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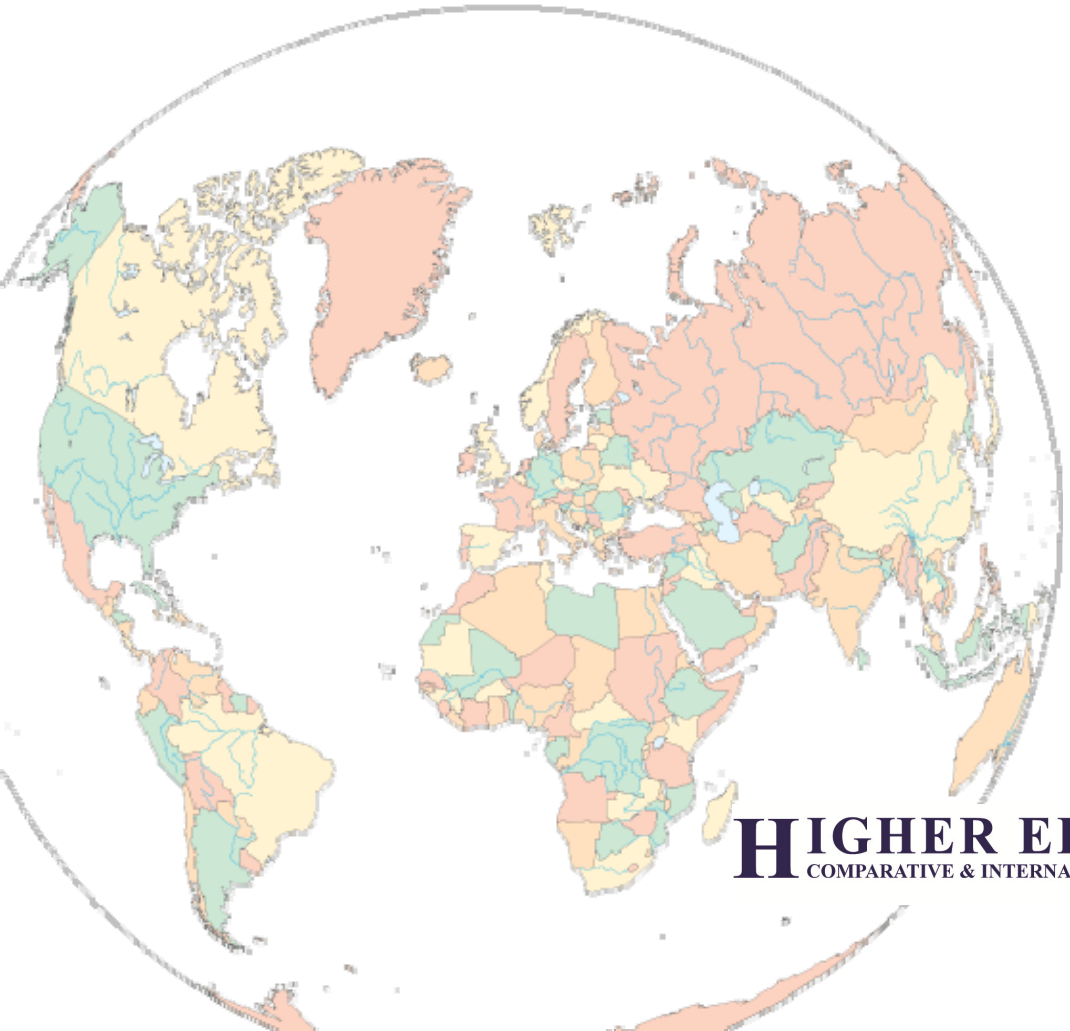

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COMPARATIVE & INTERNATIONAL HIGHER EDUCATION

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Chinese MOOCs on the Way: Opportunities and Challenges

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As China attempts to achieve mass higher education,[1] its quality and efficiency have drawn attention and been questioned widely (Li et al. 2013). In addition, students from different backgrounds do not have equal opportunities for high quality education because of existing huge disparities in basic education and among universities. Furthermore, higher education institutions use traditional teaching methods and a pedagogical ideology that focus more on teaching than learning. This situation seems to have repercussions in the world of work. Employers often complain that college graduates lack creativity and the professional skills that jobs require. Despite of being common worldwide, these problems have attracted close attention from different sectors in China in recent years.

Innovation in education has been prompted by the rapidly developing information technologies. For instance, Massive Open Online Courses (MOOCs) emerged in 2012 and became an educational buzzword. Different from the traditional long-distance education and open online courses, MOOCs are based on well-designed pedagogy, emphasize instructional design, employ diverse social interaction platforms, and collect big data[2] used for data mining and learning analytics.[3] These characteristics are used to improve teaching quality and the online course systems (Zhang and Li 2013). MOOCs, with their unprecedented openness, transparency, and accessibility, bring more opportunities to higher education (Li, et al. 2013).

Upon the launching of three major platforms, edX, Coursera, and Udacity, many institutions in the United States have adopted MOOCs. To the present, four leading Chinese universities have joined edX and the Coursera Consortium. Among them, China's top two universities, Tsinghua University and Peking University, are pioneering in this field. Having joined edX on 21 May 2013, Tsinghua University hopes to take advantage of high-quality educational resources and best practices from the world, while developing its own MOOCs. Compatible with international platforms, Chinese MOOCs will, in turn, contribute to education worldwide and facilitate the transformation of the country's higher education.

Tsinghua University has delivered five courses through edX by March 2014. In order to properly develop this project, the Center for Massive Online Education in Tsinghua University (CMOE) has been co-founded by the Institute of Computer Science, the Institute for Interdisciplinary Information Sciences, the Institute of Education, and the Department of Psychology. Currently, CMOE is creating the online platform and constructing the MOOCs. The next section presents our previous studies on the topic.

Learning Analytics and Education Assessment Based on Big Data Generated from MOOCs

Considering the development of technology and learning sciences, there are high expectations that MOOCs will transform education by designing massive teaching based on individual differences. Learning analytics and educational data mining are useful to achieve this. In a study published in 2013, Zhang and Li discuss big data definition and analysis, new ideas of learning analytics and education assessment, and problems and challenges. They conclude that analysis on online course big data will significantly improve education assessment, learning analytics, and education quality.

However, China's challenges cannot be ignored. At the policy level, one of the challenges is the shortage of analysts and managers to conduct learning analysis and data mining. Effective policies are necessary to encourage and ensure cooperation and data sharing among different sectors, in order to achieve holistic and systematic analysis on learners. Furthermore, privacy protection is a premise

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in data collection and analysis to avoid legal and moral pressures. At technical level, big data analytics and data transfer require adequate hardware and software resources.

Needs Analysis of MOOC Learners in China

In order to better serve MOOCs' users, it is important to understand and consider what students need and how to improve their learning experience when constructing China's MOOCs. In response, Liu and Huang conducted an empirical study in May 2013 to analyze the experiences and needs of Chinese online learners. The study provided preliminary empirical evidence of online education research and practical experience of curriculum design and teaching. Data were collected from a discussion forum on Guokr Study Room (http://www.guokr.com/), a Chinese social network site founded in October 2012 that targets young people interested in science and technology.

Among 30,000 users, there were 746 entries posted on Guokr Study Room before 1 June 2013 related to learning and MOOCs; they were the sample for this study. The postings were classified into 11 categories based on the topic, such as personal experience, language, technology, information on course selection, course certification. Postings and replies were calculated thereafter.

