THF Working Paper

Working Papers Series No.6/2015

FINANCING HIGHER EDUCATION

Worldwide Perspectives and Policy Options

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Abstract
An international perspective on the financing of higher education reveals great similarities among countries, in spite of equally great differences in the underlying economies, cultures, and political systems. The dominant theme throughout the world is financial austerity, affecting higher educational institutions and families alike, and challenging policy goals held by virtually all countries. As the author argues, the diverging trajectories of very rapidly increasing resource needs, and faltering revenues from state budgets, has to be met by solutions on the cost side, or on the revenue side. The cost-revenue squeeze and the resulting institutional and system austerity as well as some of the so-called *solutions* to these dilemmas can have deleterious impacts on the quality and capacity of universities and colleges as well as national goals to expand higher educational participation, accessibility, and quality. This paper is an examination of these financial dilemmas and the policy option facing governments worldwide.

The Worldwide Dilemma of Higher Educational Finance
An international perspective on the financing of higher education reveals great similarities among countries in spite of equally great differences in the underlying economies, cultures, and political systems. However, the dominant theme throughout the world is financial austerity. affecting higher educational institutions and families alike and challenging policy goals held by virtually all countries of enhancing educational quality, expanding participation and access, and assuring systems of higher education, including both public and private institutions, that can be engines for economic prosperity, individual opportunity, socio-economic mobility, and overall civic betterment.

The basis for this prevailing austerity lies in certain economic truths found worldwide—specifically:

- that higher education, especially research universities, are costly;
- that these costs and institutional revenue needs increase annually, driven upward by the labor intensity of the enterprise and the difficulties of reducing unit costs through the substitution of capital for labor—and in most countries further propelled by surging enrollments; and
- that these increasing costs must everywhere be met by some combination of public revenues, family contributions, and philanthropy (the latter source mainly in the US and indirectly offset by government through tax advantages to charitable giving).

In turn, these economic truths lead to the financial dilemmas in the international higher educational landscape: increasing institutional austerity, financial pressures on students and families as governments turn increasingly to tuition fees to supplement inadequate governmental revenues, the search for ways to expand accessibility in the face of these increasing student- and family-borne costs, and the quest for ways to inject efficiency into institutions that are notoriously resistant to change—especially to changes that endanger the job security of faculty or that call

for alterations in either curricula or instructional methodology that seem to violate long-established principles of the academy.

Thus, national policies responding to changing patterns of higher education finance are mainly responses to the worldwide phenomenon of higher educational costs tending to rise at rates considerably in excess of available public revenues from taxation, profits from governmentally-owned assets, governmental borrowing, and the inflation-generating printing of money. The consequence in most of the world has been a shortage of revenue to accommodate both the increasing costs of instruction and research as well as (and exacerbated by) the increasing revenue needs in most countries due to surging enrollments. These diverging trajectories—of very rapidly increasing resource needs and more static or even faltering revenues from state budgets—must, in turn, be met by solutions either (or both) on the cost side or on the revenue side. The cost-revenue squeeze and the resulting institutional and system austerity as well as some of the so-called solutions to these dilemmas can have deleterious impacts on the quality and capacity of universities and colleges as well as on the goals in virtually all countries to expand higher educational participation, accessibility, and quality. This paper is an examination of these financial dilemmas and the policy option facing governments worldwide.

The Context for Comparing Higher Educational Systems

Although the problems and the policy solutions in the worldwide arena of higher education finance have great similarities, these must be tempered with an appreciation of the very great differences among countries. Some of these differences most pertinent to the financing of higher education include:

Wealth and per capita income

Higher education is expensive, both to governments and to students and families (even when tuition fees are minimal). Although there are demonstrable economic returns, both public and private, to investments in higher education, the returns can be uneven—as evidenced by the very high levels of graduate unemployment and underemployment in many low- and middle-income countries and by the low levels of economic growth in many countries in spite of higher education budgets that consume disproportionate shares of public budgets. Furthermore, these returns, uneven as they may be, may be far into the future and may be difficult or impossible to capitalize: that is, to be convertible to the current cash required to operate the colleges and universities and to pay the tuition fees and student living costs. To make matters worse, low-income countries find it difficult to tax, particularly to tax progressively and cost effectively and also to borrow in the international capital markets—in spite of the well-accepted view of higher education as a worthwhile public investment. Thus, unsurprisingly, low- and middle-income countries, many of which are facing the greatest higher educational cost trajectories due to surging enrollment pressures, need to finance their public institutions of higher education from greatly strained state operating budgets. Students and families, also too often face insurmountable expenses, particularly student maintenance costs, And if students are able to access loans to cover tuition fees and living costs to invest in their higher education, they may face unmanageable debts.

Competition from other socially and politically compelling claims on limited public revenue

Further increasing the financial pressure on higher education, especially in low- and middle-income countries, is the very long queue of urgent needs that necessarily compete with public higher education for a share of scarce public revenues. This factor is extremely limiting in very low-income countries that may also be experiencing the greatest enrolment pressures and where the increasing revenue needs for higher education must compete with desperately needed revenues for elementary and secondary education, housing, public health, economic infrastructure, and seriously strained social safety nets. This competition may be less severe in countries that combine relatively low rates of enrollment growth with strong economies, such as Japan, Korea, Taiwan, and Singapore. However, all countries face queues of public needs that cannot all be met at any one time. And the very basic economic principle of *opportunity cost*: that the cost of one public expenditure can be envisioned as the best, or the most pressing, alternative expenditure that must thus must be foregone. And in that light, public revenues in support of higher education in all countries need to be assessed in light of the alternative public needs that must be foregone or postponed because of the rising costs and public revenues consumed by higher education.

The level of industrialization

Highly industrialized countries (evidenced by membership in the Organization for Economic Cooperation and Development, or OECD) are associated not only with high per-capita incomes, generally allowing a measure of both quality and sufficient capacity in their higher education systems, but also with well-developed systems of governmental regulation, banking, taxation, credit, information technology, and law. Such systems provide a basis for such policies as accreditation of both public and private institutions, cost-effective and collectible student loans, and means-testing to efficiently target financial assistance on the needy—all of which the less industrialized, lower-income countries are less able to employ.

