Institutional Differentiation and the Accommodation of Enrollment Expansion in Brazil

D. Bruce Johnstone

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Latin America and the Caribbean Regional Office
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Introduction

Higher education in Brazil is approaching a crossroads. The old model, a publicly funded system for the few, is centered on an elite and will not serve the country’s needs in the 21st century. The Government of Brazil, with the World Bank’s cooperation, is exploring a range of alternatives that address the most critical issues in Brazilian higher education:

- **Increasing Coverage**: A demographic bulge of young Brazilians is reaching university age. They will have more high school diplomas and higher educational aspirations than any previous generation. The current system provides education for less than 10 percent of the age cohort and is ill-equipped to meet the growing demands. To respond to this challenge, the higher education system will have to become more diverse, higher quality, and less expensive.

- **Restructuring Funding Mechanisms to Support Institutional Autonomy and Incentives for Efficiency**: Rigidities throughout the higher education system have institutionalized a system whose costs are on par with those of OECD countries but whose quality is not. A reexamination of funding and regulation mechanisms, and the incentives they create, is critical to improving quality and efficiency.

- **The Role of the Federal Government: Provider, Funder, and Regulator of Higher Education**: The last major reform of higher education took place in 1968. Currently, federal support for higher education is channeled almost exclusively to federal universities (and overwhelmingly for salaries). Little consideration has been given to the appropriate roles of the federal government in a diversified higher education system.

- **Quality of Instruction**: Quality assurance system at the institutional and national levels are weak, rigid, and politicized. They do not encourage diversity or flexibility of the curriculum.

- **Stakeholders: The Political Realities of Change**: Many of the system problems are well known and widely discussed within Brazil. Opponents to change in the higher community come from the country’s most capable and politically mobile/influential groups and are often fortified by strong legal (even constitutional) and bureaucratic protection. Any viable policy change must strategically deal with potentially strong and well-organized political opposition.

The eight papers in this series are a systematic examination of the problems and policy options for Brazilian education.

This paper, by Bruce Johnstone, addresses the topic of institutional differentiation, or dimensions of institutional variation, and how this differentiation impacts enrollment capacity, or the ability of a national system taken as a whole to accommodate a large anticipated expansion of enrollment. This paper specifically addresses the topic in reference to Brazil in the late 1990s. It draws on theory and experience from the international comparative study on higher education from the
perspectives of economics, finance, governance, and public policy.¹ In addressing higher education in Brazil, this paper has been informed by secondary source material in English, much of it provided by the World Bank, but has not been informed by primary source materials or by in-country experience.

Donald Winkler
Lauritz Holm-Nielsen

¹ The author is a University Professor of Higher and Comparative Education at the State University of New York at Buffalo, where he specializes in the economics, finance and governance of higher education and teaches and writes about comparative higher education. He has written about and worked in Russia, China, and Europe, but has not traveled to Brazil or elsewhere in Latin America. He has served as president of the State University College at Buffalo and as chancellor of the State University of New York system. As a chancellor he had authority over 59 highly differentiated campuses, from research universities to two-year community colleges, with some 400,000 students and a consolidated budget of more than $5 billion.
Institutional Differentiation

Universities and other institutions of higher education, in Brazil and elsewhere, differ in several important ways. From the perspective of public policy attempting to accommodate enrollment pressures, the most important aspect is differentiation in institutional mission and the several institutional variables that follow from, or are a function of, institutional mission. By “mission” is meant the larger purpose of the institutional, which in turn drives the programs, the kinds of students attracted, the kinds of faculty appointed and the expectations upon them, and the way the institution is assessed (or would be assessed).

Differentiation of mission: An institution’s mission can be aspirational, purported or actual. That is, what the institution is trying to be; what the faculty, students, and leaders wish it to be thought of; and what it most nearly is to the unbiased observer. The mission of an institution of higher education may be best thought of on a continuum, ranging from a primary orientation towards scholarship and advanced training associated with the classical research university to an orientation towards accessibility, vocational training, and the short-cycle programs associated with what are sometimes referred to as non-university institutions. The term binary line is used to describe national systems where all institutions of higher education are formally classified as either university or non-university—the latter designation including, for example, the German Fachhochschulen, the French instituts universitaires de technologie (IUTs), the Dutch HBO, most of Japanese private institutions, and those Brazilian public and private institutions without official university designation.