The study concludes that: First, individual learners need support from both online and offline discussion groups. Second, access and speed of internet connection are still bottlenecks that limit learning and results. Third, students experience language barriers in courses, which are mostly taught in English. This is a major concern for Chinese MOOC designers. Fourth, course certificates are necessary in the long run and it needs to be regulated by national education policy.

A Qualitative Study on the Future of MOOC Instructors

A qualitative study was conducted by Yang Liu and Zhenzhong Huang（Liu, et al. 2013）in June, 2013 to explore the process and problems to develop MOOCs at Tsinghua University. Three instructors and an online platform provider were interviewed about the process of developing MOOCs and course evaluation. At that time, three courses were offered in Tsinghua University, including "Software Engineering" (a course offered through Coursera), "Foundations on Circuits" (a traditional online course), and "Open Hardware-based Citizen Science" that was under development.

The interviews revealed that, in general, MOOCs in China are still in a trial stage. Instructors from Tsinghua University are considering developing MOOCs using their own educational theory and practice and deciding which technologies to use. Hence, it is too early to make generalizations about the process of developing MOOC courses. Moreover, close teamwork involving faculty, teaching staff, platform designers, and business model operators is important to develop the courses.

Research on Technical and Pedagogical Features of MOOCs

As MOOCs are attracting more institutions in China, researchers in the field summarize the technical features of MOOCs as follows (Sun 2013; Li 2013):

1. Short modular units (usually less than 10 minutes) and interactive exercises. A series of short units combined with all kinds of learning materials make the learning process "flexible." Thus, students can manage their pace and get actively involved in their learning.
2. Instant feedback based on interactive exercises. Traditional online courses can serve massive users, but they can only provide learning materials and cram learning without interaction. MOOCs have overcome this limitation. Through auto-grade interactive exercise, learners can get instant feedback, are encouraged to think actively, and get better results.
3. Personalized learning based on big data. Personalized learning is an ideal goal that educators and learners keep pursuing. However, we cannot afford Dalphene Koller's (2012) idea that a society should provide every student with an individual human tutor. Currently, personalized learning is possible by providing each student with a com-

puter or a smart phone. With big data, students can get personalized feedback much more effectively to help them fix their problems. Furthermore, employing data mining and learning analytics allows instructors to know each learner's level and provide them feedback, recommend suitable learning resources, and further improve and design teaching content. As a result, personalized teaching and a research team will produce courses that effectively assist learners (Li 2013).

4. Learners' interaction in social networks. MOOCs rely on interactions in social networks to gain interest and motivate students. Compared to auto-grading, peer-grading is more effective for interactions. Throughout each MOOC, a global community of learners would form a shared intellectual endeavor. Students collaborate in these courses in different ways, for instance, in question-and-answer forums where students post questions and other students respond to them. Because of the size of the online community, learners can interact with each other in more than they do in physical classrooms (Koller 2012). Students also self-assemble into small study groups around common topics of interest such as geography or physics.
5. Campus-like weekly course. The organization of MOOCs is similar to that of on-campus courses. They start on a given day, students watch videos on a weekly basis, and do homework assignments. Assignments are real homework for a grade, with real deadlines (Koller 2012). These are all learning experiences for learners, who get something meaningful for the time and effort invested.

Besides their advantages, MOOCs still have much potential to improve. This can be done by further exploring and enriching interactive exercise, auto-question and auto answer, and auto-grading and virtual laboratory. To maximize their implementation, MOOCs in China should employ more quality teaching resources (which are currently expected), advanced interactive information technologies (which Coursera and edX still need to improve), and brand-new teaching theory (i.e., micro-video and big data) (Sun 2013).

Challenges for MOOCs in China

Phil Hill (2012) states that in order to become self-sustaining, the concept of MOOC must overcome four challenges: developing revenue models; delivering valuable signifiers of completion such as credentials, badges, or admission into accredited programs; providing experience and perceived value that enable higher course completion rates; and authenticating students in a manner that satisfies accrediting institutions or hiring companies. Moreover, our research also reveals that MOOCs face challenges such as educational equity, completion rates, sustaining revenue models, deskilling professoriate, intellectual property, and plagiarism. Ye and Su (2013) noted that Tsinghua University is also experiencing these challenges.

Researchers will keep working on developing online education platforms, constructing MOOCs, and conducting research about MOOCs. Future studies could look at MOOCs' impact on higher education; development technical platforms for MOOCs; curriculum and learning science; assessment of student learning and evaluation of teaching based on big data; and education policy in the context of MOOCs. Based on previous studies, MOOCs in China would develop their policy, system, assessment, and technology that provide better assistance to Chinese learners worldwide.

Notes

1. China's gross higher education enrollment ratio reached 30 percent in 2012 and it is expected to reach 40 percent by 2020 (http://paper.jyb.cn/zgjyb/html/2013-03/20/content_90270.htm/).
2. Big data is a term used for collection of data that is large and complex. It is difficult to process using on-hand database management tools or traditional data-processing applications (Wikipedia, 1 October 2012).
3. Learning analytics is the measurement, collection, analysis, and report of data about learners and their

contexts, with the purpose of understanding and optimizing learning process and the environments in which it occurs (Wikipedia, 1 October 2012).

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Higher Education in Brazil: Different Worlds and Diverse Beliefs

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Diversity is one of the main traits of Brazilian higher education. The 2011 census (INEP 2013), which is the most recent data available for the entire system, registered a total of 2,565 higher education institutions (HEIs) in metropolitan areas and small towns around the country. Based on the law, all these institutions are entitled to grant bachelor degrees and supposed to provide similar undergraduate instruction. However, the immense differences among them can be found in almost any aspects: Small family-owned isolated schools coexist with huge for-profit universities with shares in the stock market. Likewise, highly competitive public research universities are established next to regional universities that are entirely devoted to undergraduate instruction.

Inside the public sector, university is the most common type of HEI. In the last few years, however, there has been a growth of non-university public institutions. Many vocational public secondary schools were upgraded to higher education and allowed to offer vocational programs at this level. Meanwhile, public universities tend to be large, multi-campus comprehensive institutions. They may be owned by the federal government, state governments, and even municipal authorities. In general, the public sector offers good work conditions for faculty since 81 percent of the academics have full-time permanent contracts.

Higher education in Brazil is not only diverse; it is also marked by strong, though informal, hierarchies. Within the public sector, the main line of division is the institutional commitment to graduate education, in particular, doctoral education (Balbachevsky 2013a). Graduate education is highly concentrated: only a small number of institutions meet the requirements to offer graduate programs, especially at the doctoral level. Since the 1970s, graduate education in Brazil is organized around disciplinary programs and subject to strong regulation and strict evaluation based on peer review (Castro and Soares 1986). Among the public universities, only a few, 21, according to the most recent data available, have a strong commitment to graduate education. Some of them are owned by the federal government, but others are owned by the states. These public universities have enrollments of, at least, 30 percent at the graduate level (masters and doctoral programs) and also a large proportion of faculty with doctoral degrees. Having graduate education as the main institutionalized site for research, these institutions serve as fully developed research universities (Durhan and Gusso 1991).

On the other hand, all other public universities and institutions (a total of 263 public institutions) are strongly committed to undergraduate education. Within these institutions, graduate education is a smaller enterprise and tends to be limited to the master's level. Even so, institutions play a relevant role as regional sources of skills and knowledge. As thus, I propose to call them public regional institutions, regardless of the ownership (i.e., the federal government or some state or local government).

