THE EMERGING MARKETS SYMPOSIUM

GREEN TEMPLETON COLLEGE | OXFORD

Tertiary Education in Emerging Markets

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Findings and Recommendations

Introduction

Economic and Social Imperatives

The critical constraints to sustained economic growth, social cohesion and political stability in emerging markets include environmental degradation, economic deprivation, social inequality and weak public and private sector governance. None of those constraints can be overcome without massive increases in the supply of competent leaders, managers, administrators, teachers, doctors, lawyers, technicians and other professionals. The skills and competencies they will need depend on the transformation of tertiary education.

The symposium focussed on the challenges that face emerging markets if they are to develop tertiary education systems that will equip them to thrive in an increasingly competitive world. The symposium's main recommendations are summarized here and are explained in more detail in the main section of this document.

Strategic Objectives

Whilst recognizing that every emerging market has distinctive priorities and objectives the symposium *recommended* that emerging market governments should:

- Develop comprehensive strategies covering all forms of tertiary education **and** links between tertiary and secondary education.
- Ensure there is broad public and private sector participation in the definition of relative priorities, the establishment of sustainable institutional missions, the allocation of resources (including research resources) and the management of relevant standards.
- Emphasize the need for improved preparation for tertiary education through upgraded primary and secondary education and pre-tertiary teacher education.
- Give increasing emphasis to the development of life-long learning systems.
- Create multiple means for transfers between different types of tertiary institutions to accommodate changes in student preferences and aptitudes.
- Empower regulatory bodies to develop and enforce nationally applicable accreditation standards in public and private institutions including private for-profit and foreign based institutions.
- Ensure tertiary institutions remain relevant to changing national needs by strengthening ties between tertiary institutions, government and business communities to help define anticipated future skill requirements.
- Encourage continuous self-assessment and adjustment in tertiary institutions. Nurture excellence in both elite and mainstream institutions while avoiding

over-concentration on elite institutions at the expense of mainstream institutions

Resourcing Tertiary Education: Students

Given regressive trends in the distribution of wealth and income in emerging markets, the potential consequences of these trends for the integrity of their social (and political) fabrics, underlying principles of social justice and the fact that the denial of tertiary education to those who can benefit from it wastes human capital, the symposium *recommended* that governments and institutions ensure that:

- Access to (conventional or distance learning) tertiary education is open to all qualified students without regard to family circumstances or financial capacity.
- Tertiary institutions make concerted efforts to attract and retain traditionally excluded students.
- All students pay at least part of the cost of tertiary education by borrowing, and/or earning.
- Consideration is given to creating loan or equity-investment markets for student financing and to arrangements for deferred repayment including minimum income thresholds, the use of taxation as a medium for repayment and the possibility of differential treatment for those who go on to produce public goods.
- Student financing provides funds to students rather than institutions.

Resourcing Tertiary Education: Teachers

Recognizing that the quality of tertiary education is largely determined by the quality of teaching the symposium *recommended* governments ensure that:

- Compensation arrangements should recognize the critical role of teachers and the need to attract and retain them in tertiary education.
- The terms and conditions of employment are competitive with those in other fields in which their expertise might be employed and varies in accordance with the need to attract and retain skilled personnel in strategic fields such as science and industry-oriented research.
- Teachers receive support to keep pace with changes in technology, communication and teaching methods.

Resourcing Tertiary Education: Research

Recognizing intimate links between teaching and research in tertiary institutions, assuming some types of research should be at least partly funded by private enterprise and accepting that research generates public benefits, the symposium *recommended* that emerging market governments should:

- Develop coherent, consistent and equitable policies to govern the allocation of resources for publicly funded research on the basis of intellectual merit.

- Align publicly funded research with national economic, social and cultural priorities and the expansion of national innovation capacity.
- Build and retain critical masses of research personnel using a mix of international and local training and sustain institutional capacities to access world systems and data bases for research and innovation.
- Encourage researchers to leverage their careers and capacities by partnering with institutions and scholars in high income countries.
- Develop transparent cost-sharing arrangements for research funding with the private sector.

Resourcing Tertiary Education: Technologies

To harness the immense potential of information and communications technologies the symposium *recommended* that emerging markets should:

- Emphasize the development of national high speed broadband networks to provide tertiary institutions with reliable internet access.
- Enable all students in tertiary education to acquire and use personal computers.
- Promote the development of internet based distance learning.
- Take full advantage of the growing availability of high quality electronic educational resources.
- Monitor and evaluate opportunities offered by cloud computing.

