits of community engagement; (2) the development and adoption of institution-wide policies and strategies for community engagement; (3) the development of enabling mechanisms for the institutionalization of community engagement; (4) building institutional capacity for community engagement; (5) the development of accredited academic modules that include community engagement (i.e. service learning); and (6) generating data on community engagement through monitoring, evaluation and research (Ibid: 66).

As expected, the pilot program achieved a high-level of success in embedding community engagement at the programmatic and institutional levels of the participant HEIs (see Lazarus et al 2008: 67-77). It also informed the formulation of further national HE policies in South Africa. Since 2001, a number of official documents released by Department of Education and affiliated bodies started to recognize community engagement as one of the three areas for accreditation and quality assurance of higher education along with teaching and research, and to establish guidelines for the implementation of good practices and quality evaluation with respect to community engagement in South African HEIs (Ibid: 79-82).

International collaborations and the promotion of social innovation/enterprise

The process of institutionalizing community engagement in South African HEIs was accompanied by new efforts in S&T policies. Interestingly, the Department of Science and Technology (DST) White Paper of 1996 explicitly set up 'the establishment of an efficient, well-coordinated, and integrated system of technological *and social innovation*;' and 'improved support of all kinds of innovation which is fundamental to sustainable economic growth, employment creation, equity

(47) These were: Cape Peninsula University of Technology, Central University of Technology, Mangosuthu Technikon, Stellenbosch University, University of Cape Town, University of Johannesburg, University of KwaZulu Natal, University of Pretoria, University of Free State, University of Western Cape, University of Witwatersrand, Walter Sisulu University (Lazarus et al 2008: 65).

through redress, and social development' as two of its three main goals (Pillay 2015: 465, emphasis added). In addition, the National Advisory Council on Innovation's attributions in advising the Minister of S&T includes *indigenous technologies* as one of the areas deemed important in 'promoting and achieving national objectives, namely to improve and sustain the quality of life for all South African, develop human resources for S&T, build the economy, and strengthen the country's competitiveness in the international sphere' (Ibid: 474).

According to the British Council and SERIO/Plymouth University, social enterprise is a relatively established concept in South Africa, where engagement with social enterprise activity has taken place since before the 1990s (British Council and SERIO 2016c: 4). However, the researchers stress that, at the same time, there is a widespread confusion regarding the concepts of "social innovation" and "social enterprise", suggesting that those terms are often used interchangeably in South Africa. Moreover, as with the other BRICS, the extent to which particular HEIs engage in these kinds of activities varies enormously among institutions. As Kruss (2017: 236-237) observes, 'universities operate in a complex policy space, with multiple imperatives from different government actors shaping multiple roles, being interpreted and enacted in terms of their own historical trajectories, institutional cultures and disciplinary strengths.' Nevertheless, evidence indicates that South African HEIs have developed and engaged in a number of intramural and extramural socially-oriented projects and activities, either in isolation (e.g. through curricular reforms) or in partnership with local, national and international governmental and non-governmental actors.

A good example is the *Technology Station Program*, which was developed by the DST in 1996 and has been implemented by the Tshumisano Trust with the technical support of the Deutsche Gesellschaft fur Internationale Zusammenarbeit (Germany). This Program aims to strengthen and accelerate interaction between South African universities of technologies (UoTs) and existing SMME's in terms of technology solutions, services and training.[48] Although their mandate is to interact with SMMEs, in practice, technology stations engage with a range of different actors, including community cooperatives, NGOs and social enterprises (Kruss 2017: 248). The technology stations are hosted by the UOTs, which provide them with institutional, organizational and legal frameworks, and are further supported by the Trust, which is responsible for providing technical and financial support. To illustrate, Ndabeni and Maharajh (2009) highlight successful cases involving the Technology Station in Chemicals (TSC), based at the Tshwane University of Technology. They report that, after receiving assistance from TSC, client SMMEs were 'able to participate in the formal economy,' while 'TSC interns have managed to secure employment in different private sector companies' (Ndabeni and Maharajh 2009: 130).

Influenced by global trends, other forms of community engagement have recently emerged in South Africa. The emergence of *science shops* is one example, which involves establishing designated spaces in local townships where 'academics and students can identify research topics of relevance to communities, and communities can be assisted to access expertise to provide research, evaluation or other expertise to find solutions to their problems' (Kruss 2017: 247). Another example is the creation of *social innovation hubs* aimed at promoting social entrepreneurship for micro-enterprises in impoverished urban townships. These hubs are usually developed by a research university through its center for social innovation in partnership with the national government program designed to tackle unemployment in those areas.