Private institutions represent more than 88 percent of all institutions and attract 73.7 percent of all enrollments at the undergraduate level. In the private sector, the most common institutional type is the isolated professional school that offers programs in a small number of professional tracks.[1] Most of the private sector is confined to a kind of mass market where the lower price charged for education is the most relevant differential. I label these institutions private mass-oriented institutions. They are open-door institutions catering for older students from poorer families that had no access to good quality education prior to entering higher education. In the last 10 years, this subsector has experienced a strong

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consolidation movement with the growth of huge private universities—some of them with more than five hundred thousand students. As a result, while most private institutions are still small isolated professional schools, there is a small number of large multi-campuses private for-profit universities among them. In 2011, the 88 largest private universities had more than 27.5 percent of all undergraduate enrollments in the country (Sampaio 1999).

In the last two decades, the private sector also has experienced a process of stratification with the growth of prestigious, elite private institutions catering to the students from the richer and better-educated families. Some of these institutions are Catholic and other denominational universities, but there are also a number of lay institutions with strong reputation for providing good quality training conformed to the demands posed by the labor market.

Policy Dynamics in Brazilian Higher Education

The dynamics of Brazilian higher education policies are marked by contradictory forces. At the beginning of nineteenth century, higher education was conceived as part of a project to transform this early Portuguese colony into a more modern national state. This transformation was expected to produce a group of professional elites trained to possess the best technical and legal knowledge available. At that time, training was supposed to be conducted in institutions that were controlled by the state and freed from traditional religious thinking. In order to reinforce the utilitarian side of the knowledge cultivated inside higher education, none of the institutions founded in the nineteenth century adopted the university model. Instead, higher education offered updated professional training, thus directing students to specialized professional schools such as the Polytechnic School of Engineering of São Paulo, the Medical School of Salvador, and the Law School of Rio de Janeiro.

In the 1930s, when the first universities were founded, their elite character was reinforced. The establishment of these first universities was supported by a group of new elites with a modernizing project that also aimed at establishing the basis for the country's industrialization and government reform. The first universities in Brazil were built upon meritocratic access to higher education, high level of professional training, new institutional core devoted to the development of science and humanities, and trained teachers for the secondary level. Access to higher education was regulated through competitive entrance exams. Curriculum was developed under strict supervision of a new powerful education ministry.

The first comprehensive university reform in Brazil was carried out in 1968. The reform replaced the chair system with departments, created specialized institutes for different fields of science, and introduced full-time contracts for faculty. It also reinforced the preexisting ideals of unitary higher education constituted by only public, tuition-free, and research-oriented universities. These ideals have had a lasting impact on the beliefs that guide public decisions on higher education in Brazil (for an overview of 1968 reforms, see Klein 1992).

The 1968 reform was more or less successfully implemented in the public sector. At that time, Brazil also experienced the first massive increase of demand for higher education. In 1960, 95,000 students were enrolled in undergraduate courses. Ten years later, this number grew to 425,000, and to more than one million by 1975. To face this scenario, while preserving the public universities' elite training function, the government allowed private initiatives to create new institutions. The growth of the private sector was achieved as the number of for-profit isolated professional school increased, following the early institutional model of the nineteenth century. Because the 1968 reform had relevantly introduced full-time contracts to the public sector, the new institutions at the private sector searched for faculty mostly among professionals from the general labor market, without any kind of academic training. As a result, private higher education in Brazil was regarded with contempt by most public stakeholders.

In the last decade of the twentieth century, the Brazilian society was gradually reshaped by long-lasting forces of both economic and macro-political processes. The former refers to the Brazil's economic crisis in the 1980s and the latter refers to the country's democratiza-

tion process. In general, the economic crisis was overcome by the economic reforms that supported new policy instruments directing higher education to perform a more active role in the country's innovation system. These policies were related with competitiveness, entrepreneurship, and market relevance of academic research. By employing this proactive policy agenda, the federal government applied a new public management approach centered in decisions related to science, technology, and innovation.

The so-called "democratic pact" that provided legitimacy to the new political regime starting in 1984 also encompassed a strong demand for equity and social inclusiveness. Being present across all policy systems, issues related to social inclusiveness, including higher education, have strong legitimacy. Access to higher education has become the private sector's main concern; however, this matter has been a key issue to the public sector as well since early 2000s. The demand for access poses strong challenges to public universities. They are expensive institutions manned by full-time academics with low teaching load and governed through an organization model based on the representative principle. In this model, institutional authorities are elected by students, academics, and non-academic staff and decisions respond mostly to the pressures coming from internal stakeholders. While the representative principle keeps university governance from any external influence and support, the lack of financial autonomy subjects it to direct political pressures coming from the government (Balbachevsky 2013b).

The Brazilian government is currently responding to a new political agenda where access and inclusiveness are top priorities. The agenda is realized by increasing access to higher education and breaking off the meritocratic logic through policies that favor minority and low-income students. In order to accommodate the new agenda, while preserving the early university model inside the public sector, universities are pushed to expand themselves toward mega-universities, following the example of many other Latin American countries. However, if this agenda is applied homogeneously through all institutions in the public sector, it would endanger the prior massive efforts of establishing high quality graduate education and strong research environment of some universities. Furthermore, internal stakeholders strongly resist the notion of acknowledging differentiation, which creates a lasting impasse in this area.

On the other hand, Brazil's large and ever-growing private sector has posed a challenge for the government, particularly a leftist government committed to the ideals of a universal public tuition-free higher education. To overpower the challenge, both the government and public sector need to curb the growth of the private sector. Thus, the policies directed to private sector have a permanent *leitmotif* that pushes strict control and restriction. One of the policies, dating back several decades, requires high academic indicators from teaching-oriented and tuition-dependent institutions. Following this, private institutions are pushed to raise the fare of undergraduate tuitions in order to face the extra-costs caused by the new exigencies imposed by the government. However, since most of these institutions operate in a market with low elasticity, these policies reinforce the worse side of private education, supporting concentration and commoditization of teaching (Balbachevsky and Schwartzman 2007; Sampaio 2011).

Conclusions

From the pictures outlined above, it is clear that higher education in Brazil faces strong challenges. The central issue requires higher education to change its core mission by rebuilding the social pact that sustains the long-lasting relationships between university and society (Gornitza, Maassen, Olsen, and Stensaker 2007). However, Brazil's higher education is crucially ill-equipped to face such challenges. There exist not only different rationales evoked by different layers of policy, but also a wide mismatch between the stakeholders' ideals and the country's reality. Unless these conflicts reach a compromise point, it is impossible to produce a stable paradigm framework that could support the continuity of higher education policies.

In the years ahead, the demand for higher education is expected to grow sharply as the country's most conspicuous inequalities are being addressed by the public

policies. More and more children from middle-class families will seek to enroll in higher education. On the other hand, as the national economy faces globalization, demand for quality education and research is becoming a central issue in the country's development. These new realities pose strong challenges for both the public and private sector. To the public sector, the main challenge is to answer the demand of access to higher education without jeopardizing the function of universities as a place to preserve and develop knowledge. While to the private sector, the main challenge is to make institutions' flexibility and keenness meet with the market logics, which enable them to answer for the new skills and competences demanded by the labor market.