However, this nomenclature is becoming out of date—and almost dysfunctional—for several reasons. First, as stated above, institutions are more accurately portrayed along a continuum—or even better, along a series of continua, describing various institutional characteristics or dimensions. Most institutions in most countries lie somewhere between the extremes of the classical, research-oriented, Humboldtian university and the exclusively short-cycle, teaching- and vocationally-oriented college or institute, as shown in Figure 1. In the UK, for example, the former polytechnics, once officially non-university, are now classified as universities, but are required to compete for and earn the resources that may actually lead them to the scholarly distinction associated with those institutions that have long borne that designation. In the US, the community colleges are clearly non-university, except that most of the coursework is transferable to a university first degree (the baccalaureate). Many able students begin at these colleges for reasons of cost and convenience, transferring to universities after completing the two-year degree. The US public comprehensive institutions (called either colleges or universities) as well as most of the baccalaureate (mainly private) colleges also resemble the European non-universities in the absence of advanced degrees and the largely teaching orientation of the faculty. However, some of the private baccalaureate colleges enroll decidedly elite student bodies, most of whom go on to obtain advanced degrees in universities, as well as faculty who publish extensively. Similarly, many of the comprehensive colleges give masters degrees, some even grant doctorates (largely
professional doctorates in education), and most of the faculty conduct research and publish. To further complicate the distinction between university and non-university in the US, most universities, both public and private, give substantial emphasis to teaching (even at remedial levels), community service, applied scholarship, and even to short-cycle training.²

Mission is also a proxy for a number of important related variables on which institutions of higher education typically vary, most frequently, as for mission itself along continua. These dimensions include:

- Dominant knowledge orientation.
- Expected students’ required academic preparedness and interest.
- Expected faculty’s required academic and scholarly standards.
- Expected and rewarded faculty orientation.
- Degree of prestige accorded to the institution, faculty, and graduates.
- Dominant degree programs.
- Duration of studies and full- or part-time commitment of the students,
- Dominant form of internal governance.
- Typical per-student cost of instruction.

These variables and their associated continua are summarized in Figure 1. A number of important related dimensions of institutional variation track closely with the mission and with each other. For example, prestige is associated with scholarly reputation, which is gained through research and the training of advanced students who are engaged in longer-term study, (usually) in more theoretical disciplines. A research orientation, although relevant mainly to advanced doctoral training in the arts and science disciplines, is associated with high entry standards for undergraduate or first degree students who will likely have little association with the prestigious professors, but will reap the rewards of a high-status degree largely because of these high entry standards and the all-important signal to the outside world of their required intelligence, academic preparedness, ambition, and probable social background. All of presumed value to employers, future friends, and mates.

² Burton Clark describes the blurring of the traditional “teaching-research” distinction, with institutions formerly focused on one or the other end “drifting” toward “some of each” in the middle. See Clark (1995) Places of Inquiry. Berkeley: University of California Press.


<table>
<thead>
<tr>
<th>Dimensions of Mission Variation</th>
<th>Research University Humboldtian Tradition</th>
<th>Continua</th>
<th>Non-University: Practical &amp; Short-Cycle Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominant Knowledge Orientation</td>
<td>Theoretical, scholarly, broadly generalizable</td>
<td>←</td>
<td>Practical, vocational, Immediately useful</td>
</tr>
<tr>
<td>Students’ Required Academic Standards</td>
<td>High: rigorous academic secondary school preparation</td>
<td></td>
<td>Medium to low: can be less Than academic secondary School</td>
</tr>
<tr>
<td>Faculty’s Required Academic Standards</td>
<td>Terminal degree in field: doctorate or equivalent</td>
<td>←</td>
<td>Master’s or lesser Degree</td>
</tr>
<tr>
<td>Expected &amp; Rewarded Faculty Behavior</td>
<td>Rewards &amp; time oriented to research and scholarship</td>
<td></td>
<td>Rewards &amp; time oriented to Teaching</td>
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<tr>
<td>Image of Prestige &amp; Status</td>
<td>High</td>
<td>←</td>
<td>Medium to low (relative to University)</td>
</tr>
<tr>
<td>Dominant Degree Programs or Courses</td>
<td>Arts and sciences &amp; advanced professional (law, medicine)</td>
<td>←</td>
<td>Business, human services, Entry technical (computer programs)</td>
</tr>
<tr>
<td>Duration of Programs</td>
<td>Long (typically 4- to 7-year first degrees)</td>
<td>←</td>
<td>Short: may feature certificates and diplomas of less than 1 year</td>
</tr>
<tr>
<td>Time Commitment (full or part-time)</td>
<td>Typically full-time study</td>
<td>←</td>
<td>Typically part-time study</td>
</tr>
<tr>
<td>Dominant Form of Governance</td>
<td>Curriculum &amp; rector selection dominated by faculty</td>
<td>←</td>
<td>More bureaucratic-management domination</td>
</tr>
<tr>
<td>Typical Instructional Unit cost</td>
<td>High</td>
<td>←</td>
<td>Medium to low</td>
</tr>
</tbody>
</table>

Programs of study or degrees vary by discipline or occupational field, by level of study (first, second, or advanced degree), and by the dominant learning goals (whether heavily theoretical or more applied). These track closely with the other dimensions of institutional variation associated with the university vs. non-university distinction. For example, programs will vary by prestige, cost of delivery, and attractiveness to students. An institution seeking to raise its prestige and to be perceived as more “scholarly” is likely to emphasize the traditional arts and science disciplines and the classical professions of law and medicine. An institution not likely ever to attain genuine university status might be more cost-conscious and seek fields of study that can be taught (and presumably learned) in large lecture formats, with little or no specialized equipment and with inexpensive adjunct professors. Finally, an institution that must
work to maintain enrollment—generally meaning one that is minimally selective and that attracts students on the basis of location, service, and program rather than prestige—will present the programs with greatest student demand (although generally also mindful of costs), regardless of future employment prospects or the social need for more practitioners.