Alignment along a political-cultural continuum of economic policy orientation, ranging from aggressive market capitalism to welfare capitalism to market socialism

The more aggressively market-oriented countries (e.g. US and UK) are more likely to embrace privatization and even the corporatization of their public universities and to adopt policies that shift public institutional expenses from the state to parents and/or students in the forms of higher tuition fees, and the privatization of food and lodging. Universities may be incentivized to expand enrollments, to view students as customers, and to allocate resources in pursuit of tuition paying students and profits. And management concepts like cost-effectiveness, profit centers, outsourcing, and resource reallocation are more likely to be employed in public as well as private universities.

Countries aligned toward the social welfare end of this political / ideological continuum (e.g. Scandinavia) or market socialism (e.g. the People's Republic of China) tend to be more accommodating of high taxes, governmental regulations, and universities as state agencies rather than public corporations. Governments are more

likely to support faculty in opposition to programmatic changes that might cost faculty jobs as well as to oppose tuition fees and other policies associated with cost-sharing.

However, alignment along such a cultural-political continuum is never neat, and governmental policies toward higher education can be unanticipated and sometimes counter intuitive. For example, while the free market, anti-tax, and pro-privatization United States is compatible with a large private sector and high tuition fees in both the public and private institutions, the similarly market-oriented England, while adopting high tuition fees in the publically-financed universities, has almost no truly private institutions of higher education. Most of Latin America, known for opposition to tuition fees in the highly selective and even elitist public universities, has absorbed student demand largely through private colleges. And Russia and the other countries that emerged from the former Soviet Union, while retaining the socialist legacy of free higher education, generally restrict this free higher education to the number of academically selective students whom the governments can afford to support and charge essentially full-cost tuition fees to students scoring below the cut-off scores on the entrance examinations.

Population demographics

Countries vary greatly in the rate of growth of the university-age youth population, and also in the rate of growth of the youth population completing secondary school and aspiring to some form of post-secondary education: the two factors most correlated with the pressures (or lack thereof) of enrollment increases on systems of higher education. Taken together, a slow or even negative growth in the university-age youth population plus a high percentage of this (declining) population already completing secondary school and enrolling in tertiary education almost certainly means overall declining college and university enrollments. The consequence may be less fiscal pressure on state public higher education budgets, but great pressure on institutional budgets that depend on tuition fees or on enrollment numbers to qualify for state operating grants. Selective universities may get less selective, possibly affecting academic quality. Less selective institutions with declining applicant pools, especially those that are financially dependent on tuition fee revenue, may downsize or even close. Institutions may compensate for the declining domestic applicant pools by aggressively seeking international students, as in Japan, with consequences to academic programs and quality.

On the other hand, countries with rapidly rising university-age youth populations along with currently low participation rates—and thus a likely high rate of increase in the percentage of this already rising population cohort completing secondary school and aspiring to go on to tertiary education—presents the country and its higher educational institutions with enormous annually increasing enrollment pressures. These two conditions are found in the majority of low-income and very many of middle-income countries. These surging enrollment pressures combined with scarce state public revenues and the long queue of competing claimants on these state revenues underlay the extreme austerity found throughout the low- and middle-income higher educational world.

Two extreme examples illustrate the connection of these factors to the financing of higher education. At one extreme would be Japan, which has a negative

population growth rate plus a relatively high proportion of this declining university age cohort already enrolled. With a declining population and little ability even to maintain current enrollments, not to mention to grow, any growth in Japanese higher education, at least for the foreseeable future, will depend on increasing international matriculates—which must overcome barriers posed by the Japanese language and a Japanese culture thought to be relatively unaccommodating to immigrants. At the other extreme would be any number of countries in Sub-Saharan Africa or Latin America that combine a very rapidly growing university age cohort with a currently low level of post-secondary educational participation, which suggests the potential for a rapidly growing proportion of the rapidly increasing population that potentially will be qualified for, and demand access to, higher education.

Extent of a tuition fee-dependent private sector

Another country characteristic that affects its financing of higher education is the extent of reliance on a tuition fee-dependent private sector. Japan, the Philippines, Korea and elsewhere in East and South Asia as well as most of Latin America have absorbed much of the increasing demand for higher education by encouraging private colleges and universities. This encouragement begins by permitting a private, or independent, or non-state, sector and easing the barriers to accreditation, or the legal permission to grant degrees and other forms of certification. Private sector growth can be further encouraged by direct and indirect forms of public financial assistance such as:

- providing or subsidizing necessary infrastructure such as roads, sewers, electricity, and internet connectivity;
- providing low interest financing for necessary construction and expansion;
- providing grants to students to lower the net cost of attendance;
- opening governmentally guaranteed and / or subsidized loans to students in private colleges and universities;
- opening governmental research grants to faculty of private universities;
- exempting philanthropic gifts to colleges and universities from income taxation; and
- providing direct operating subsidies based on enrollment or completion, perhaps in selected programs determined to be of high social need (such as teaching or nursing).

By encouraging a fee-dependent private sector in such ways—whether non-profit or for-profit, and even if the demand-absorbing private higher education requires some direct or indirect subsidization, countries may be able to generate higher education capacity for less money (and perhaps greater efficiency) than is generally required for the expansion of capacity in a fully public sector, even with tuition fees in the public institutions.

The nature and extent of the devolution of state authority over public higher education to various forms of public corporations:

The policy response to higher educational austerity and the worldwide need for greater capacity, efficiency, and responsiveness will vary in important ways

depending upon how a country apportions critical authority among the state ministries of finance and higher education and public corporate governing boards either of separate institutions or multi-campus systems of public colleges and universities. Whatever the extent and nature of this devolution, critical decisions must be made over, for example: (a) the terms and conditions of employment, including faculty and staff compensation (generally 70 to 90 percent of university operating budgets), policies for achieving promotion and tenure, and rules concerning outside employment; (b) the allocation and reallocation of funds within the operating budget; (c) the execution of contracts for equipment, new construction, plant maintenance, and functions such as eating establishments and lodging; (d) the issuance of debt; and (e) the establishment, collection, and retention tuition fees.