Note

1. Brazil, like all Latin-American countries, adopt the old continental model of higher education where undergraduate training is supposed to end up in a bachelor's degree, which certifies the completion of the first cycle of higher education and, at the same time, accredits the holder as a full-fledged professional, entitled to exercise his/her profession.

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Dispelling Illusions of Homogeneity: Growing Disparities in Higher Education Access in the Post-Soviet Regions

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Introduction

The Soviet Union benchmarked its achievements by stressing equal access to education. While the regime made significant progress in compulsory K-10 education (in most cases, the republics reported between 90 and 100 percent enrolment at the pre-college level), the tertiary education sector exhibited huge disparities across constituent republics and regions of the Union. Not only was access hierarchized by the types of institutions, but also politicized by the societal dominance of privileged populations located in the constituent republics' capital cities, as well as by elites educated in the oldest national universities and science centres—primarily based in the European parts of the Soviet Union (Karklins 1984; Nesvetailov 1995). The economically-advanced western part of the former empire, governed by a heavily centralized and politicized bureaucracy in the Kremlin, tended to dictate the political, economic, and educational rules and priorities to the underdeveloped and politically repressed East (Luong 2004).

The policies of "Sovietisation", aimed at the Russian language domination and a levelling of religious, linguistic, and cultural differences (see Dostál and Knippenberg 1979), were predisposed to fail given the rich diversity of the vast territory under Soviet control, which stretched from the Far East to Central Europe. The absence of higher education that recognized and served the needs of the constituent national or ethnic cultures was a root cause of the union's collapse. While the repressive regime called for homogeneity, on the ground convergence was limited to regional cohesions. For example, the Baltics, the Caucasus, and Central Asia enjoyed a greater rate of convergence, exchange, and communication among the republics inside rather than across the regions.

While the communist party made deliberate efforts to stimulate wider mobility and economic integration across these regions, the overarching objectives were undermined by national elites working in defence of local interests and cultures inside the regions, and not necessarily across the regions.

The collapse of the Soviet Union opened the way for revitalized national cultures to steer the development of higher education within independent states. Regional dynamics differed significantly; however, key drivers included aspirations for the European Union (EU) accession in the Baltics and Ukraine; authoritarian leadership in Belarus, Kazakhstan, and Turkmenistan; prioritization of natural over intellectual resources in the Russian Federation, and so forth. Over the last twenty years, colleges and universities in the Baltic republics (Estonia, Latvia, and Lithuania), as well as Eastern Europe (Ukraine and the Republic of Moldova), were able not only to depoliticize their curricula, but also to advance institutional support for new fields of studies (e.g., sociology, cultural studies, gender studies, public administration, etc.), thus promoting local research agendas and debates to global scholarly communities. Within these regions, national cultures and languages have been re-energized and aligned with the interests of newly independent nation-states. Access to higher education improved significantly as private universities and colleges mushroomed and stimulated domestic and regional competition for students and tuition fees. Conversely, the more authoritarian states in Central Asia provoked a variety of closures, including reduced access to higher education and the shunning of liberal studies. Notwithstanding the regional variations in access, the unequal distribution of wealth across most of the post-Soviet realm produced a wide range of inconsistencies with regards to the quality of higher education. The student-led revolutions in

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Ukraine and the Kyrgyz Republic were in part expressions of the accumulating resentment and resistance of the emerging middle class to the excessive corruption, which is endemic in education in the post-Soviet space.

The comparative perspective on inequities across the post-Soviet regions is currently lacking in studies on higher education. This type of research is imperative given the growing hierarchization of the globally-competing national higher education systems and the prevailing misconception that homogenization is achievable or becomes an unavoidable direction for future development. To counter this notion, this paper illustrates growing regional divergences and dispelling revisionist aspirations for coherent or common higher education space. The paper offers several snapshots of the changing contours of access and equity in higher education by examining the disparate dynamics inside and across the regions. The following paragraphs analyse and compare the 1991 and 2011 access data from the UNESCO Institute for Statistics. The analysis is also informed by insights from higher education experts from the post-Soviet republics and their views on national and regional differences in tertiary enrolment, teaching resources, and geospatial inequalities.

The Disintegrating Post-Soviet Higher Education Space

UNESCO's tertiary enrolment data reveal unequal access rates across the republics and regions at the time of the Soviet Union's collapse (see Appendix). Uzbekistan had the lowest access rate (17 percent) and Belarus had the highest rate (48 percent) in 1991. Disparity existed even within well-to-do regions: for instance, Lithuania (32 percent) surpassed neighbouring Estonia (24 percent) in the economically advanced Baltic region, where GDP per capita was two to six times higher than in other Soviet regions. Following the disintegration of the Soviet Union, most independent states significantly increased access to higher education (except for Uzbekistan, where access dropped from 17 percent in 1991 to nine percent in 2011). The Baltic republics (Estonia, Latvia, and Lithuania) and Eastern Europe (Belarus and Ukraine) more than doubled their number of college students: from an average of 27 percent to an average of 63 percent in the case of the former, and from 47.5 percent to 83.5 percent in the case of the latter. Meanwhile, university access in most countries of the Caucasus and Central Asia declined despite an expansion of the college-age population. Within these regions, Kazakhstan and Armenia stand out sharply from among their neighbours. Armenia expanded access from 25 percent to 49 percent, while Azerbaijan and Georgia reduced access from 24 percent to 20 percent, and 37 percent to 30 percent, respectively. Similarly to Uzbekistan in Central Asia, the Eastern European state of Moldova provided a lower rate of access despite a growing school population at the tertiary level (see Appendix).

Data suggest that certain countries, including Azerbaijan and Uzbekistan, took deliberate steps to control access to higher education: the number of university places dropped despite a growth in the college-age student population, while the number of teaching staff increased or remained unchanged, thus improving student/teacher ratios. Rashed Aliyev (2011) reports that the Azerbaijani government adopted an elitist approach, while disregarding the needs of large rural populations and restricting the roles of private providers. Other experts argue that low-income families find it difficult not only to get financial support for the increasingly expensive and competitive public education (e.g., minimum interest rate for loans in Azerbaijan was reported to be at 24 percent), but also to pay for increasingly expensive pre-college exam tutorials. Ukraine also reduced the teacher/student ratio, but by radically increasing both the teaching workforce (90 percent) and student access to higher education (82 percent) through private universities and self-financing programs in public universities. The debates about access versus quality and impact on employment opportunities have intensified as well.

Likewise, national elites have displayed contrasting attitudes to stratification and global engagement. Disparity in national responses to the world-class university movement is indicative in that regard. After massification and privatization of higher education, Russia and Kazakhstan undertook forceful policy changes to strati-

fy their systems by introducing high status global research universities and stimulating curriculum development aimed at meeting global standards. In contrast, Ukraine has expanded and diversified its higher education system significantly but has, in large part, simply paid lip-service to global standardization, while remaining wary of external intervention in local policy-making, seeing it as a threat to its fragile national identity and culture. The smaller states of Kyrgyzstan and Moldova, on the other hand, were in no position to join the world-class university movement, given a persisting legacy of peripheral higher education infrastructures lacking demand for higher degrees from large rural populations (Padure 2012; Silova 2011). Meanwhile, Kyrgyzstan and other Central Asian republics engaged in a number of "glonacal" partnership initiatives, melding public and private resources to address the educational needs of isolated geographical areas (Oleksiyenko 2012).