Tertiary Education as a Globalized Business

The globalization of tertiary education is measured by the migration of students, teachers and researchers between high income, emerging market and poorer countries, by ever-improving Internet-based access to knowledge and by the proliferation of globe-spanning institutional partnerships. Yet recognizing that the global market in tertiary education is far from perfect the symposium *recommended* international action to:

- Improve the functionality of the global market for tertiary education and the global labour market for graduates of tertiary institutions by developing:
    - Minimum international standards for the skills and competencies that should be associated with tertiary qualifications.
    - Agreements to govern the requalification of graduates of foreign tertiary institutions who migrate to other countries to continue their studies or engage in professional work.
    - Codes of practise to govern the international recruitment of highly skilled personnel from emerging market (and poorer) countries to work in high income countries.
- (While recognizing the necessity and legitimacy of national security criteria) rationalise visa and length of stay requirements for students who wish to study in foreign institutions.

Findings and Recommendations

The symposium interpreted *tertiary* education to mean post compulsory education including teaching and research at public and private universities, technical, lifelong learning and adult education institutes, community colleges and their equivalents, and specialized institutions for professional and vocational training, distance learning, and executive education.

Findings

Contexts

The Global Context

Although there are major contrasts in the history, structure, and objectives of tertiary education in Brazil, China, India, Russia and the roughly twenty smaller emerging markets within the purview of the EMS they face common though not identical issues. The resolution of those issues will have far reaching economic and social consequences for these countries and the world at large.

The global marketplace for tertiary education is riddled with imperfections
1. Finding: Although teachers and scholars have been crossing the world in search of knowledge for more than a thousand years, the global marketplace for tertiary education is riddled with imperfections. The imperfections are reflected in contrasts in (i) The quality, breadth, depth, cost and accessibility of tertiary education between and within emerging markets; and (ii) Programme content, teacher competence, admissions criteria, accreditation processes and the extent to which tertiary educations encompass 'civilizing influences'. These contrasts distort student choices, provide students with variable experiences and send them into the world with apparently similar qualifications yet equipped with vastly different skills, attitudes and values and different employment and compensation prospects in increasingly competitive workplaces.

Tertiary education needs diverse institutions that match supply and demand
2. Finding: A fundamental imperfection in the marketplace for tertiary education in both emerging market and high income countries is significant imbalance between the output of tertiary institutions and labour market demands. In high income countries where economic growth has recently slowed or has been reversed some graduates are unable to find jobs that match their skills. In rapidly changing emerging economies the expansion of tertiary education has led to growing quality differentials between institutions and to misalignments between student qualifications and marketplace demand. Equipped with grants and the ability to price pedagogic services below costs, some tertiary institutions have attracted young people to fields of study that have brought them intellectual rewards whilst they were studying only to find thereafter that the economy had little use for their new found skills.

As a result, some families and students in both high income countries and emerging markets are now questioning the value of tertiary education even as it becomes clear

that economic growth, social mobility, social cohesion and political stability depend on populations with tertiary educations. There is thus an urgent need to improve the alignment of tertiary education with the marketplace.

But demand is partly driven by non-market forces

3. Finding: Demand for tertiary education is driven by: (i) The life-cycle aspirations of individuals who want tertiary education; and (ii) The needs of industry, commerce and government for the skills required by global competition. The second source informs the first in the form of career aspirations. The balance varies enormously between countries and changes over time in light of national objectives, degrees of economic freedom and cultural norms.

Tertiary institutions exist to equip their students with the capacity to (i) Earn enough to support a family by selling their time and skills; (ii) Be productive participants in the civic and political life of their societies; and (iii) Translate information and personal experience into personal satisfactions. The line that divides *training* from *education* lies somewhere between the first and third skill sets.

Tertiary education in emerging markets[1] should ideally nourish all three but the weighting varies by country, by culture and by how much of the third skill an emerging market country can afford. In general, the poorer the country and/or larger the skill gap the greater the emphasis on the first type of skill. So while the broad–gauged tradition might in the long run, serve emerging markets well, the practical question is whether they can devote resources to what may seem luxury benefits.

Tertiary education is a globalized business...