States will not delegate all such authority, and such authority that is delegated, or devolved, is generally bounded by limits. But the ability of university leaders to generate non-governmental revenues, including from fees, contracts, and philanthropy, as well as to use the resources available in the most efficient way varies greatly depending on the extent to which public colleges and universities in a particular country are effectively *public agencies*—like all other governmental departments, bound by civil service regulations and rigid financial controls, and subject to governmental interference—or are forms of *public corporations* with the abilities to execute contracts (including with faculty and staff unions), hold and dispose of real property, charge fees, accept gifts, and sue and be sued. One of the most distinctive—and converging—trends in recent decades has been a worldwide shift in the direction of what Europeans call *New Public Management*, which is a shift in the direction of greater corporatization of public universities.

The historical roots of higher education systems

Most modern universities trace their historical roots to some combination of German, French, British, Soviet, and American models: frequently to a former colonial power and sometimes combining several such roots with older, indigenous, and often religious, institutions in ways unique to a particular country. For example, British Commonwealth and Anglophone countries may stress residential colleges for undergraduates, governing councils headed by volunteer, or honorary chancellors, and require successful A-level examinations for university entrance. German roots formed the basis for the principles of academic freedom, graduate studies, the fusion of teaching and research followed by universities throughout the world. Soviet roots have lost influence, but prior to the collapse of communism stressed tight control over the numbers and credentials of students and the curricula of applied programs established by the Five-Year Plans and the production ministries. America combined British and German roots, added public service, the expansion of accessibility, and the concept of community colleges from which students could transfer horizontally into the upper divisions of universities, and became the principal model for Japanese higher education after World War II and Chinese higher education after the opening up of China in the 1980s.

Cultural norms associated with student and parental obligations to bear portions of the expenses associated with higher education

Three of such cultural norms in which countries may differ are particularly critical to the financing of higher education. The first is the appropriateness of tuition fees at all (that is, without regard to means testing, or the ability of families to afford a tuition fee). The countries of Europe, most of Latin America, most of Africa (both north and south of the Sahara), and all of the *transitional*, or formerly communist, countries historically resisted all forms of tuition fees. In Europe, the Nordic countries still have no tuition fees; England has quite high maximum fees in their public universities (up to more than $14,500 a year); and most of the rest of Western Europe is moving, slowly and with great political resistance, in direction of fees. China and Mongolia have adopted fees that are high relative to their median family incomes, while Russia and the rest of the countries from the former Soviet Union and the countries of Eastern and Central Europe, together with the former African Socialist countries of East Africa have found a way, through *dual track* tuitions, to simultaneously accept the revenue from fees but to be able to proclaim free higher education for a limited number of the most academically able students. The acceptance or rejection of the very concept of tuition fees has nothing to do with the wealth of the country or the ability of at least some families to afford some fees. Rather it is a country-specific (sometime a region-specific) cultural/political/ideological characteristic and has proven to be difficult to change—in spite of the theoretical capacity of a tuition fee to provide supplemental (and often badly needed) revenue without diminishing accessibility.

A second critical cultural norm that is also difficult to predict on the basis of other political and cultural characteristics is the degree to which—if some of the costs of higher education are to be borne by the family, either through tuition fees or responsibility for the costs of student living—these expenses should be borne by the parents or the students or both. Most countries that accept the appropriateness of tuition fees hold these to be the responsibility of the parents (at least to the extent to which they are financially able), with students responsible for at least a portion of any tuition fees and living expenses through part-time employment and loans. The Nordic countries not only have no tuition fees, but hold that it is the student and not the parent who should be financially responsible for food, lodging, and other living expenses. England and Australia, while affirming the appropriateness of tuition fees, have adopted the Nordic notion that the student is to be considered a financially independent adult (albeit generally with little of his or her own money) and not a financially dependent child. Therefore the tuition fee, which used to be borne by parents (if financially able), since 2006 has been deferred as a loan and borne instead by the student. In most of the rest of Continental Western Europe, featuring low or no tuition, parents are assumed to bear financial responsibility for student living costs (and in Germany, such responsibility is required by law and is enforceable by the courts).

A third culturally-based distinction that affects a country's financing of higher education is the degree to which student assistance, whether in the form of grants, subsidized loans, or access to subsidized food and lodging, is to be given on the basis of *academic merit*—as determined either by high school academic records,

entrance examinations, or academic performance at the university—or is to be given on the basis of *financial need*, generally according to the income of the family, with little or no recognition of academic merit or of the degree or certificate program being pursued. Most policy analysts advocate financial assistance on the basis of financial need, arguing that assistance on the basis of academic merit does little or nothing to make the college or university any more accessible. Furthermore, since so much of academic merit as conventionally measured, is a function of family and peer background, merit aid tends to go disproportionately to sons and daughters of the more affluent, for which the financial assistance implied by admission to a free public higher education is like a prize, but does not materially affect their access or persistence or even their academic performance. Many cultures, however, hold to the belief that admission by merit is both appropriate and fair and that all students—even the poor, the rural or isolated, and those from ethnic or linguistic minorities—have an equal chance to do well in their secondary schools and thus to be admitted to the universities without special assistance or preference merely because their parents are poor or ethnically or linguistically marginalized (in spite of considerable evidence to the contrary).

In summary, context—historical, political, demographic, and cultural—is important to understanding country variations in systems of higher education and how institutions and systems are financed. Because nearly all institutions in all countries face the common dilemma of rapidly rising costs and flat or even declining governmental revenues, at least on a per-capita basis, an international perspective can offer lessons for either increasing revenues or increasing efficiencies or both. But an appreciation of the historical, political, and deeply embedded cultural contexts in which colleges and universities necessarily operate cautions us in assuming that what may work in one country will work in another. With this extensive caveat, we turn to several trends in the financing of higher education that are that should provide guidance to policy makers in most countries.

Financing Higher Education Worldwide: The Challenge

As set forth in the opening paragraphs, national policies in the financing of higher education are mainly responses to the worldwide phenomenon of higher educational costs and revenue needs—at both the institutional and the country or system levels—that tend This is to rise at rates considerably in excess of available revenues. This failure of public revenues to rise commensurate with higher education's rising costs and revenue needs may be due to taxpayer resistance, increased competition from other public needs, or a political sense that a country's higher education system must improve on its efficiency or effectiveness or both to warrant more public revenues.