In various ways, the post-Soviet republics eagerly embraced technical assistance and collaborations with the western partners, especially in cases of massive donorship, primarily from the EU and the United States. At the same time, academics emerged as strongly opposed to the idea of global compliance in higher education (e.g., re-orientation of local performance evaluation from teaching to internationally peer-reviewed Web of Science publications) as majority of local professoriate often lacks competency in foreign languages and experience with international journal publications. Moreover, there is marked reluctance among some established academics to lose the remunerative benefits that come from reading the same lecture from year to year, across multiple public and private university jobs. National aspirations to reorient their regional integration (e.g., moving from the post-Soviet to the European Area of Higher Education) confront numerous hurdles at the institutional level (Tomusk 2007).

With the exception of the Baltic republics, which are regulated by EU policies and legal frameworks, most of the higher education systems in post-Soviet states suffer from chronic corruption (Osipian 2009) and have been deliberately or inadvertently spearheading mediocrity over competitiveness in higher education. Meanwhile, the introduction of standardized testing in most contexts has been controversial and stimulated the growth of "shadow education" (Chankseliani 2013; Silova 2011). Increasingly, households and individual students are choosing studies abroad as a means to improve the quality of the educational experience and the competitiveness of the degree awarded. As indicated by a Ukrainian case study, the reorientation of transnational student mobility increasingly disfavours the post-Soviet space and invests more resources in obtaining access to universities and colleges in the EU (Oleksiyenko 2014). However, opportunities for study in the EU are slim for households in the Central Asian countries, where families have lower income and prefer to reach out to more affordable university programs in Belarus, the Russian Federation, Kazakhstan, or Ukraine.

Doing More for Less?

Income disparities have been escalating very rapidly inside the post-Soviet nations and across the regions. Some economies and elites have been more dynamic than their neighbours in implementing economic reforms, embracing global flows, and strategizing higher education positions (the resulting regional differences are apparent in the Appendix). In general, investments in higher education by governments and households are often related to the state of the national economy. However, greater economic progress does not guarantee the automatic prioritization or improvement of higher education. As comparative data show, the post-Soviet states have utilized disparate strategic approaches to resource concentration / distribution for elite versus mass higher education. For example, Ukraine has lagged behind in income growth (GDP per capita grew from USD$PPP 3,000 to 7,208 between 1991 and 2011, i.e., twice as slow as in Belarus), but has had one of the highest enrolment rates (increasing from 47 percent to 82 percent in the same years; on a par with Belarus). Indeed, Ukraine and Belarus appear to be doing equally well in tertiary enrolment under totally opposite regulatory conditions: the former shaped by the influential student movements of the Orange Revolution, and the latter controlled by "Europe's last dictator." Paradoxically, the Ukrainian higher education system outranked all

post-Soviet countries, as well as some EU leaders (e.g., France and Germany) in terms of the resources allocated for higher education (U21, 2012). Meanwhile, Azerbaijan used its oil revenues to successfully raise income rates (from US$1,962 to US$10,061), while its higher education participation rate dropped from 24 percent to 20 percent over the last twenty years.

In general, the cumulative advantages acquired over the course of history seem to have carried over into the present. Higher education access rates in post-Soviet nation-states and regions have followed a predictable trajectory: that is, those that used to have high rates improved them even further; while those with low rates stagnated or declined. The limits of this analysis do not allow for a thorough examination of the socio-political, economic, and cultural predispositions and variations influencing national decision-making with regard to elite versus mass higher education. However, it is obvious that the concept of homogeneity is illusive, both as a window to the past and as a view of the future, despite the enthusiasm of advocates affected by misplaced nostalgia and historical amnesia. The geography of disparities is persistent despite the changing contours of regional spaces and the legacy of centrally-guided policy interventions (Fuchs and Demko 1979). Further cross-regional study (e.g., on changes in local resource schemes, mobility structures, student aspirations, and household behaviours) is important at the sub-national and supranational levels to better understand the nature of heterogeneity as well as the implications of misguided homogenization policies.

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Public Funding and the Beginning of a New Era in Higher Education in Brazil

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In Brazil, higher education is perceived as the means for social mobility (Romanelli 1991; Canuto 1987). However, most Brazilian families cannot afford to send their children to private institutions, which have more enrollment capacity than their public counterparts. As a response, people demand the government to develop mechanisms to increase access to public higher education institutions (HEIs) and/or create scholarships for private HEIs. Consequently, the Brazilian federal government has implemented a series of policies to quantitatively and qualitatively address the demands for more higher education. Such initiatives constitute a new era in this sector, which is no longer being expanded only through private financing and is making possible to provide more public financing.

Expansion of Private Higher Education by 2004

Private higher institutions made an important contribution to the expansion of higher education in Brazil. The first major structural change occurred in 1968 when through Law 5540 law the higher education system was reformed. Between 1968 and 1970, number of HEIs doubled. However, the reform opened the door for more participation of private HEIs that grew without major regulation, as shown in Table 1. At the end of the 1970s, the Brazilian government stopped authorizing the creation of new private institutions until the promulgation of the Law of Guidelines and Bases of Education (LDB, or "Lei de Diretrizes e Bases da Educação") in 1996. The LDB provided the environment for another expansion of private higher education, resulting in a new accelerated growth. According to Valdemar Sguissardi (2000) and Nelson C. Amaral (2003), in a short period of time, private institutions were able to offer over two thirds of available seats.

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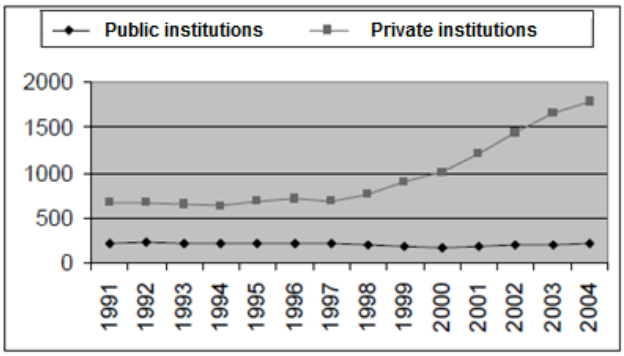
The analysis of all the indicators provided by the National Institute of Educational Studies Anísio Teixeira (INEP) shows that the private sector grew 151.6 percent between 1996 and 2004 in Brazil (Figure 1).

FIGURE 1
GROWTH OF HIGHER EDUCATION INSTITUTIONS, 1991-2004



Source: Adapted from Michelotto, Coelho, and Zainko (2005, p. 192).

The unexpected increase of institutions and number of seats generated high competition for students and several challenges within the sector, such as high dropout rates and unfilled seats (Meyer Junior 2004). At this point, the Brazilian government intervened by increasing public funding, which was distributed in several public policies, as it is discussed in the next section.

Public Programs and the Expansion of Public Seats

It became necessary to reconfigure the higher education system in Brazil. The reform was delineated in a document titled Education Development Plan (PDE, or "Plano de Desenvolvimento da Educação") that was released in 2007. Since then, several structural change have been carried out in order to provide funding for

TABLE 1
NUMBER OF ENROLLMENTS IN HIGHER EDUCATION, 1960-1980

Year	Public Financing		Private Financing		Total Enrollment
	Enrollment	Participation	Enrollment	Participation	
1960	132.25	58.5%	93.968	41.5%	226,218
1970	210.61	49.5%	214.865	50.5%	425,475
1980	492.232	35.7%	885.054	64.3%	1,377,286

Source: Adapted from Terribili Filho and Machado (2006, p.10).

seats in private institutions and more seats public universities. The actions to expand access to public seats were performed under three fundamental modalities:

1. federal higher education,
2. distance higher education, and
3. vocational higher education.