Tracking closely with differences in program, prestige, and primary orientation of the faculty is the dimension of student orientation, or institutional market niche. Institutions that choose, or for some reason are required, to locate on the non-university end of the institutional mission continuum, will generally appeal more to less academically and/or socially ambitious students. They might be less academically able, perhaps as a result of early schooling or the academically non-supportive influence of peers or family. But they also might be simply less drawn to theoretical subjects, or more drawn to vocations that require applied training in which university training is of little (or negative) value, or—and this is closely tied to public policy—their institutional preferences may be a function of both academic preparedness and family financial resources. Not being academically strong enough to be admitted to the prestigious free universities, and not being financially able to afford the best alternatives. The barrier may be tuition fees for private institutions, or high living costs (from the need to live away from home) for the alternative public institution. So, they are relegated to the institution closest to home—which may just happen to be a college or institute with less prestige and less value in the job market.

Academic Drift: Gravitation toward the University End of the Mission Continuum

Institutions of higher education are neither neutral nor stable with regard to where on this continuum their mission is positioned. For reasons that are partly natural (a human inclination toward prestige), partly historical/cultural (the historic origins of the classical universities), and in part a function of policy (governmental rewards, whether intended or not, that favor the classical research model relative to all others), there is an almost ineluctable gravitation toward the scholarly-research end of the mission continuum. Institutions want to be thought of as universities, frequently as more scholarly and well regarded than they really are. And if they are not presently particularly scholarly, it is thought to be proper to aspire to become more so by acquiring permission to offer more advanced and prestigious programs, attracting a more academically prepared student body, inducing more scholarly behavior from the faculty, or by attempting to change the institution's designation politically by governmental edict.

The Brazilian university, like the French university on which it was largely modeled, has traditionally been more of a teaching institution than a center of

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3 There may as well be a gender effect, as parents may be less willing to spend their money to support a daughter away from home than to support a son.
Although reforms in the 1960s attempted to raise scholarly qualifications of the faculty and scholarly output of the universities, most university faculty are still without terminal degrees, and the research productivity of most universities (except for a few that do international quality research, mainly in São Paulo and Rio) is low. To describe Brazilian higher education the 1980's, Verhine wrote in 1992: “the generally low qualifications of teaching personnel, the lack of effective faculty evaluation, the virtual impossibility of employee firing, the absence of incentives for research and publishing, and the need for many in the [professorate] to hold down additional employment to meet income expectations have led to a major internal crisis.”

Any attempt to turn institutions that formally consider themselves universities into anything less (which is how the imposition of a non-university designation would be seen) would be made with great resistance and would probably fail. However, as the American experience has shown for years, and the British experience has shown since the abolition of the binary line that once separated their universities from the polytechnics, a very substantial and useful differentiation can co-exist within the formal university designation. Care is taken to resist academic drift toward the faculty roles and rewards associated only with research universities. With most Brazilian universities already operating primarily as teaching institutions, little seems to be gained from “taking on” the designation of university. Instead, public policy ought to concentrate on freeing public institutions from the rigidity of the federally imposed teaching expectations and other “terms and conditions” for both faculty and staff. Likewise, it should fund program growth principally (but not exclusively) on the practical, shorter-cycle end of the mission continuum.

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5 It should be noted that these reform efforts, while partly successful, came about at the time of the military dictatorship that also took away many of the academic freedoms so essential to the classical Humboldtian research university tradition.

6 Verhine, p. 892.
Differentiation between or within Institutions

The last point suggests another variation on the theme of differentiation. Institutions of higher education, especially those of substantial size and those that are predominantly research-oriented, can differentiate within. That is, the non-university function can be added to or incorporated within an existing research university, without having to create a separate institution. An example of institutions that incorporate both the university and the non-university functions are those French universities that incorporate all of the traditional university mission\(^7\) along with the non-university Instituts Universitaires de Technologie (IUT). However, although these two institutions share some space and formal governing authority, they are less successful in sharing faculty and courses. The IUTs have acquired some status not generally associated with non-university institutions, by virtue of having entry standards beyond the mere possession of secondary academic leaving certificate or Baccalaureate. In a kind of role reversal, the French university is the institution with more nearly-open admissions (being forced to accept all students with a Bac), whereas some of the IUTs have been able to carry out a kind of selectivity process. In fact, the French have adopted quite another model to contend with students who are less motivated for the traditional university first degree. This is a two-year degree (DEUG) that allows such students exit gracefully--although few seem to be taking advantage of this opportunity. Another attempt to combine both ends of the mission continuum in a single institution is the German Gesamthochschule, which was devised to combine the classical German university with some of the programs and orientations of the newer Fachhochschulen. While the idea seems to be working where it has been adopted, the model is not spreading to the other states.