This is the case of, for example, the UCT GSB Solution Space, in Philippi. Designed by the Bertha Centre for Social Innovation and Entrepreneurship (a specialized Centre at the University of Cape Town's Graduate School of Business), the initiative is described as a hub for innovation and

(48) Available at: http://pmg-assets.s3-website-eu-west-1.amazonaws.com/docs/2005/051018thumisano.doc. Accessed on 05 Mar 2018.

entrepreneurship with 'the purpose of getting community members of Philippi and surrounding Nyanga, Gugulethu and Khayelitsha, as well as private stakeholders, donors, corporate parties and business school students involved in a process that goes beyond the traditional space of a university.'[49] The UCT GSB's facilities have been supported by the multinational mobile telecommunications company MTN Group, the Flanders Government Funding for building a social economy (Belgium), the UCT Vice-Chancellor's Strategic Fund, as well as by the Bertha Foundation. Other South African HEIs that also have founded centers for social entrepreneurship include the University of Johannesburg and Durban University of Technology (British Council and SERIO 2016c).

Support from international organizations for fostering social enterprise has been common in South Africa since the early 1990s. The US Ashoka Foundation, for example, has acted in the country since 1991. Other organizations include the Schwab Foundation for Social Entrepreneurship (headquartered in Cologny-Geneva, Switzerland), the Aspen Network of Development Entrepreneurs (based in Washington, D.C. United States), and the Skoll Foundation (based in Palo Alto, California, United States) (Ibid: 4). More particularly, South African HEIs have created international partnerships and participated in numerous transnational networks focused on social innovation/enterprise, including the UK Global Social Entrepreneurs Network (GSEN) (Ibid: 15), DESIS, LeNS, EnoLL, and Fab Labs (Cruz, Luisi and Rebourseau 2018, Table 2), just to mention a few. Information on the University of Venda's community engagement activities, which include a long-term partnership with the University of Virginia (United States) is provided below, in Box 5.

:: Box 5 ::

Community Engagement Directorate at the University of Venda (UNIVEN)

Located in Thohoyandou in Limpopo province, UNIVEN explicitly includes community engagement as part of its institutional mission. Community engagement is seen as a means to both improve student experience and to address national needs.

The Community Engagement Directorate (CE) is focused on rural development and poverty reduction in South Africa. Besides promoting a campus-wide approach to financially sustainable, rural development endeavors, CE runs many social ventures, such as the 'Amplifying Community Voice' Program, through which the CE facilitates self-driven rural development processes within grassroots communities. The Program is particularly sensitive to making sure that leaders and individuals from those communities perform an active role in their respective community development plans. For that, a "participatory reflection circles" methodology is adopted requiring that students and staff work in close partnership with community representatives at the village level. The latter are known as "Foot Soldiers." They participate in discussions concerning local issues and should ensure that community-owned decisions are made.

Another socially-oriented initiative at UNIVEN is the Water and Health in Limpopo Initiative (WHIL), which emerged from a long-term international partnership between UNIVEN and the University of Virginia (UVA), in the United States. WHIL focuses on improving water and sanitation in South African rural villages and on creating educational opportunities for students from both universities. Since its launch in 2008, the initiative has been expanded through the creation of PureMadi, a further interdisciplinary collaboration between UNIVEN and UVA that also includes international partnerships with the Rotary Club, Cocokind, and Khulisa Social Solutions. PureMadi's first project comprises the development of a sustainable, ceramic water filter facility that can become a sustainable business venture, providing economic stimulus to local communities in South Africa. According to the team, their goal is 'to create a blueprint for a successful facility, including its architecture, efficiency of water and energy use, technological performance of the filter itself, and an effective and sustainable business model.'

Sources: PureMadi official website; British Council and SERIO (2016c: 16).

(49) Available at: http://www.gsb.uct.ac.za/po-uct-history-philippi-campus. Accessed on 05 March 2018.

5. Conclusion

HEIs around the world have been facing huge transformations under the pressures of their newly assigned Third Mission. While the mainstream view has insisted on the need for HEIs to commercialize their academic outputs and to interact more closely with industry and business organizations in order to foster economic growth, alternative approaches have reiterated the notion of higher education as a public good, and advocated the necessity of developing a broader understanding of the university's third mission. In this context, the promotion of *social innovation* has been seen as a promising way through which HEIs can perform their third mission and tackle social and environmental pressing issues at local, national and global scales. Global South countries nevertheless face additional challenges related, among other things, to low demands for knowledge-intensive technologies by their domestic enterprises combined with the high degree of social exclusion typically found in those societies. Some scholars have thus contended that *inclusive innovation* is a more suitable concept to orient HE and STI development policies and strategies in the Global South. With this in mind, scholars have proposed alternative concepts to the mainstream *entrepreneurial university*. In particular, the *developmental university* seems a promising model.