The federal higher education initiatives were described in the Plan of Reorganization and Expansion of Federal Universities (REUNI, or "Programa de Apoio a Planos de Reestruturação e Expansão das Universidades Federais").[1] With this program, in return with the large investment (about US$900 million), the federal government aimed to increase the number of undergraduate courses in public universities to 3,601 and the number of seats to 227,260 in 2012. The program also intended to increase evening courses to 1,299 and the number of seats to 79,215. In addition, there was a great concern regarding the training of teachers in basic education; therefore, the government increase teaching certification courses (those that prepare teachers for basic education) to 1,198 and the number of seats to 79,191 (Ministry of Education of Brazil—MEC 2013a).

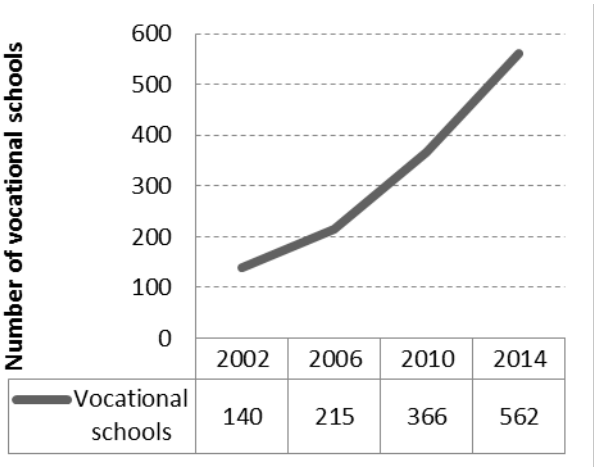
The initiatives to expand distance higher education were executed through the Open University of Brazil (UAB, or "Universidade Aberta do Brasil").[2] The latest data released by the Coordination of Improvement of Higher Education Personnel (CAPES) shows that between 2007 and July 2009, 557 face-to-face support centers were approved and implemented, resulting in the creation of 187,154 seats. In August 2009, over 163 new centers were selected to address the needs of the population, increasing to 720 centers. By the end of 2013, the system would expand its cooperation network to achieve all public HEIs in Brazil and accept 800,000 students a year. Since it was established, the UAB received public funding of over USD$300 million (Capes 2013).

Regarding vocational higher education, Federal Technical Schools were upgraded to Federal Institutes of Education, Science, and Technology (IFETs, or "Institutos Federais de Educação, Ciência e Tecnologia").[3] This reorganization led to the greatest expansion in the history of Brazilian vocational higher education. From the emergence of the first schools in 1909 to 2002, 140 vocational schools were created in the country. In accordance with the goal of expanding the vocational higher education, the government expected to create 214 more schools, reaching a total of 354 schools by the end of 2010. However, with the public funding of over USD$500 million for the expansion of vocational education and the goal of creating 500.000 seats countrywide, the Ministry of Education intends to exceed this goal, as shown in Figure 2.

All these initiatives contributed greatly to the growth of public higher education; however, as it was previously argued, the largest number of seats is concentrated in the private sector. For this reason, there was a great effort to develop public policies to increase the number of private seats, which is described in the next session.

FIGURE 2

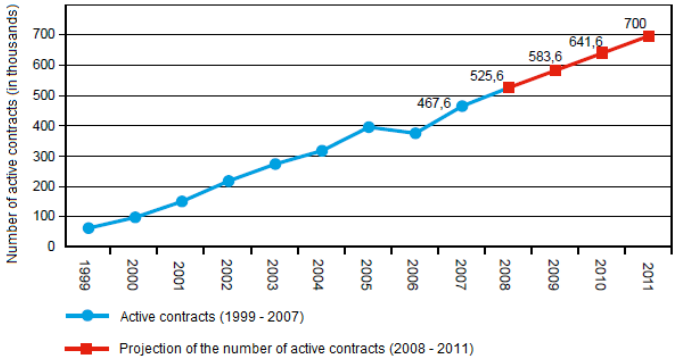
SCENARIO OF VOCATIONAL HIGHER EDUCATION BY 2014



Source: Adapted by the author with data from MEC (2013b; 2013c).

FIGURE 3

EVOLUTION IN THE NUMBER OF ACTIVE CONTRACTS OF FIES IN 1999-2007 AND PROJECTION FOR THE 2008-2011 PERIOD



Source: Brasil (2009, p.35), translated by the author.
Note: In the following years there was no update of these data by the Federal Government to prove the realization of projections.

Public Financing for Private Seats

To support the expansion and democratization of higher education, the federal government has invested public funds in two programs to increase public and private seats:

Financing of Higher Education Student (FIES, or "Fundo de Financiamento ao Estudante do Ensino Superior").[4] Students study with funding from the government until completion and have a grace period for repayment of the amount borrowed of 18 months at a rate of 3.4 percent per year after graduation.

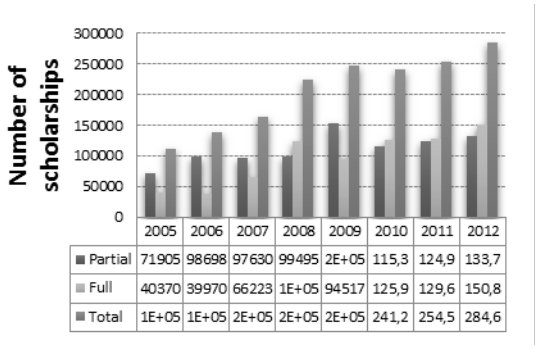
University for All Program (PROUNI, or "Programa Universidade para Todos").[5] Economically disadvantaged students receive scholarships of 25 percent, 50 percent, and 100 percent in private higher institutions (no need to pay the government after completion).

With respect to the FIES, data from the latest report released by the Brazilian Court of Auditors (TCU, or "Tribunal de Contas da União") show that 1,459 institutions were part of the program in 2007. With public funding of over USD$500 dollars, at the end of that year, the FIES had 467,600 active financing contracts and aimed at reaching about 700 thousand contracts at the end of 2011, as shown in Figure 3 (Brazil 2009).

Between its creation and 2012 (latest available data by MEC), PROUNI offered more than 1.7 million scholarships as illustrated in Figure 4.

FIGURE 4

PROUNI – NUMBER OF SCHOLARSHIPS OFFERED EACH YEAR



Source: MEC (2013d), translated by the author.

With the creation of the PDE in 2007, FIES started to work together with PROUNI. Students who have a PROUNI partial scholarship (50 percent or 25 percent) may request FIES to finance the rest of the monthly fees, ensuring their permanence in private HEIs (Brasil 2007).

All these public investments and programs represent a new moment in Brazilian higher education, which is shown in the Census of Higher Education. It is presented in the next section.

Census of Higher Education and the New Era of Brazilian Higher Education

Data from the last Census of Brazilian Higher Education (2011) show changes in enrollment, divided in two administrative categories, public and private, and in the following modalities: face-to-face and distance education (see Table 2). Table 2 shows an increase in the number of seats in public and private education (including the face-to-face and distance education).