The problem with combining broad mission variation in a single institution is the difficulty of combining fruitful partnership elements with such disparate levels of prestige and assumed rewards—to faculty and student alike. Thus, the more practical, teaching-oriented, non-university elements may remain on the periphery, gaining little from the consolidation and having faculty chaffing unhappily under larger teaching loads. On the other hand, institutions may try to emulate the university faculty and programs, losing every reason for creating the practical, teaching-oriented programs. However, in the large number of Brazilian Universities that are already in the middle of the mission continuum, it might be possible to expand the more practical, shorter-cycle programs by tying faculty rewards to such programs or to non-university proxy indicators, such as shorter time to graduation, teaching performance, and enrollment of students carrying need-based aid.

\(^{7}\) Most of the national research function is assigned to the independent National Scientific Research Centers, or CNRS, not to the French universities.
Differentiation of Institutions by Relationship to Government

Institutions of higher education may also be differentiated according to several dimensions of reliance on, or relationship to, government. These several continua are associated with *publicness* or *privateness*7 They are only loosely related to mission. Three principal dimensions of variation are the following:

**Ownership:** Ranging from the clearly public, to the private non-profit and to the private for-profit or proprietary (or in the case of Brazil, the *entrepreneurial* institution that is nominally non-profit but that exists for the clear purpose of profit through ways other than payment of dividends.)

**Control by government:** Ranging from the high degree of control associated with a governmental agency to the relative freedom to operate associated with a private enterprise. The *high control*, or *government agency*, end of the continuum might include direct control procedures over all institutional expenditures and contracts, and perhaps even the authority of the government head to directly appoint and remove top-level administrators, in a ministry or agency. In the middle of the continuum might be control by a publicly-appointed board or buffer agency, like a university grants commission or an appointed or elected governing board, subject ultimately to control by direct election or by the appointing authority of an elected official—but not quickly or (in theory) too overtly. At the *private* end would be an entity placed quite away from the authority of the government—even though the institution might be operating under a public charter dependent on public revenues, and in facilities owned by the state.

**Level or Branch of government control:** The principal governmental control can be federal, state (or provincial), or municipal—or possibly shared among these levels according to the prevailing national tenants of federalism. In the U.S. and Canada, for example, the federal government has no authority over the operation of any institution of higher education (except for the very few that are federally owned, such as the military service academies). The federal government has the regulatory authority it has over any organization or entity, but none by virtue of the entity being an institution of higher education. Brazilian federalism imparts considerably less sovereignty to the constituent states than the U.S. Constitution to the American states. The Brazilian federal government has “its own” institutions (35 of which are designated as universities) and it allows states and municipalities, with federal permission, to form, fund, and control more than 150 additional public institutions of higher education.

Multi-level jurisdictions present some problems, at least in theory. When there are federal and state or provincial institutions of higher education, and when all sovereignty lies clearly at the federal or central level, it is tempting for the federal government to choose the smaller, high-prestige end of the institutional mission continuum, reinforcing or even exacerbating the disparities in prestige and funding to the relative detriment of
those institutions serving the majority of students and arguably even the most important role in the economy. Also, when financial responsibility is shared between two levels of government, each level has an incentive to be the least and the last. Because the federal level of government is usually the strongest, it will attempt to push financial responsibility down to the states or regions and, at the same time, retain the ability to “top up” funding where it chooses. Both levels can evade responsibility (especially funding responsibility), claiming that any deficiency is due to the failure of the other level.

**Reliance on governmental revenue:** Institutions in all countries vary considerably in their reliance on governmental or public revenue, as opposed to non-governmental revenue. The principal sources of non-governmental revenue for institutions of higher education are the following:

- Students and parents—through tuition, fees, and full-cost recovery of institutionally-provided room and board;
- Sales of faculty and other institutional services—through sponsored research contracts or the provision of specialized training to individuals, firms, or government agencies; and
- Philanthropists—through individual, business, and foundation donations.

These variations are summarized in Figure 2. Universities and other institutions of higher education can be publicly owned—which would be the most unequivocal determination of public status—and yet quite reliant on non-governmental revenue through the charging of high tuition and full cost-recovery of institutionally-provided room and board. They could also be given substantial managerial autonomy, perhaps through a publicly appointed buffer governing board. Conversely, institutions of higher education can be unequivocally privately owned, yet subject to heavy governmental regulations—e.g., on the charging of tuition or the compensation of faculty and staff. They may also be highly dependant on governmental revenue either through direct institutional operating grants, or through the device of tuition grants or vouchers that channel public financial assistance through students. In the former example, the university would be nominally public, yet substantially private; and, in the latter, the institution may be legally private, yet virtually indistinguishable from a public university.