The challenge begins with the rapidly and relentlessly increasing demand in most countries (and virtually all middle- and low-income countries) for higher education places and the need for additional college and university capacity: for more lecture theatres and laboratories, campuses, residence halls, and of course more faculty and staff. This surging demand for greater capacity is driven by four principal forces: (a) the demographic effect of high birth rates and increasing

college- and university-age populations that are then accelerated by the rapidly growing secondary school completion rates of these rapidly increasing population cohorts; (b) an increasing public demand for more education, recognizing that tertiary education—including education and research at the highest levels—are the keys to economic growth, global competitiveness, a healthy and stable political system, and a vibrant civil society; (c) a surging private demand that is borne of the increasing awareness that higher education is the key to better jobs, higher status, greater social and political influence, and a wider array of lifetime choices, including occupations, places to live, and mates; and (d) the quest for greater social justice and the expansion of higher educational accessibility to those who have traditionally been excluded or at least underrepresented in higher education: the rural and isolated, the ethnically and linguistically marginalized, sometime girls, and always the poor.

The financial impact of these surging enrollments is compounded by annual increases in per-student costs, generally at rates exceeding the prevailing rates of inflation. These are a function of another set of forces operating in virtually all countries. The basic cause is the labor intensity of higher education, which tends to resist the continuous substitution of capital for labor that is the dominant driver of productivity in manufacturing. As long as *productivity resistant* faculty and staff receive, on average, wage and salary increases similar to the increases enjoyed by workers in the *productivity receptive* sectors of the national economy, the unit, or per-student, costs of higher education will increase at above average rates. And because a rate of inflation in any country is simply a carefully weighted average of economy-wide price increases, the normal, or default, rate of increase of per-student costs in higher education will tend generally to be above the prevailing rate of inflation—and thus will tend to magnify the cost increases and revenue needs of countries and systems.

A second force operating to increase per-student costs is the greatly increasing use in universities throughout the world of computing and telecommunications. The application of such technologies in manufacturing and in the private provision of services tends to add productivity and hold down costs and prices. In higher education, these massive increases of computing and telecommunications may also add value to both teaching and research. But they rarely *lower* costs: in fact are more likely to *add* costs and require *more revenue*.

A third force is the tendency in most universities in most countries to add new academic programs in response to changing scholarly fields and changing job markets faster than old programs (and their faculty and staff and equipment) can be diminished or shed altogether. This is caused in part by the inflexible faculty labor markets prevailing in most countries and is especially significant in low- and middle-income countries in which faculty and staff along with other civil service employees tend to be well organized, politically powerful, and able to resist a reallocation of resources that might jeopardize jobs. (Private institutions of higher education, whether non-profit or for-profit, tend to be more flexible and better able to reallocate resources—and thus to more easily shed less critically needed staff and to follow the changing needs of local job markets and the changing demands of their students.)

Austerity and the Search for Other-than-Public Revenue

In response to these diverging trajectories of annually increasing costs and revenue needs and flat or declining resources available from governments, universities and other tertiary-level institutions throughout the world are turning to other-than-governmental revenue to fill the gap and stave off the encroaching austerity. The principal other-than-governmental revenue sources for the continuous support of institutions of higher education are five:

1. Parents and students, or cost-sharing: in the form of (a) tuition fees (covering a portion of the costs of instruction); (b) fees for what may once have been governmentally- or institutionally-born costs of food and lodging; and (c) other educationally related expenses for books, computer access, and the like that may be shifted to parents and students as public revenues become increasingly insufficient;
2. Governmentally or externally-funded research grants: which benefit mainly certain research programs in certain faculties in certain universities but may do little to ameliorate the overall austerity either of the recipient university or the country's higher education system as a whole;
3. Instructional entrepreneurship: such non-credit short courses in high demand fields as the English language, management, accounting, and information systems management—again benefiting certain departments and faculty members, but doing little for the university as a whole or for institutions with less market power;
4. Philanthropy: which is extremely successful in the United States and moderately successful in the United Kingdom and a few other countries, but is only minimally or not at all successful in most countries and is not likely to be a significant source of operating revenue for most colleges and universities in the world; and
5. Donor countries: which can be a source of revenue for some universities in in a few of the poorest countries in the world (as in Sub-Saharan Africa), although the principal donor countries (e.g. US, UK, Germany, France, Sweden, Norway, and Japan) and principal donor agencies such as the World Bank, the African Development Bank, and the European Union) are notoriously uncoordinated.

Cost-Sharing

The only substantial and continuing source of other-than-governmental revenue for the support of higher education generally is cost-sharing. Cost-sharing is both a statement of fact—that higher educational costs are necessarily shared among governments (mainly taxpayers), parents, students (mainly through part-time employment and loans), and philanthropists or donors—as well as a term used to describe a worldwide shift of the costs of higher education from a predominate or even an exclusive reliance on governments and taxpayers to being shifted in the direction of a greater and greater reliance on parents and/or students.

Cost-sharing is supported by the economic concepts of equity and efficiency as well as by the apparent inability of public revenues in almost all countries to keep up with burgeoning enrollments and rising per-student costs. However, it continues to be strongly resisted in countries with traditions of free or only nominal tuition fees (sometimes constitutionally enshrined), some of which also have limited mechanisms of means-tested financial assistance or of student loans to maintain accessibility in the face of these rising costs. The policy dilemma of nations struggling with the need to maintain and extend higher educational accessibility under conditions of increasing competition for scarce public resources can be summarized in the following six propositions.