TABLE 2

EVOLUTION OF THE NUMBER OF GRADUATE ENROLLMENT, BY TYPE OF EDUCATION AND ADMINISTRATIVE CATEGORY ACCORDING TO ACADEMIC DEGREE, BRAZIL, 2002-2011

Year	Public		Private		Total
	Face-to-Face	Distance	Face-to-Face	Distance	
2002	1,051,655	34,322	2,428,258	6,392	3,520,627
2003	1,136,370	39,804	2,750,652	10,107	3,936,933
2004	1,178,328	35,989	2,985,405	23,622	4,223,344
2005	1,192,189	54,515	3,260,967	60,127	4,567,798
2006	1,209,304	42,061	3,467,342	165,145	4,883,852
2007	1,240,968	94,209	3,639,413	275,557	5,250,147
2008	1,273,965	278,988	3,806,091	448,973	5,808,017
2009	1,351,168	172,696	3,764,728	665,429	5,954,021
2010	1,461,696	181,602	3,987,424	748,577	6,379,299
2011	1,595,391	177,924	4,151,371	815,003	6,739,689

Source: Adapted by the author with data from Census of Higher Education 2011 (INEP 2012, p. 94).

These data indicate that public funding and policies regulated by the government have contributed significantly to the expansion of higher education in Brazil. This expansion can be seen in the following categories:

- Face-to-face public education, REUNI and IFETs: 33 percent growth between 2007 (creation of the programs) and 2011
- Distance public education, UAB: 77 percent growth between 2006 (creation of the program) and 2011
- Face-to-face private education, FIES and PROUNI: 41 percent growth between 2002 and 2011.

Indicators show that the public funding, along with several public policies, increase the number of seats (and therefore enrollment) in public and private institutions in a unique manner and constitute a new era of higher education in Brazil.

Final Thoughts

As the society began to perceive higher education as the primary way to improve social status, the access to higher education has been discussed at several levels and social spheres. Since then, a number of initiatives, especially the PDE, were created and programs like REUNI and PROUNI, articulated together with the FIES, UAB, and IFETs, are the main pillars for the reformulation of Brazilian higher education. Through

these programs, public funding has been allocated for the Brazilian higher education.

Brazil seeks to become the fifth world power during this decade, by increasing its Gross Domestic Product and Human Development Index, while decreasing unemployment rates. To achieve these goals, the country must democratize the access to higher education because education is considered the driving force for development.

The scenario presented in this article shows a new era in Brazilian higher education, which starts from the reversal of financing agents to expand access to higher education (private to public). However, there still are some that can be improved:

- The program REUNI, which was scheduled to end at the end of 2012, should continue. Some researchers suggest the creation of REUNI 2 because there is still room for progress in federal higher education (Costa, Costa e Barbosa 2013)
- The IFETS and UAB should not promote only quantitative expansion. It is necessary to allocate public funding to increase the quality of education through these programs, thus improving the quality of human resources educated in the nation
- The FIES and PROUNI should be united in a single process. A student who is eligible to receive the PROUNI should be automatically eligible to get the FIES. This would facilitate the financing of remaining monthly fees to students who receive partial PROUNI scholarships. Programs that have similar objectives should be managed by the same board, something that does not happen currently (Brasil 2009).

Finally, the Federal Government should proceed with the creation and advancement of effective public programs. It is necessary to highlight our higher education. We should consider it an important pillar of the desired development and therefore transform the country by education.

Notes

1. REUNI was released on 24 April 2007. It aims to demonstrate the strategic role of federal universities for economic and social development of the country. REUNI's main objectives were to increase the number of seats and the reduction of dropout rates, with a focus on undergraduate courses (MEC 2013a).
2. UAB was established in 8 June 2006 with the purpose of developing distance higher education and the mission to offer courses and programs to places that lacked tertiary education in Brazil, such as rural areas (Capes 2013).
3. IFET were established in 24 April 2007 with the purpose of integrating all Federal Technical Schools that already exist in IFETs as part of the Federal Network of Technological Education that manages all the processes.
4. FIES was created in 27 May 1999 with the purpose of financing undergraduate education of economically disadvantaged students in private Institutions.
5. PROUNI was created in 13 January 2005 with the purpose of providing scholarships to cover 100, 50, and 25 percent of expenses for undergraduate students in private higher education institutions.

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Three Solutions for Reforming Indian Higher Education

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Introduction

Is Indian Institute of Technology (IIT) a university? What is the difference between a deemed-to-be-university and a state private university? How does University of Pune "affiliate" more than 600 colleges? How does the authority and control of multiple regulatory bodies differ?

These are some of confusing and frustrating questions that researchers, policy-makers, and foreign institutions who are interested in India have to confront (Choudaha 2013). It exposes the complexity of the current condition of higher education in India. The bigger implication of this complexity is how it threatens human talent potential and economic growth. A recent report from the World Economic Forum (2010, 23) states:

> More than 100mn people from India—the equivalent of the combined labor forces of the United Kingdom, France, Italy and Spain—are projected to join the workforce by 2020. With the youngest age profile among large economies and the largest national workforce, India holds great potential to become one of the most attractive talent providers.

In order to accomplish this, it is necessary that India put its postsecondary education system in order.

Context and Complexity of Indian Higher Education

Indian higher education has expanded at a breakneck speed. Between 2007-2008 and 2010-2011, postsecondary student enrollment grew by nearly five million students (see Table 1). In the same five-year period, the number of institutions increased by nearly 10,000. However, this much needed expansion came at the expense of quality, primarily due to an inadequate and incoherent policy and legal framework.

TABLE 1
GROWTH IN ENROLLMENT BY TYPE OF INSTITUTIONS

Category	2007-2008	2011-2012	Increase	Growth Rate (%)
Central Institutions				
Degree Awarding Institutions	75	138	63	13.0
Colleges	58	69	11	3.5
Diploma Institutions	14	24	10	11.4
Sub Total	147	231	84	9.5
State Institutions				
Degree Awarding Institutions	253	316	63	4.5
Colleges	9,500	13,024	3,524	6.5
Diploma Institutions	2,151	3,207	1,056	8.3
Sub Total	11,904	16,547	4,643	6.8
Private Unaided Institutions				
Degree Awarding Institutions	80	191	111	19.0
Colleges	13,706	19,930	6,224	7.8
Diploma Institutions	7,220	9,541	2,321	5.7
Sub Total	21,006	29,662	8,656	7.2
Total	**33,057**	**46,446**	**13,383**	**7.0**

Source: XIIth Five-Year Plan of the Government of India.

The most challenging problem of higher education institutions in India is funding. According to the policy framework, higher education institutions in India are required to have a non-profit structure, irrespective of how they are funded—by public or private sources. At the same time, degree-awarding power rests only with universities as specified by the University Grants Commission (UGC) under Section 22(3) of the *University Grants Commission Act, 1956*.

The Act has resulted in a unique and complex system of hundreds of "teaching" colleges—private or

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public—"affiliated" with public universities. Public universities themselves can be funded by state or central sources. In order to achieve the goals of expanding access to higher education within the constraints of public funding, privately-funded universities were allowed. These private universities in turn can be approved by state acts or central authority (UGC). This complex framework resulted in four types of universities in India as shown in Table 2.

TABLE 2
TYPOLOGY OF UNIVERSITIES IN INDIA

Types of universities	Number of universities	College affiliation?	Funding	Regulatory authority
Central Universities	44	Y	Public	Central
State Universities	299	Y	Public	State
Private Universities	140	N	Private	State
Deemed to be Universities	130	N	Mostly Private	Central
Total Universities	*613*			

Source: University Grants Commission (2012).