Brazil’s public universities are heavily governmentally controlled—from the appointment of rectors to the compensation and terms of employment for faculty and staff. Brazil’s large private higher education sector, ranging from a few institutions clearly at the research university end of the mission continuum to the majority near the non-university end, are subject to considerable governmental control. The Federal Council of Education (CFE) controls initial approval to operate as a university or college, the courses of study or programs that can be offered, and the maximum tuition
that can be charged. Through the 1960s, lessening in the 1970s, and ending in the early 1980s, most of Brazil’s private universities also received substantial public operating subsidies, further reducing the significance of their privateness. By the 1990s, however, this operating support had been mainly eliminated, making the private institutions quite tuition dependent—no longer depending on public revenue, but still subject to various public controls including tuition.

Figure 2
Variations in Relationship between Institutions of Higher Education and Government

<table>
<thead>
<tr>
<th>Dimension of Variation</th>
<th>High Governmental; High Publicness</th>
<th>↔</th>
<th>Mid Government Public and Private</th>
<th>↔</th>
<th>Low Governmental; High Privateness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
<td>Clear public Ownership</td>
<td>↔</td>
<td>Ownership by public authority or “true” non-profit entity</td>
<td>↔</td>
<td>Clear private ownership</td>
</tr>
<tr>
<td>Control by Government</td>
<td>High govt. control as in gov’t agency or ministry</td>
<td>↔</td>
<td>High autonomy; only ultimate gov. control &amp; post audit</td>
<td>↔</td>
<td>Gov. control Limited to regulatory authority</td>
</tr>
<tr>
<td>Reliance on Public Revenue</td>
<td>High reliance on governmental revenue</td>
<td>↔</td>
<td>Some reliance: “shared” revenue responsibility</td>
<td>↔</td>
<td>Most or all private revenue from tuition, contracts, &amp; donations</td>
</tr>
</tbody>
</table>

Typology of Higher Education Institutions in Brazil

Drawing on this treatment of institutional differentiation, Brazilian institutions of higher education can generally be differentiated along the two principal axes of ownership and institutional type:

1. Ownership
   - public—further differentiated by:
     - federal,
     - state (with the two principal São Paulo universities in a virtual class by themselves), and
     - municipal.

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9 Ibid. p. 27.
private—further differentiated by:
  ♦ religious (mainly Roman Catholic),
  ♦ secular, entrepreneurial (technically non-profit, but existing for purposes of profit), and
  ♦ proprietary (recently legalized, but there are as yet few so classified, as it is easy to make money through the non-profit entrepreneurial loophole with non-profit tax advantages.)

2. Institutional type or classification
   • universities—further (loosely) differentiated by:
     ♦ universities with doctoral training and substantial faculty scholarship, and
     ♦ teaching universities,
   • non-universities—further differentiated by:
     ♦ Single faculty institutions, and
     ♦ Multiple (federations of) faculties.

Information from the Brazilian Ministry of Education (MEC) supplied to the World Bank provided information on sector differentiation by type (universities, non-university multiple faculty, and non-university single faculty) and ownership (federal, state, municipal, or private), which is shown for 1996 in Table 1. There were 922 institutions, 57 of which were federal, 74 state, 80 municipal, and 711 private. Total enrollment in the public sector was 735,427 or 39 percent of the total, of which the Federal universities accounted for 20 percent. The state universities, mainly in São Paulo, had 11 percent of the total enrollment. Private enrollment accounted for 1,868,529, or 61 percent of the total, of which about one-half were enrolled in universities.

Table 1
Higher Educational Institutions in Brazil, by Type, 1996

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Number</th>
<th>Enrollment</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universities</td>
<td>136</td>
<td>1,209,400</td>
<td>102,685</td>
</tr>
<tr>
<td>Federal</td>
<td>39</td>
<td>373,880</td>
<td>40,492</td>
</tr>
<tr>
<td>State</td>
<td>27</td>
<td>204,819</td>
<td>22,911</td>
</tr>
<tr>
<td>Municipal</td>
<td>6</td>
<td>47,432</td>
<td>3,135</td>
</tr>
<tr>
<td>Private</td>
<td>64</td>
<td>583,269</td>
<td>36,147</td>
</tr>
<tr>
<td>Non-University-Multiple Faculty</td>
<td>143</td>
<td>254,029</td>
<td>15,725</td>
</tr>
<tr>
<td>Public</td>
<td>11</td>
<td>8,681</td>
<td>821</td>
</tr>
<tr>
<td>Private</td>
<td>132</td>
<td>236,348</td>
<td>14,904</td>
</tr>
<tr>
<td>Non-University Single Faculty</td>
<td>643</td>
<td>414,100</td>
<td>29,910</td>
</tr>
<tr>
<td>Public</td>
<td>128</td>
<td>100,615</td>
<td>7,307</td>
</tr>
<tr>
<td>Private</td>
<td>515</td>
<td>313,485</td>
<td>22,603</td>
</tr>
<tr>
<td>Total</td>
<td>922</td>
<td>1,868,529</td>
<td>148,320</td>
</tr>
</tbody>
</table>

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Enrollment Expansion

Brazil is facing considerable potential enrollment expansion at the end of the 1990s. Enrollments nearly doubled between 1980 and 1996, from 652,000 to 1,209,000.\textsuperscript{11} Enrollment growth has been somewhat flat in the 1990s, but rapid expansion of secondary school enrollments and the relatively low percentage currently going on to higher education, particularly in the North, suggest considerable enrollment growth potential. The overriding policy question of this paper is the degree to which this potential expansion can or should be met with explicit policy attention to \textit{institutional differentiation}. Specifically, what kinds of institutions should be built, expanded, or allowed to be privately developed to accommodate the needed and anticipated expansion?