1. Most countries continue to experience dramatic increases in the public and private demand for higher education as higher education comes to be recognized as the engine both of economic growth and of individual opportunity and prosperity. (This is especially true of those countries still trying to change from *elite* to *mass* and *universal* tertiary-level participation.)
2. Higher education nearly everywhere--particularly in developing, or low-income, countries and in those countries in transition from command to market-driven economies--is suffering from a severe and worsening austerity. This austerity is a function of: (a) surging enrollments; (b) high and annually increasing instructional costs, along with a resistance to measures that might increase the efficiency or productivity of universities; and (c) declining public (taxpayer-based) funding. The resistance to increased public revenue, in turn, is a function of the difficulty of increasing taxation in ways that are progressive, cost-effective and not injurious to economic growth, as well as competition from other, oftentimes more socially and politically compelling, public needs.
3. In light of the above two propositions, national systems and institutions nearly everywhere in the world are turning to some cost sharing, or revenue supplementation, from students and parents in the forms of tuition fees and more nearly full-cost recovery from the provision of room, board, and other non-instructional services.
4. In addition to the sheer need for revenue, tuition fees—even in otherwise public institutions—are supported by concepts of *equity* (the notion that those who benefit should at least share in the costs), *efficiency*(the notion that the payment of some tuition will make students and families more discerning consumers, and the universities more cost-conscious providers), and *responsiveness* (the idea that the need to supplement public revenue with tuition fees, gifts, and grants will make universities more responsive to individual and societal needs).
5. Thus, some increased costs borne by parents and students are probably both inevitable and economically rational. Indeed, the supplementation of higher educational revenues by non-governmental sources--primarily the family--is one of the major recommendations from the World Bank and most other development experts as one important solution to increasingly underfunded and overcrowded universities. We can see the beginnings of tuition and various kinds of fees in such countries as China, Vietnam, India, more and more countries in Latin America and Africa, and even in formerly tuition fee-free Europe. (Indeed,

England as of 2015 features among the highest public university tuition fees in the world.) One can see the dilemma of countries with antiquated constitutional guarantees of free higher education struggling with the need to supplement increasingly inadequate public revenues for higher education. And one can see mature, even if uneven, private higher education sectors, mainly tuition fee-supported, in Japan, Korea, the Philippines, Chile, and most of the rest of Latin America, as well as private sectors beginning to emerge in the countries of the former Soviet Union and elsewhere.

6. In the face of these increasing expenses borne by students and parents, national systems and individual institutions face the challenge of maintaining higher educational accessibility, especially for poor, minority, rural, and otherwise underserved populations. (This challenge is particularly compelling in light of the increasing income disparities being experienced in most of the countries of the world.) In many countries, the principle of expanding higher educational opportunity and accessibility is being met, among other ways, with means-tested student financial assistance and/or student loans or other forms of delayed payment, such as income contingent loans collected by the employer from wages or salaries along with income tax withholding or pension contributions.
7. At the same time, means-tested assistance—that is, financial assistance that increases accessibility and persistence rather than merely rewarding intelligence and good secondary school records—is difficult and costly, especially in the absence of a tradition of revealing incomes and assets, honestly, in response to tax laws or requests for the documentation of financial need. Furthermore, student loan schemes that actually recover (most of) the borrowed principal and interest are exceedingly rare and difficult, especially in the absence of a mature credit culture and a well-designed loan scheme with professional management.

In summary, proponents of cost-sharing maintain that it can supplement public revenues and even—with means-tested financial assistance—enhance accessibility and equity. And without some form of revenue supplementation, public colleges and universities in many countries will be forced either to limit enrollments—and thus continue to serve only a small elite—or will be maintained at such levels of overcrowding and shabbiness that all students may be denied a good higher education.

Forms of Cost-Sharing

Cost-sharing can take several quite different forms, the principal ones being:

1. The beginning of tuition (where higher education was formerly free or nearly so): This would be the case in China in 1997, the United Kingdom in 1998, or Austria in 2001.
2. The addition of a special tuition-paying track while maintaining free higher education
3. for the regularly admitted, state-supported students: Such a dual track tuition fee preserves the legal and political appearance of free higher education, which is particularly important (and is frequently enshrined in a

constitution or a framework law) in formerly Marxist countries such as Russia, most of East and Central Europe, and other countries that were once part of the former Soviet Union, as well as East African countries such as Kenya, Uganda, and Tanzania with their legacy of African Socialism.

4. A very sharp rise in tuition where public sector tuition already exists: A shift in the direction of greater cost-sharing requires that the rise in tuition be greater than the rise in institutional costs generally in order for the government's, or taxpayer's, proportionate share to be lessened, and the parent's and / or student's shares to rise. This has been the case most recently in England, which in 2012 raised the maximum allowable university tuition fee to some £9000 [$14,800], It has also been the case for decades in most of the states in the United States and many of the provinces in Canada as state and provincial governments have failed to maintain their former shares of public university expenses, forcing tuition fees to fill in the gaps left by the failure of government funding to keep pace with the rising costs of higher education.
5. The imposition of user charges to recover the expenses of what were once governmentally- or institutionally- provided (and heavily subsidized) residences and dining halls: This has been happening in most countries, including virtually all the formerly Communist/Socialist countries, and notably and controversially most of the countries in Sub-Saharan Africa, where subsidized living costs at one time absorbed the bulk of the higher educational budgets. In the Nordic countries of Sweden, Norway, Finland, and Denmark, where higher education remains "free," the expenses to students are exclusively the expenses of student living, which are very high in those countries and which are shared neither by taxpayers nor (at least officially) by parents, but rather are borne mainly or entirely by the students, largely in the form of student loans (which costs are indirectly shared by the taxpayer in the form of repayment subsidies).
6. The elimination or reduction of student grants or scholarships: This is sometimes accomplished simply by "freezing" grant or loan levels, holding them constant in the face of inflation, which then erodes their real value. This began happening to the once generous cost of living grants in Britain (which were later abandoned altogether) and has happened to the value of the maintenance grants in most of the communist or socialist countries of the former Soviet Union, Eastern and Central Europe, and Asia, as well as many countries in Africa.
7. A shift in the predominate form of student assistance from grants to loans: This was the case in the United Kingdom, as reported above, and has been the case in the United States, where the federal need-based grants have not kept pace with increases in the costs of higher education to students, but the total volume of federally sponsored student loans (most of them subsidized) has risen dramatically.
8. An increase in the effective cost recovery on student loans: This can be accomplished through a diminution of the subsidies on student loans (similar to the diminution in the value of non-repayable grants) and might be

accomplished through an increase in interest rates, a reduction in the length of time that interest is not charged, or a reduction in the numbers of loans for which the repayments, for any number of reasons, are forgiven. Or, the effective cost recovery might be accomplished through a tightening of collections, or a reduction in the instances of default (as in the United States in the 1990s) with no change in the effective rates of interest paid by those who were repaying anyway.