4. Finding: The globalization of tertiary education is measured by (i) The migration of students, teachers and researchers between high income, emerging market and poorer countries; (ii) Improving Internet access to knowledge; and (iii) The proliferation of globe-spanning institutional partnerships. Student migration between emerging markets and between emerging markets and high income countries is increasing. Migration is mainly driven by (i) Quality and cost differentials between domestic and foreign institutions; (ii) Capacity constraints in emerging market institutions that are not expanding fast enough to match student demand; and (iii) The belief that over and above its academic benefits, foreign education offers distinctive opportunities and enriching experiences[2].

But personal mobility is constrained by immigration controls...

5. Finding: The global mobility of capital, enterprise and some types of labour is increasingly facilitated by open trade regimes and enabling regulatory frameworks. Yet while the volume of educational travel (by students, teachers and researchers) is growing (see Finding 4) it is increasingly inhibited by burdensome and arbitrary visa processes and heavy-handed immigration procedures. Border controls are essential and legitimate conditions of national security but have direct (and often unintended) effects on academic travel.

...Which also impede the flow of knowledge

6. Finding: Global flows of formalized, organized and retrievable data and information and the creation of new information are increasingly enabled by Internet access. But constraints on global movements of students, teachers and researchers

necessarily inhibit the transfer of *tacit* knowledge embodied in individual experience and memory and thus the transfer of skills and capabilities.

The lack of international standards for tertiary qualifications can have anomalous consequences for students from emerging markets

7. Finding: The absence of international standards and quality assurance systems for tertiary qualifications (in terms of knowledge, skill and competency requirements) can have anomalous consequences. The most obvious examples are what are often perceived as arbitrary re-qualification and re-certification requirements for students who have qualified in emerging market institutions and subsequently want to work or pursue further education in other (for the most part high income) countries.

...But not consistently

8. Finding: A different anomaly arises from the fact that some high income (particularly Anglophone) countries promote the selective immigration of specialists who have been educated in emerging market (and poorer) countries. The outstanding example is the migration of doctors, nurses and technicians from emerging markets to compensate for endemic shortages of healthcare professionals in high income countries. This practise alleviates skill deficits in receiving countries but depletes the skills of source countries, skews emerging market student decisions about courses and careers and distorts the allocation of resources in emerging market institutions. In 2010 WHO adopted a voluntary *Code of Practise on the International Recruitment of Health Personnel* to serve as "a continuous and dynamic framework for global dialogue and cooperation" on the issues arising. That was a step in the right direction.

National Contexts

Despite massive contrasts in size, scale, structure and dynamics of emerging market economies they have enough in common to be discussed in the same breath. Broadly speaking, their attributes include relatively developed financial markets, relatively robust legal systems, relatively open investment and trade regimes, increasingly dynamic enterprises, recent records of prudent macro-economic management, strong export sectors, growing domestic markets and solid prospects for economic growth. But emerging markets are so demographically and culturally diverse that were it not for their shared economic attributes they would not constitute a coherent group at all.

Economic Context

Tertiary education is a condition of sustained economic growth

9. Finding: The current combination of weak growth in high income countries and surging growth in emerging economies has created widespread perceptions that, (i) At least in the short run, emerging market economies are the world's most robust sources of GDP growth; and (ii) Global recovery hinges on their success.

The recent performance of emerging markets has been remarkable and in some ways unexpected. It is likely to continue in the short term although it could be affected by two risks. One risk is that GDP growth could be affected by shrinking demand for emerging market exports in high income countries although that risk

could be offset by increased trade between emerging markets and the expansion of domestic demand in emerging markets. The other risk is that the recent record of prudent monetary and fiscal policy in almost all emerging markets might not be sustained although the fact that emerging markets have clearly learned from the disastrous consequences of poor macro-management in the 1990s makes that rather unlikely.

In the longer term sustained growth in most emerging markets will be contingent on the continuation of skilful macro-economic management and innovative solutions to fundamental challenges that, in varying degrees affect them all. Because solutions will take time they must be addressed as matters of urgency.