The agenda of enrollment expansion is part of, and confounded by, four quite different, although related, change agendas identified below as \textit{reform}, \textit{modernization}, \textit{growth}, and \textit{democratization}.

\textbf{1. The Reform Agenda.} Quite apart from growth or changing external factors (such as increasing population or changing economy) to which an institution might or might not want to accommodate, and apart from considerations of the future, in general there will be an underlying higher educational reform agenda in any country. This agenda asks what is currently perceived (usually by persons of power) to be wrong with the universities and other institutions of higher education, and how should they change. Most countries have a conventional and long-standing reform agenda that is relevant to, but not directly concerned with, accommodating future enrollment pressures. Within this conventional (and relatively timeless) reform agenda, for example, long desired changes are usually found, such as more attention to the craft of teaching and to first degree or undergraduate students, better management and more appropriate allocation of resources, and addressing the occasional (or perhaps more-than-occasional) unproductive faculty member. A successful reform agenda can help accommodate enrollment growth to the degree to which it uses higher educational resources more effectively or improves the quality of teaching and learning. The conventional reform agenda usually incorporates greater differentiation aspects –partly in opposition to the forces of \textit{academic drift} and \textit{institutional homogenization} mentioned above—which are viewed as part of the problems giving rise to the reform agenda in the first place. But the existing reform agenda has a life of its own and is not primarily a response to a perceived need to expand enrollment.

\textbf{2. The Modernization Agenda.} The modernization agenda applies to all institutions, and is similar in all countries, especially as it pertains to research universities and to science, both of which are very universalistic and globally interconnected. The base of knowledge and the methods for its expansion change, especially in science, but also in other fields, faculty, and curricula, and facilities must accommodate or modernize. Thus, Brazilian higher education would be facing needed changes and new resource demands

\textsuperscript{11} Arora, Crawford, and Holm-Nielsen, p. 3.
even if past reforms had all been successfully adopted, and even if there were no pressures for expansion of enrollments or new institutions. Some of these modernization processes would likely call for further institutional differentiation, although it might be accommodated more by differentiation within, rather than differentiation between, institutions.

3. The Growth Agenda. As populations grow, so should the number of those who need, or could be expected to demand, some sort of higher education—quite apart from any expansion in the percentage of the school-age cohort completing academic secondary school, or the percentage of those who wish to enter a post secondary institution. Brazil has a large, fast-growing, young population. The World Bank estimated in 1993 that the prevailing annual secondary growth rate was 3.4 percent.\(^{12}\) Thus, if the current range and capacities of institutional types described above are assumed to be "right" for the present, each kind of institution would have to increase its capacity—or built new ones—at about the same percentage growth rate as that of the 18- to 25-year-old-age cohort. What is significant about the pure growth agenda is that it presumes no differential growth rates or redistribution of enrollments among the different parts of Brazil’s higher education system. Research universities, non-universities, and institutions in between could be expected to feel the same marginal growth pressures and to expand or to be expanded at about the same rate.

4. The Democratization Agenda. The democratization agenda assumes a need to expand the percentage of the age cohort attending higher education—as well as accommodating older persons who did not have the ability or the inclination to go on to some form of higher education at the time they left compulsory schooling. The significance of higher educational democratization is that is magnifies the effect of sheer population growth. If a country is growing in population and is currently educating a relatively small proportion of the traditional age cohort (and thus has a large, latent non-traditional student demand) that needs to be sharply expanded, the potential total enrollment expansion can be very large indeed.\(^{13}\) The World Bank estimated in 1993 that reforms in secondary schooling could raise the then prevailing secondary school enrollment growth rate from 3.4 percent to 6.6 percent.\(^{14}\) By this reasoning, the Brazil’s potential higher education enrollment growth rate must be considerable. Some democratization-accelerated higher education growth is also supported by comparative higher education participation rates. Total higher educational enrollment in Brazil is estimated at approximately 11 percent of the 18- to 24-year-old-age cohort—compared to 35 percent in Argentina and nearly 50 percent in France.\(^{15}\) Not only is this participation rate somewhat low for Brazil's overall level of economic development and modernization, but the country-wide number masks a very great within-country disparity with relatively high participation rates in the South and around São Paulo, but


\(^{13}\) In a similar manner, one can postulate even further magnification by assuming that the amount of higher education partaken of (i.e., degrees per individual student) will also increase over time, or “on the margin.”


presumably very low rates in the North and Northeast. The democratization perspective also suggests that the average student on the margin of this enrollment expansion—by definition, a student who in the past would not have been able or interested (for whatever reason) in higher education—is likely to need or demand a different kind of higher educational experience and thus, perhaps, a different kind of higher educational institution.