In the main section of this paper, we sought to investigate how these ideas—i.e. social innovation/entrepreneurship and/or inclusive innovation/entrepreneurship—have emerged in the BRICS HE contexts. As we pointed out, committing to HE outreach activities is not a novelty in some of those countries, especially in Brazil and South Africa. In Brazil, universities were traditionally assigned to commit with extension activities as part of their *public service* mission. In the 1980s, this notion was revised and since then *university extension* has been conceived in Brazil as an inseparable dimension of the university's mission, intertwined with teaching and research. A similar process took place in South Africa, where the notion of *community service* has been increasingly replaced by *community engagement* since the late 1990s. As for Russia, India and China, not only has the embeddedness of a third mission been a challenge, but also the integration of teaching and research in their respective HE systems—especially in Russia, where attempts to integrate teaching and research still face strong opposition.

In all cases, the HE sector has gone through a notable expansion process over the past decades, leading to *massification*. In some cases, this phenomenon has been accompanied by *affirmative actions* to provide access to traditionally marginalized social groups. This has been particularly acute in South Africa, where redress-related issues have been at the center of the Central Government's agenda. The Governments of Brazil and India have also adopted redress policies to facilitate access to students from traditionally disadvantaged racial groups and social classes, while Russian HEIs have been especially engaged in developing inclusive strategies to assist persons with disabilities. However, at the same time, financial constraints on students, especially due to the steady increase of tuition fees, have emerged as a new hindrance to a truly inclusive HE system in countries such as South Africa. This is also a pressing issue in China, where recent policies have finally acknowledged the need to address equity and diversity issues in the country's HE system. In Brazil, the current political and institutional crisis has resulted in the adoption of policies and measures at the national level that severely threaten the existing HE and STI systems and social inclusion programs initiated in the early 2000s.

Innovation has been normally understood in the BRICS in a traditional sense, resulting in a narrow view of the university's third mission, with emphasis being put on enhancing HEI performance levels as measured by traditional indicators. China has been particularly successful in achieving those goals. However, the Chinese Government currently struggles to tackle the unintended consequences resulting from the highly quantity-oriented mindset adopted over the past decades,

and now seeks to address quality, equity and diversity issues in the Chinese HE System. In general, models informed by the globally-promoted notion of *world-class university* have emerged in all BRICS countries, with the exception of Brazil. *Innovative universities* have been created both in Russia and India, though the latter has recently shifted its focus on innovation by formulating its own conceptualization of *inclusive innovation*. Creating *campus entrepreneurial cultures* has also been a common trend in the BRICS. This has involved the promotion of both curricular and extracurricular activities aimed at fostering entrepreneurship in HE landscapes.

All considered, evidence suggests that social innovation/entrepreneurship has been on the rise in all BRICS countries—although levels of engagement vary both among those countries and between different HEIs within them. India shows the most well integrated strategy for fostering inclusive development through an inclusive innovation approach. In contrast, Russia seems to present the least social innovation-sensitive approach to HE reform. Notably, the emergence of social innovation/entrepreneurship in all BRICS countries features a strong international dimension, with related activities performed by the BRICS HEIs largely informed by or conducted in partnership with international and transnational actors. The examples provided in this paper show that most international collaborations established by those BRICS HEIs have involved collaborations with academic circles, governments, organizations and networks based in—or originating in—Europe and the United States. The involvement of both governmental and non-governmental actors from the United Kingdom stand out as the most recurrent type of international collaborations in this regard. This is particularly prominent in India, China and South Africa, countries in which the British Council has been actively involved in promoting—and exporting UK—social enterprises.

To conclude, we want to raise two points connected with this finding. First, this finding suggests that South-South cooperation initiatives aimed at promoting and supporting inclusive/social innovation in higher education have been largely underexplored by the BRICS countries. Establishing and strengthening cross-border South-South partnerships—including collaborations within the BRICS group—between HEIs, governmental and non-governmental actors would open a range of new possibilities for exchanging knowledge and experiences and further promoting inclusive innovation initiatives in these countries. The recently founded BRICS Network University (BRICS NU) seems to be a particularly suitable platform through which this kind of collaboration could be established and advanced. In particular, the expertise of some South African HEIs could assist other HEIs in the BRICS to design social/inclusive innovation projects in which local communities are assured to participate not as passive beneficiaries, but as active co-creators and protagonists in their respective communities' and regions' development strategies. In fact, this is a requirement of a truly inclusive and sustainable socioeconomic development process.

Finally, the international dimension revealed in our findings further suggests an ongoing trend in the BRICS HEIs of social innovation/entrepreneurship activities operating within a complex, multiscalar type of governance. We test this hypothesis in our second paper on this topic (Cruz, Luisi and Rebourseau 2018). Together, these pieces form a two-piece set of working papers resulting from the first phase of our research on Social Innovation and Higher Education in the BRICS.

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