The most potent longer term threats to sustained growth in emerging markets are the combined or separate impacts of (i) Environmental degradation, (ii) Social deprivation, (iii) Economic inequality, (iv) Weak governance and (v) Unproductive private sector management practises (including the effects of corruption). The management of those threats will demand consistent policies and strategies rather than piecemeal palliatives. Most emerging market governments recognize (at least rhetorically) that failure to resolve those threats will have inexorable economic, social and political consequences.
None of those threats can be overcome without the skills needed to provide better health care, better primary and secondary education, better infrastructure, better public services, better cities, better governance, better enterprises and better management. And those skills cannot be developed without accessible, high quality, cost-effective tertiary level teaching and research. Tertiary education is the keystone of a sustainable modern economy and a robust civil society and must lie at the heart of every emerging market country agenda.

Tertiary education is both a public good and a private good

10. Finding: For individual students tertiary education is not a public good[3] because access to private institutions is *always* impeded and access to public institutions *may* be impeded by selective admissions and price barriers. But on a collective level tertiary education delivers public benefits because society at large as well as the students concerned benefit from skills, capabilities, attitudes and behaviours acquired through tertiary education. Most obviously because professional skills may be used for public services, but also because tertiary education builds leadership, management and entrepreneurial skills that (*inter alia*) contribute to the creation of better health outcomes, broader democratic capabilities and cultural goods that indirectly benefit society even if the direct financial benefits accrue to individuals.

The public-private mix in tertiary education is changing

11. Finding: In virtually all emerging markets (as elsewhere) tertiary education is provided by both private and public institutions. As in high income countries the mix and balance varies widely. Driven in part by the growth of private institutions including for-profit institutions, it is also changing rapidly. The symposium did not take a view on the intrinsic value of for-profit institutions but, recognizing that some for-profit institutions view tertiary education primarily as profit centres, it emphasised the need for regulatory regimes that protect public, private and individual interests.

Subsidies for tertiary education may be justified...

12. Finding: Policies and practices governing the allocation of the costs of tertiary education vary widely but costs are generally shared between governments, institutions and households. Public subsidies to institutions and students may be justified by the public benefits of tertiary education, because (i) Students who underinvest in education may deprive society of potential derived benefits; (ii) Students from poor families lack financial resources to pay the full costs of education; (iii) Tertiary education promotes social mobility; and (iv) Tertiary institutions provide public goods.

Social Context

The social role of tertiary education in emerging markets is no less important and potentially no less fragile than its economic role. But while tertiary education is seen as a potential enabler of social mobility, an instrument of social change and a tool of human development its social impact has ranged from transformative to marginal.

Emerging market poverty is declining but inequality is rising

13. Finding: Many emerging markets have made extraordinary progress in reducing poverty. Between 1981 and 2008 the incidence of absolute poverty (defined as daily *per capita* income under $1.25 in 2005 prices) fell from 81% to 16% in China, from 17% to 8% in Brazil and from 60% to 42% in India. But income inequality in most emerging markets (as measured by rising Gini coefficients[4]) has increased. This trend is not confined to emerging markets (there are similar trends in the USA and Europe) but it raises questions about the resilience of social fabrics in emerging markets and challenges policy makers to find cost-effective ways to use tertiary education as an instrument of social change and greater equality.

Emerging markets are wasting human potential

14. Finding: While economic demand for human resources is a critical determinant of demand for tertiary education, changes in personal, familial and societal aspirations and demand for better, more 'enlightened' and more fulfilled lives are also important determinants. Most emerging markets – and many high income countries - fall short of these objectives. The potential consequences of failure include the corrosion of aspirations, damage to social fabrics, the loss of leadership and other skills that are critical to cohesive societies and the unforgivable waste of human potential. Most emerging markets face the simultaneous challenge of expanding supply to meet future potential demand and expanding demand to enable growing proportions of school leavers who would benefit from tertiary education to do so.

Demographic Context

Emerging markets have contrasting demographic profiles

15. Finding: Demographic differences between China, Brazil, India, Russia and smaller countries - some still growing (although not at historic rates), others stable, a few shrinking - mean there are significant contrasts in the age (and in some cases gender) profiles of students who are in or seeking access to tertiary education. These differences help explain why the proportion of the age-relevant cohorts in tertiary education in some emerging markets (e.g. Russia and Argentina) exceeds

the average for those cohorts in high income countries. But in many emerging markets, including some where tertiary education has recently undergone rapid expansion, the proportions are significantly lower.