Enrollment Expansion and Institutional Differentiation

This analysis suggests that the marginal enrollment expansion is likely to need expanded higher education capacity in all types and sectors but especially in institutions closer to the non-university end of the mission continuum. Public policy should therefore make special efforts to expand capacity there—and to resist the natural drift of the more applied and shorter cycle programs in the direction of research university norms. The conventional advice of inter-national higher education agencies, international development banks, and most scholars and consultants in the business of offering advice to national education ministries is exactly that: urging institutional diversification—meaning relative expansion toward the non-university, shorter cycle, more vocationally-oriented end of the mission continuum. There are two reasons underlying this advice, and it is worth identifying them and examining their underlying assumptions.

The first basis for recommending a relatively greater expansion at the non-university end of the mission continuum is that the new or marginal student is thought to be less academically prepared and less academically interested. Admittedly, there is a social class basis to this assumption. Part of the attraction of the classical university is generally assumed to be a fondness for literature and the arts, an inclination (or sufficient leisure time) for abstraction and knowledge consumption. This kind of academic preparation and ambition is associated with upper-middle and upper class families. It is further assumed (well supported by data on higher educational participation by family income and/or social class) that most young people from these income classes who are academically able and inclined are already going to a university. Furthermore, it is also assumed that most job growth will require not necessarily a university first or second degree, but a shorter degree—bachelors, or even shorter, and in some kind of applied or technological field (at least, the jobs are assumed not to be in the fields of classical art, science, or law as it was assumed in the past when it was appropriate for entry into the civil service.) It follows from these observations and assumptions that public policy to increase higher educational enrollment capacity should at least “tilt” toward the non-university end of the mission continuum.

The second factor in favor of this tilt is the assumption that costs are less at non-university colleges than at classical or strictly research universities. The basis for this assumption (aside from the fact observed) is that faculty at research universities teach lighter loads, are supported by more equipment (including libraries, laboratories, and computing facilities), and frequently have higher salaries (or are more likely to be full-time) than their counterparts at the polytechnics, colleges, and other non-university
institutions. Unit (i.e., per-student) expenditure data bear this out. In addition, because students at the short-degree end of the continuum take fewer classes and move out faster, they cost less per degree. Thus, as higher educational policy is driven by considerations of cost and by the need to stretch public revenues further, the institutions toward the non-university end of the mission continuum are all the more attractive.

However, there are caveats to the conclusion that the non-university is necessarily more cost-effective. In the first place, at least some of the greater per-student cost associated with classical universities is a function of three factors having little to do with actual higher educational production functions:

- **Tradition**: University budgets have always been greater, so it is assumed that whatever university faculty do is necessarily more costly;

- **Professorial Preference**: Understandably for lighter loads and abundant unscheduled time; and

- **Student Preference**: taking unhurried time toward the degree.

But these factors are not to be confused with an actual production function, demonstrating that it must cost more to educate a university student. Universities that are genuinely (and successfully) research-oriented, especially those that are scientific, biomedical, or technological are indeed fundamentally more expensive (at least the successful ones). This, however, has little to do with what it actually costs to educate the students especially at the first degree level. Rather, the faculty must be provided with light teaching loads, competitive compensation, and costly equipment to produce the research. But as already noted, many of the Brazilian institutions that are called universities are actually in the middle of the mission continuum and are essentially teaching institutions. Their admittedly higher per-student costs are arguably a function of light teaching loads very often unmatched by commensurately high scholarly production, excessive staffing, and other manifestations of inefficient management. Similarly, the low per-student costs associated with some of the institutions at the short cycle non-university end of the mission continuum are likely a function of shoddy facilities, overworked and/or under compensated faculty (many of whom are part-time or paid by the class or the hour), and paying less or no attention to the student outside the classroom.

To assume that all universities need to be more costly than colleges, polytechnics, or other non-university institutions may be to perpetuate an existing pattern of resource allocation and faculty norms that should be changed. Perhaps some of the faculty teaching at colleges and other non-universities would be more effective (particularly from the perspective of student learning), if more members were full-time, better compensated, and had more opportunities for scholarly work. Similarly, there are some universities that are almost certainly not as genuinely costly per-student as their non-university

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counterparts because of the huge university classes and minimal individualized attention to the student. However, the prevailing cost-accounting conventions, attributing all costs to teaching, will not reveal this. In the case of Brazil, where many of the demand-absorbing institutions are nominally universities, it would be a policy mistake to be overly influenced in the decision about what kinds of institutions to favor taking the current patterns of per-student cost estimates. However, in spite of these caveats, the conventional advice—to tilt the accommodation of enrollment expansion toward the expansion of capacity in institutions from the middle to the non-university end of the mission continuum—almost certainly holds in the Brazilian case. But the reason is more for the greater curricular appropriateness than for any presumed fundamental cost effectiveness.