The complexity of the Indian higher education system gets further compounded due to large number of regulatory bodies who sometimes have overlapping scope of work resulting in power struggle and additional confusion for stakeholders. Consider the recent example of conflict between UGC and All India Council for Technical Education or AICTE on the regulatory jurisdiction for management programs in India (Pathak and Balchandran 2013).

Another outcome of this complexity is the nexus of politics and business of higher education, which has given birth to pseudo-not-for-profit institutions. As the regulations require colleges and universities to be registered as a non-profit legal entity, many private colleges, which offer high-demand engineering and management programs, are found to be engaged with financial engineering to siphon off the "profit."

The previous Minister of Human Resources Development, who is also responsible for higher education, has attempted to address these challenges by proposing a dozen legislative bills, including the *Foreign Education Institutions Bill* 2010, the *Higher Education and Research Bill* 2011, and the *Prohibition of Unfair Practices in Educational Institutions* 2010. Unfortunately, most of the bills were still far from seeing the light of the day and had remained unapproved due to political divisiveness and general elections in 2014.

With the proposal of the Foreign Education Institutions Bill, foreign universities bills, which had been in conversation in its various forms for nearly a decade, became a topic of discussion again in 2010. However, no progression was made as the bills had been languishing in a political stalemate. Regulatory bodies themselves are seeking ways to work around politics of Indian higher education. In May 2013, UGC announced that the existing and future partnerships would require their approval to offer any joint degrees and twinning (Kumar 2013). The vacuum of policy framework resulted many twinning partnerships and a few branch campuses have started without any regulatory oversight. Unsurprisingly, quality is at risk and the students are often deceived for the high cost and the lack of recognition of the degree they earn.

Overall, the regulatory environment for Indian higher education is complex and fails to improve its quality and addresses the deficiencies. Regarding this matter, I am proposing three recommendations that go beyond the rigmarole of politics and power struggle in higher education.

Recommendations for Improving the State of Indian Higher Education

The three recommendations to navigate the complexity of Indian higher education system are: First, enforce higher standards of transparency and disclosures for private higher education institutions; second, strengthen the vocational and doctoral education pipeline; third, professionalize the sector through stronger institutional responsibility.

Improve Transparency of Information for Students

One of the biggest and often overlooked challenges of Indian higher education is the lack of transparency in

accessing credible and current information about institutional performance. The policy reform directions are seriously limited by its political approach of using control and bureaucracy as the way of assuring quality rather than using transparency for empowering students and fostering competition.

One specific recommendation to achieve goals of transparency is to mandate high standards of institutional performance data disclosures by institutions. These data are uploaded to a user-friendly and easy-to-use national database. Hence, students are able to make informed choices based on the data they obtained.

Let me elaborate on the case of regulation in the financial system. How is transparency ensured in publicly traded companies? It is through mandatory and easily-available-audited financial reports coupled with the strict oversight by the financial regulator. In contrast, the parallel information of institutional performance for higher education institutions is unavailable. This results in all sorts of academic, financial, regulatory, and marketing malpractices.

As applied in the US educational system, transparency through data reporting and information sharing is an important policy-tool enforced by the U.S. Department of Education where the National Center for Education Statistics collects, collates, analyzes, and reports on American education. Data reported by the institutions are uploaded to a free website (CollegeNavigator), which enables students to search and compare colleges based on various parameters.

As the students have easy access to comparable information on each college institutional performance, they can decide the programs they are pursuing and in the process creating a state of enhanced competition among institutions. In addition, policy-makers and researchers will also have access to rich data in order to improve the educational system.

Strengthen the Doctoral and Vocational Education Pipeline

The two extremes of postsecondary education, vocational and doctoral, are facing acute quantitative and qualitative challenges. At the qualitative front, there are serious concerns about the learning experiences and hence the outcomes are sub-par. Likewise, at the quantitative front it is difficult to attract the students to pursue programs at the two extreme—vocational or doctoral. While improving these two challenges, officials often neglect two important aspects. First, providing a policy framework that facilitates better fit of students with their career path and second, attracting and preparing faculty who can offer quality educational experience.

Vocational education is impaled on the quantitative front by the large gap between demand and supply. According to the Ministry of Labor and Employment, Government of India, while 12.8 million people are added to the labor force annually, vocational training is available to only a miniscule 4.3 million.

On the qualitative scale lies the dismal skill development and training scenario. A report by the World Bank released in 2008 notes that over 60 percent of graduates from the vocational stream in India remain unemployed even three years after graduation.

This quality gap in vocational education has resulted in a disproportionally large number of students opting for college degrees and resulting in graduates oversupply. At the same time, the quality of college education is also challenged; hence, many college graduates remain unemployed. In addition, industry is clamoring for skilled labor force. This unfortunate mismatch would have been better resolved with an improved vocational education system.

If vocational training is in shambles, the doctoral educational system also struggles with the issues of quality and accessibility. According to the University Grants Commission, nearly 16,000 doctoral degrees were awarded in 2010-11—a disproportionately small number for one of the largest education systems in the world enrolling 20 million students.

Despite such small number of PhD enrollments, concerns for quality and rigor of training have been growing (Rajput 2013). There have been cases of poor quality assurance and large number of doctoral degrees awarded through the distance learning model. India is in a precarious situation of balancing quality and quantity for doctoral degrees.

Professionalize the Higher Education Sector

Higher education services are considered public goods with a strong sociopolitical connection. In addition, they are highly experiential in nature with information asymmetry between consumers (students) and service providers (institutions). This makes higher education to be one of the highly regulated sectors. Teixeir (2006, 14) notes that

> the adoption of market forces as a steering mechanism for higher education is unlikely to engender the expected efficiency benefits for society unless a more effective regulatory framework can be developed to address the problem of imperfect information on the quality of teaching and student learning.

While regulation is required to developing the system in India, there are bigger opportunities for self-regulation through professionalization of the sector. Jongbloed (2004, 94) argues that "self-regulation is preferable to government regulation when specific knowledge or information is primarily held by the sector itself." He adds that "in higher education, the norms of academic professionalism act as systems of self-regulation" (94). This could be achieved through professional associations, which in the process mutually define and monitor the agreed quality standards. It will also provide systematic opportunities of continuous learning and professional development for faculty and administrators.

Many people consider a career in higher education as their last resort. This makes it difficult to attract, retain, and reward more people with the best talent. It has also been constrained by the "non-for-profit" requirement, which has kept salary levels low, especially for private institutions.

Currently, the administrative positions in higher education are not recognized as a "profession" and hence there is a lack of formal training and corresponding deficiency in the quality and impact of the services. There is an urgent need to systematically develop leaders and managers who understand the context, constraints, and challenges of education. Professional associations are the key as they will encourage quality improvement and prepare higher education specialists for a changing environment.

Conclusion

Indian higher education has expanded at a clipping rate and policy framework has failed to adapt and change its complex system. The system has remained embroiled in politics of policymaking and suffered in terms of quality. Given the pace of growth and unmet demand, the success of Indian higher education lies in adaptable and innovative solutions. A focus on enforcing higher standards of transparency, strengthening of the vocational and doctoral education pipeline, and professionalization of the sector through stronger institutional responsibility would help in reprioritizing efforts and working around the complexities.

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