By way of example, recent data show that life expectancy is 73.5 years in China *versus* 64.4 years in India; infant mortality is 17/1000 in China *versus* 50/1000 in India; maternal mortality is 38/100,000 in China *versus* 230/100,000 in India; mean years of schooling is 7.5 in China *versus* 4.4 in India; and adult literacy is 94% in China *versus* 74% in India. Comparisons between other emerging markets provide further evidence of demographic contrasts, most of them grounded in economic, financial, cultural and other realities.

Emerging markets must embrace life-long learning

16. Finding: Changes in the global economy, increased longevity and changes in the nature of work point to a growing need for lifetime education, re-education and retraining. In emerging markets (as elsewhere) more and more people will have multiple careers (rather than multiple jobs) in their lifetimes. Governments will have to address the consequent need for life-long learning to equip people with the skills they will need to survive and thrive in radically new work environments.

Objectives

The tertiary education objectives of all governments reflect national economic and social objectives. All emerging markets expect tertiary institutions to produce a growing supply of professional and technical expertise to meet the expanding needs of their economies. Some seek to develop 'world class' research and training institutions. Some stress the role of tertiary institutions as escalators of social transformation. Some, with varying emphases, expect tertiary institutions to equip students with skills for lifetime learning and personal development. Some view tertiary institutions as sources of values, attitudes and the formation of social skills. Some see domestic tertiary institutions as sources of earnings from foreign students. Some assume some students will study abroad.

Contrasting national priorities are reflected in striking contrasts between the four largest emerging markets (Brazil, China, India, Russia) with, for example a stronger emphasis in China on meeting future demand from government and business and a stronger emphasis in India on meeting the specific expectations of each state.

Ways and Means

Until recently, it was widely assumed that many questions on tertiary education posed by emerging markets could be answered in light of the experience of high income countries. But it is increasingly accepted that many answers will be found within emerging markets; that some will flow from local innovations; that some will be found in other emerging markets; and (reversing historical pattern) that ideas will also flow from emerging markets to high income countries.

There are almost as many sets of national objectives for tertiary education as there are nation states (although the weights vary). They are pursued: (i) Through the

public sector, the private sector, or both; (ii) By charging students and families all, some or none of the costs involved; (iii) By developing comprehensive policies, strategies and plans that take account of all aspects of education, or by not planning at all.; (iv) By focusing on elite institutions, world-class (rather than elite) institutions, mainstream institutions or all of the above; (v) By promoting basic or commercial research; (vi) By forging partnerships with foreign institutions or operating independently; (vii) By aligning curricula with national economic, social and cultural priorities or favouring a looser approach; (viii) By using information and communications technologies (ICT) as an enabler of conventional structures and curricula or as the core element of radical approaches to distance learning and the development of institutions without walls; or, almost inevitably (ix) By combining these options.

Strategy and Planning

Coordination

Education strategies are not joined-up

17. Finding: Policies and strategies on tertiary education in emerging markets should address: (i) Access between and within between academic institutions and institutions providing vocational, technical and other non-academic adult education; (ii) Cooperative networks for the exchange of knowledge and ideas to foster innovation and reduce compartmentalization; (iii) Links between primary, secondary and tertiary education emphasising the coordination of secondary and tertiary curricula; (iii) Adult and lifetime education in the context of economic changes (see Finding 16) that mean many people will change careers several times and will need to acquire new (or adapt existing) skills and capabilities. Policies and strategies should also emphasize the need to embed the development of softer transferable skills that are critical for job mobility and personal development.

Every Minister is a Minister of Education

18. Finding: Tertiary education in emerging markets cannot be the exclusive province of a Minister of Education. Echoing a finding of the 2009 EMS symposium on *Health and Healthcare* that inter-departmental coordination is essential to the development of coherent policies and strategies for health and healthcare, the symposium found that every department of every government at every level should have a role in shaping the development of the skills and capabilities on which the future of its sector depends. And echoing Sir Michael Marmot who told the 2011 EMS symposium on *Urbanization, Health and Human Security in Emerging Markets* that: “Every Minister is a Minister of Health”, this symposium found every minister must also be a Minister of Education.

Coordination is a condition of effective results

19. Finding: Inter-departmental coordination - in this field, as in others - is often inhibited by territorial instincts, closed hierarchies, rivalries and resistance to the partial loss of autonomy in the interest of improved collective outcomes. Resistance to change causes emerging markets to misalign priorities, misallocate resources and deprive societies of essential skills. That does not mean tertiary education in emerging markets should be driven by short term demands of the marketplace. It

means - whether the role of government is writ large or small - that coordination is a condition of cost-effective results.