**Recommendations on Institutional Differentiation for the Accommodation of Enrollment Expansion in Brazil**

It is not apparent from the secondary source materials available for this analysis that Brazil needs a dramatic or wrenching restructuring of existing institutions of higher education for the purpose of accommodating enrollment expansion. The universities and other institutions of higher education in Brazil seem to need reform as in virtually any country. But the purpose of accommodating enrollment expansion is not necessarily any more compelling than the goal of enhancing efficiency or quality. And while this analysis has emphasized, for the accommodation of enrollment expansion, what has been called the *non-university end of the mission continuum*, it is arguably as important for Brazil—as large and as economically and culturally significant as it is—to reform and enhance its research and scholarly capabilities.

With a special sensitivity to the enrollment pressures presented by both growth and democratization and with a special awareness of the importance of institutional diversification or differentiation, the following recommendations and observations are offered.

1. There are probably enough (if not too many) federal institutions. The federal government of Brazil clearly has an important role in higher and postsecondary education. But that role is almost certainly not primarily the ownership and management of federal institutions. Rather, more effective federal roles in higher and postsecondary education may be the following:

   a. The provision of need-based financial aid portable to institutions of any type in any state. If Brazil is to rely substantially on loans (as opposed to grants or low tuition for all), then the general rules and the financial responsibility should be federal because of the difficulties of collecting loan repayments under the best of circumstances.

   b. Special assistance to the more isolated and impoverished regions, principally in the North and Northeast. This would be accomplished more effectively through
additional student assistance, special program grants, and special capital grants instead of additional federally owned and managed institutions.

c. The determination of general priorities for, and the funding of, most basic research.

d. Accreditation. From initial permission to open, through permission to offer certain degrees and programs, to periodic quality assessments (with the implied authority to close insufficient programs and institutions).

2. It is appropriate for each federal institution to feature scholarship and advanced training, although this scholarship and training does not have to be comprehensive, nor extend to all faculty or all programs, nor preclude "scholarship" of a very applied nature. The most persistent criticism against US universities is the assumption (perhaps only implicit, but widely acknowledged) that all faculty of all universities should be engaged in research (the more theoretical, the better) for their entire careers. It is likely that the same criticism is being made in Brazil. Thus, no federal university in Brazil would have to cease being a university. But many should be pressured to become more scholarly, perhaps by the need to compete for the funding that allows faculty to have a reduced teaching load and the resources for research. Furthermore, the kind of advanced training programs to be approved and the research to be funded would be that which is appropriate to social, cultural, and economic needs of the region—and complementary to the research and advanced training provided by the (few) genuinely scholarly private universities as well as by the state universities in São Paulo.

3. The above recommendations depend on adequate funding of federal research foundations—in effect, removing federal dollars from the requirement to maintain the higher operating support of a research university, and requiring the universities and the faculty to compete for the dollars and the prestige that come with them. This, in turn, depends on success in the familiar reform agenda calling for greater institutional management authority over the appointment, promotion, compensation, and teaching assignments for faculty.

4. The state universities ought to combine a mission of effective teaching with attention to the special research and training needs of the region. The excellent research universities of São Paulo aside, most of these institutions need to be held to appropriate scholarly standards—but not allowed to minimize their teaching responsibilities, nor necessarily be held to the same kind of research-and-publication output expected in the world’s and Brazilian’s top research universities.

5. Brazil’s reliance on a large private sector especially for the accommodation of enrollments (not unlike other Latin American and many Asian countries) has served the country well, and should be maintained and strengthened. Some familiar recommendations:
a. Strengthen a portable need-based grant system, supplemented by a generally available,\textsuperscript{17} minimally subsidized,\textsuperscript{18} national loan program.

b. Make private universities eligible for the expanded grant programs, mentioned in 1.a) above.

c. Provide low interest, guaranteed loans for capital improvements and expansion.

d. Remove government restrictions on private sector tuition. Adopt a policy of modest public sector tuition (say 15-20 percent of per-student costs).

6. Accommodate overtly proprietary institutions. Tighten up on the loopholes and other violations of the non-profit laws (the \textit{entrepreneurial institutions}).

7. Strengthen the accreditation system. Brazil will probably rely on ministerial accreditation, but can still utilize largely volunteer staff and faculty from peer institutions to provide better and less expensive staff for the accreditation site visits.

These measures will preserve and improve the efficiency of what is already a substantially differentiated system of institutional missions, programs, and forms of governance. The sharpened, strengthened differentiation will better accommodate the inevitable expansion of higher education enrollment in Brazil.

\textsuperscript{17} The "general availability" is to prevent the loans from being restricted to those whose parents are affluent enough to be accepted as co-signers.

\textsuperscript{18} Substantial subsidization demands that the loans be rationed by "need," which is exceedingly difficult to determine, especially for students who require loans rather than grants. A "minimally subsidized" loan does not require tests of "need" or "credit worthiness."
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