9. The limitation of capacity in the low fee or free public sector together with the official encouragement (and frequently some public subsidization) of a tuition-dependent private sector: A number of countries—notably Japan, Korea, the Philippines, Indonesia, Brazil, and other countries in Latin America and East Asia—have avoided much of what would otherwise have been significant governmental expenditure on higher education by keeping a limited public sector—usually elite and selective—and shifting much of the costs of expanded participation to parents and students through the encouragement of a substantial and growing private higher education sector.

Tuition Fees and Their Limits

Although cost-sharing may take on these different forms, the imposition of, and/or increases in, tuition fees provides the greatest financial impact. This is because tuition fees, aside from the need to rebate some of the additional income in the form of grants or discounts to preserve accessibility, can be both financially significant and on-going, and can even be designed to regularly increase, thus keeping pace with the inevitably rising per-student costs of instruction. Also, unlike most forms of faculty entrepreneurship, tuition fees do not divert faculty from the core instructional mission (and according to many observers, actually have a beneficial effect of improving the quality of teaching and the relevance of the curriculum). Perhaps for these reasons, tuition fees are also the most politically charged and ideologically resisted form of cost-sharing and thus have become a symbol of the conflict between those who believe that government must continue to provide higher education free of any charge, and those who believe in the imperative of cost-sharing and especially of tuition fees.

At the same time, shifting even a small portion of the costs that were formerly borne by governments and taxpayers on to parents and students requires some form or forms of student financial assistance for students from families who cannot afford these expenses. Financial assistance may take the form of grants (or discounts) that may cover all or some of the tuition fees plus some or possibly most of the costs of student living. Grants or discounts are generally means tested, or based on some measure of what the family can afford to pay based on its income, assets, and special expenses (such as the size of the family and the number of children in higher education for whom fees and living expenses have to be paid).

Means-testing, however, is difficult as families may resist disclosing to authorities their true incomes and assets. This resistance may be to escape taxation; or it may be that resisting the disclosure of family income, or its under-reporting, may

be rewarded by a means-tested grant or discount that would not have been earned with a true reporting. Means-testing is more likely to give reliable measures of family finances in countries where incomes are generally reported and known, as they are more likely to be in North America, the UK, and Northern Europe than in most other countries, or where most middle and high incomes are mainly from state enterprises or multinational corporations and able to be discovered. However, in low- and middle-income countries, incomes are apt to be variable, or from self-employment or farming, and are often either not known or not reported with accuracy. Such countries, as in Kenya or the Philippines, may resort to what have been described as *categorical indicators* of income that may at least approximate the ability to pay a moderate tuition fee and be more difficult to hide. For example, families may be considered able to pay if either parent is employed full time in a managerial capacity by the state or a licensed multinational corporation, if the family has been able to send children to private secondary schools, or if the family farm is of a certain size or has running water and telephone connection, and so forth. In all of these cases, the object of governmental policy is to find a relatively accurate, verifiable, and cost-effective measure of the family's ability to pay a tuition fee so that the financial assistance may be targeted on those families for which the governmental grant will not merely reward academic ability, but will make a difference between the student being able to attend an appropriate university or not.

Student Loans

The other form of financial assistance designed to expand accessibility to all forms of post-secondary education is a loan. Student loans are politically controversial because, along with other forms of cost-sharing, they are designed to shift a portion of higher educational costs onto students—even though they can equally be perceived as a way to retain accessibility if tuition fees and other forms of cost-sharing are unavoidable and if the family of the student is unable to cover the costs of attendance. Governments may prefer loans over grants, or low tuition fees for all, in that a loan, even if funded initially from governmental revenues, is in theory more of an asset than an expenditure even if partially subsidized. Thus, a given level of governmental expenditure—again in theory, and assuming a degree of means-testing, or targeting—can generate more accessibility than the same level of expenditure could provide with no or very low tuition fees for all or even with means-tested grants.[1]

The caveat, *in theory*, is used because very many loan programs in fact do not recover more than a fraction of the amounts lent. This may be due to interest rates that are set too low, or because the loans are not recovered, or because the means-testing is insufficient. In addition, some families, especially in some cultures, are

[1] Because of this political resistance, student loans schemes are sometimes partially disguised with the euphemism of a *deferred tuition fee*: as in Australia, and England, which provide university access to most students free of up-front tuition fees—which generally fall upon parents—in favor of deferred tuition fees that are repaid by the student in the same way as loans. Income contingent loans, in which the repayment obligation is a percentage of the borrower's income until the loans is repaid at the required interest rate, are essentially the same (in true cost to the borrower) as conventional fixed schedule loans that are repaid for a set number of years at set monthly repayment—both of which, for most borrowers, constitute the same present value of the repayment stream.

resistant to borrowing or averse for religious reasons to the payment of interest, as in some Islamic cultures. And student debt—even in a country as accustomed to cost-sharing, high tuition fees, and student borrowing as the United States—can become a problem if students take on far more debt than they are likely to be able to repay. However, given the very high and rising cost of higher education and the need in so many countries for some degree of cost-sharing to supplement increasingly inadequate governmental revenues; and given that higher education does bring a private return to students (both monetary and non-monetary); and finally given that student loans with appropriate interest rates and appropriately lent, managed, and recovered, can work and can provide substantial cost-effective access, student loan schemes will continue to play an important role in reconciling the need for supplemental revenue with the need for maintaining and expanding higher educational accessibility. Indeed, student loans are an integral part of higher education finance in very many countries, including (among a great many): the US and Canada in North America: the UK, Sweden, Norway, Denmark, Germany, the Netherlands and Portugal, in Europe; Kenya and South Africa in Sub-Saharan Africa; Chile in South America; and Japan, Korea, and China in Asia. These loan schemes differ greatly in, for example:

- the average levels of indebtedness, annually and at the conclusion of studies;
- the form of the repayment obligation (income contingent or fixed schedule);
- the rates of interest or levels of governmental subsidization (that is, the degree to which the loans are actually in part *grants*);
- the degree to which money goes through the hands of the student or is simply entered as an obligation to be repaid like an income surtax after completion of studies;
- the source of capital (specifically whether the revenues lent are entirely from the public treasury, or are able to tap private savings in banks, pension funds, or other non-bank sources of capital;
- the bearer of risk (as student loans are inherently risky and can have very high levels of default); and
- the degree to which the loan scheme is open to students at private as well as public institutions of higher education.

In the end, student loan schemes that are: (a) properly designed with a real interest rate, sufficient repayment period, means-tested rationing, and provision for dealing with unmanageable debt); (b) efficiently disbursed and collected; and (c) able to tap a private capital market without impacting the government's operating budget will be an important component of the comprehensive higher educational financing schemes of most countries, along with tuition fees, means-testing, and grants, and along with policies to close the cost-revenue squeeze by reducing costs and introducing efficiencies—to which subject we now turn.

Cost-Side Solutions: the Search for Greater Efficiency

Solutions to the austerity brought on by the nearly universal phenomenon of costs and revenue needs outpacing available governmental revenues cannot depend entirely on finding sources of other-than-governmental revenue, mainly from cost-sharing. Institutions and systems of higher education throughout the world are also seeking efficiencies, or *solutions on the cost-side*. Such solutions, whether imposed by governments or undertaken voluntarily by colleges and universities (both public and private) may include increasing class sizes and teaching loads, deferring maintenance, substituting lower cost part-time faculty for higher cost full-time faculty, and dropping low priority programs. However, all of these are difficult, academically problematic, and heavily contested, especially by the faculty and their political allies who frequently reject outright the claims of insufficient public revenues. Opponents of cost-sharing sometimes maintain that if the government simply raised taxes on the wealthy and on corporations, or wasted less on defense, needless public works or their own emoluments, there would be enough for higher education without the need for controversial tuition fees or the expensive and inefficient policies of means-testing and student loans that the introduction of tuition fees requires to maintain accessibility.

Especially harmful to the goal of greater higher educational participation and accessibility are the cost-side solutions that simply limit capacity in the low-price public institutions of higher education (including both research universities and teaching-oriented colleges and technical institutes) and force increasing numbers of young men and women who have completed secondary education prepared for, and aspiring to, higher education of some sort, into higher priced (and generally lower quality) private colleges and universities or into the fee-paying tracks of the public universities—or, lacking the family resources to pay for the higher costs of private instruction and the high costs everywhere of food and lodging, into the workforce and forever away from their aspirations to a post-secondary education.

Strategic cost-side solutions, on the other hand, accept (at some point after serious political negotiation for additional public resources) that additional revenue, whether from government or from cost-sharing in all of its forms will not alone suffice. Politicians, university leaders and even the larger citizenry in most countries are accepting the fundamental limitation of higher educational revenues and seeking to use available resources more wisely—that is, strategically—in pursuit of the mix of goals that include such aims as increasing academic quality, capacity, social equity, and responsiveness to the needs of students, employers, and society alike.

The management of governmental agencies and the norms of civil service employment that prize generally continuity of employment above all are not fully compatible with the kinds of strategic cost-side solutions to the financial problems characteristic of universities and other institutions of higher education. Such solutions above all require continuous flexibility in the deployment of the university's principal resource, which is personnel. Typical problems with government agencies are rigid civil service laws, negotiated union contracts and political considerations that generally forbid terminating staff for any but the most egregious reason, hiring part-time or temporary workers, contracting out services, carrying unspent funds forward from one fiscal year to the next, or shifting available funds from one budget category to another.

There has been a clear shift in governmental laws and regulations dealing with public universities in the last decade or two, especially in Europe (e.g., the Netherlands and the UK), in many Canadian provinces and virtually all American states, and very recently in China and Japan, This shift has been in the direction of greater managerial autonomy and flexibility, frequently transforming public universities from simple *governmental agencies* into *public corporations.* These new developments for greater managerial autonomy and flexibility were described earlier as *New Public Management*, which in connection with public universities is designed to maximize the university's outputs of teaching and research for the taxpayer dollar, as well as to provide incentives for maximizing other-than-governmental revenue. Substituting lower-cost junior or part-time faculty for higher-cost senior faculty, increasing average class size, increasing teaching loads, and differentiating faculty workloads will be resisted by faculty and staff and their political allies. In the end, they may be too divisive and too easily politicized both from those on the outside who believe there are far more cuts yet to be made, as well as those on the inside who believe that the cuts already made were unnecessary and have virtually destroyed their universities. But more limiting is the likelihood that most of the low hanging fruit of easy expenditure cuts and other efficiency measures in most countries has long since been taken.

Profound, or Extreme, Cost-Side Solutions

What lies ahead in the worldwide financing of higher education may be a far more profound set of changes to the way at least some students are educated. These include shorter first degrees (which is already happening with the European Bologna Accords), more university credit for learning taking place in secondary schools (such as the International Baccalaureate or the American Advanced Placement Program), a greater differentiation of sectors, and more students beginning their post-secondary education in lower-cost non-universities such as 3- and 4-year university colleges, community colleges, polytechnics, universities of applied technology, and other institutions featuring shorter cycles, higher student/faculty ratios, and less faculty time devoted to research.

The most profound, controversial, problematic, and disruptive threat to the world-wide conventional instructional paradigm is the potential presented by instructional technology and the Internet in the form of massive open on-line courses. MOOCS present the tantalizing possibility of altering the basic instructional paradigm associated with higher education since the Middle Ages and greatly lowering the cost to students, institutions, systems and countries. Few will doubt that instructional technology will alter the way professors teach and students learn, and few will resist self-paced learning via the Internet taking the place of much certificate training or mid-career professional updating that may be required of health care professionals, engineers, accountants, and lawyers. At the same time, many observers are sceptical about the degree to which MOOCS or even less dramatic forms of technologically-aided, self-paced learning will so profoundly alter the higher education of traditional age students. The skeptics point to early indications of very heavy drop-out rates from such learning experiences, together with significant problems with the actual awarding of degrees and maintaining security. Traditional

age students, it is asserted, go to colleges and universities (if they can) not just to learn from an instructor—whether lecturing or leading a discussion in front of a live class or received on a computer screen—but learn from other students both in and out of class plus all of the rest of the university experience. What some fear is that some governments will attempt to solve the financial dilemma of rising costs and increasing enrollments with a combination of high fee elite public universities, which will become increasingly for students who are very high achieving and disproportionately from wealthy families, and the rest of the students will receive their higher education either from a high cost private college or from a public college that is low cost—to both the student and the state—because there are few professors and most of the instruction conveyed via massive open on-line courses.

Policy Options and Lessons To Be Learned

The opening section of this paper stressed that the financing of a country's system of higher education must be seen within a context of that nation's history, level of economic development, per-capita wealth, population, demographics, degree and nature of social stratification, political system, and prevailing ideologies—and that what works or seems to solve a problem in one country might be totally ineffective or even counterproductive in another. Thus any lessons to be learned regarding the more effective financing of a country's system of higher education must be offered with both caution and humility. Nevertheless, we have been examining the international comparative financing of higher education for two decades from the perspective both of a scholar (professor of higher and comparative education) and university leader (college president and university system chancellor), and believe that there are some lessons applicable to all institutions and all countries. Following are twelve such lessons:

1. Higher education—or tertiary education to use the more comprehensive term embracing all education and training beyond the secondary level—is vital to economies, societies, and individuals. Moreover, higher and other forms of tertiary education are becoming ever more important as economic fortunes—again, both for national economies and for individuals— depend increasingly on higher level skills and the ability to tap global information and advanced technology. Higher education in all countries is expensive, but it is an appropriate and worthwhile investment, both for governments, from public (mainly tax) revenues, and for students and families.
2. Following lesson #1, the demand for higher education will continue to increase in most countries, driven by increasing populations and increasing proportions of these growing population cohorts seeking education beyond the secondary level.
3. In many countries—even some with fast growing economies such as China, India, and Brazil—these increasing numbers of students completing universities, colleges, and other forms of tertiary education will exceed the number of highly skilled and well-paying available jobs. This should not be a reason for governments to limit tertiary-level enrollments, to educate only for jobs that currently exist (many of which will soon be obsolete), or to create

unneeded public sector jobs just to employ the graduates. Rather governments should continue to invest in higher education as they also invest in needed public infrastructure and encourage private sector economic growth that will be stimulated in part by the entrepreneurship of the better educated college and university graduates.

4. Higher education will continue to be costly, and the combination of increasing per-student costs and (at least in most countries) surging enrollments will drive the costs and revenue needs of higher educational institutions up at rates well in excess of the prevailing rates of inflation. The need for such continually increasing levels of public resources, combined with the commensurate rapid growth in the need for competing public expenditures, will increase the need in almost all countries for non-governmental revenues to support the costs of instruction in public colleges and universities.
5. Governments should maintain a balance between investing in true research universities, which are extremely expensive and which most countries need but a few, and the equally important but too frequently under-appreciated and under-financed, university colleges, technical universities, community colleges, and other short-cycle institutions of post-secondary education.
6. Revenues in support of higher education come in all countries—but in varying proportions—from four principal sources: governments (from taxes, public assets, and deficit financing); parents (from current income, savings, or borrowing); students (from savings, current part-time employment, and borrowing); and philanthropists (from current gifts and from endowments created by past gifts). The term, cost-sharing, in international comparative higher educational finance is an expression of this fact, and also a description of the trend in most countries of a shift from predominate (sometimes almost exclusive) reliance on governments and taxpayers for the support of institutional costs of instruction to parents and students through tuition fees and the payment of more nearly full costs of institutionally- or governmentally-provided food and lodging.
7. A modest tuition fee that is gradually imposed—for example, up to 15 to 25 percent of the full per-student costs of instruction—can provide a substantial and predictable source of revenue that does not divert professors and lecturers from their primary teaching obligations and can increase both instructional capacity and academic quality. In spite of almost certain opposition from students and some politicians, the additional revenue from tuition fees and other forms of cost-sharing, along with means-tested grants and student loans, can add instructional capacity and also increase student financial assistance, both of which are critical to the expansion of participation especially in low- and middle-income countries.
8. As the benefits to higher education are undisputedly both public and private, a shift of some of the cost from government and taxpayers to parents and students does not deny the important public benefits to higher education, which provide a persuasive rationale for continuing governmental support of public higher education (and at least partial subsidization of private higher education). Ideally, governments should set an appropriate percentage of instructional

costs to be passed on to parents and students—and then maintain this level of support and refrain from continuing to decrease that percentage in order to solve other governmental financial problems.

9. Following lesson # 8, however, governments should also refrain from freezing tuition fees, at least during periods of inflation (which is most of the time in most countries) as this simply diminishes the government's share and is almost certain to lead to worsening austerity of the colleges and universities.
10. Student loans can allow students to invest in their own post-secondary education and to achieve some financial independence from their parents. But the debts should be held to levels that can be amortizable by most students at a reasonable percentage of average earnings from similar programs.
11. Governments should participate in student loan programs, setting the terms and rules of the program and bearing a portion of the risk, as generally available student loans will always have a high rate of default compared to other forms of consumer lending. Governments should not enter into student loan schemes under the popular but incorrect assumption that a student loan program can ever be free from a continuing need for governmental revenues: In other words, no student loan scheme that is generally available (or not restricted to only medical students or to students from wealthy parents who can co-sign the loans) can be truly self-sustaining.
12. On the other hand, student loans can work: that is when student loan schemes are designed and operated properly they can provide a level of accessibility for the governmental revenue that is at least equal to, and most often greater than, the same level of public revenue that would be required to keep tuition fees at zero or very low, or to provide only grants or discounts.
13. For both political and substantive reasons, financial solutions to higher educational austerity cannot be only in the form of shifting financial burdens to parents and students. Universities and other post-secondary institutions must vigorously pursue efficiencies—some of which will be controversial and may involve shedding less needed faculty and staff in order to attract and hold needed talent and invest in new programs.
14. Expanding access and participation in higher education is rightly a public priority. At the same time, expanding access, especially in countries already at levels of mass or universal participation, must be pursued mainly at the middle and secondary levels—where too many students from low-income or ethnically- or linguistically-marginalized groups fail to achieve at levels required for success at post-secondary colleges or universities. Adults and others who have been by-passed from higher educational opportunities for no fault of their own need pathways to enter or re-enter and succeed in higher education. But higher education is an inefficient and expensive way to make up for deficiencies at earlier levels of education.

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These lessons still leave room for policies toward the financing of higher education that will vary in significant ways among countries. But the major aims of quality and

accessibility remain the same, as do the overriding problem of high and rising costs and the dilemma of how to solve these financial problems in ways that are sustainable for taxpayers, families, and students alike.

Note

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