Planning

Education planning needs improvement

20. Few emerging markets have developed: (i) Comprehensive policies and strategies for tertiary education that articulate objectives, priorities, constraints and choices across all levels of education; and (ii) Regulatory and accreditation bodies that, while respecting academic freedom, ensure public and private, domestic and foreign tertiary institutions conform to acceptable standards with respect to faculty qualifications and the quality of programmes offered; or (iii) Established systems to monitor and evaluate the performance of tertiary institutions.

Performance assessments are essential; league tables are not

21. Finding: The quality of tertiary education should be measured by the extent to which it fulfils its objectives. That means measurement is only possible if the objectives are clear. All too often they are not. All too often the measurements are of doubtful value. And all too often they make no reference to costs. Whereas the quality of healthcare is increasingly defined in terms of cost effectiveness (i.e. the value of outcomes per unit of health care spending or the cost of achieving a given outcome) the assessment of performance in tertiary education implies tertiary education is cost-free[5].

'League tables' that rank tertiary institutions are of limited value, offer spurious accuracy, fail to recognize lags in performance, reflect a narrow range of functions, are based on partial information and/or are highly subjective. None are universally accepted and in the case of universities some of them distort resource allocations and priorities because they focus on research achievements rather than courses and teaching and on science and technology rather than the professions, arts and humanities. The purpose of systematic, transparent, and regularly updated evaluation is not to rank institutions but to assess how well they are doing in terms of their agreed missions, ends and means and to provide feedback that can be used as a basis for improvement.

The search for prestige can detract from mainstream needs

22. Finding: Some emerging markets (like some high income countries) place undue emphasis on elite institutions. Flagship institutions and centres of excellence in tertiary education play legitimate roles as centres of advanced research, as aspirational beacons and as benchmarks. They provide indispensable connections to global science and the innovation economy. They augment national culture and are crucial to building advanced capacity in governance, regulation and policy. Emerging markets should devote some scarce resources to their development. But policies, practices and priorities for tertiary education should balance the development of elite institutions with the improvement of mainstream institutions that serve the majority of students and play central roles in the evolution of economies and societies.

Emerging market governments should recognize that the search for excellence should not be confined to whole institutions; that departments, units and faculties

within a given institution may shine brighter than others; and that uniform institution-wide standards may neither be feasible nor cost-effective.

The allocation of resources for tertiary education should be based on objective, consistent and transparent criteria

23. Finding: There are significant contrasts in the way emerging markets allocate financial resources between tertiary institutions. In some, resource allocation reflects historical traditions. In some, resource allocations are driven by changing patterns of student demand (money follows students). In others, allocations are determined by a variety of criteria including excellence. Emerging markets need to develop coherent philosophies and practices if they are to use increasingly scarce resources efficiently and in the national interest.

Structure

Partnerships

Institutional partnerships must be anchored in mutuality

24. Finding: A growing number of tertiary institutions (mostly from high income countries) have established satellite or subsidiary campuses in emerging markets. Some operate like direct foreign investors without domestic partners. Most are linked to domestic institutions. Some (e.g. partnerships of business schools in several countries) involve multiple partners. These rapidly proliferating arrangements can benefit both the institutions and students concerned. But the fact some have failed suggests that partnerships must be grounded in sustainability and a culture of self-improvement and should not focus on short term earnings. Like all partnerships, they must also be anchored in mutuality which means benefits must accrue and be seen to accrue to each partner and the corollary that partnerships can be undermined if partners believe the benefits are not mutual.

Transfers

Exits and entrances

25. Finding: Few emerging market (or other) countries have developed systems to facilitate student transfers and progressions between institutions variously engaged in academic, vocational, technical and other forms of post-compulsory education. The lack of such arrangements makes it difficult or impossible for motivated and qualified students to shift from one stream to another in the same institution or to a different institution in the same country or another country. It is in the interest of both students and society to facilitate these arrangements.

In health care, a trend towards increasing vertical and horizontal integration of health-care institutions is driven by the desire for a smooth interface for patients among, say, primary (outpatient) care, tertiary (inpatient) care, convalescent care, and other forms of care. This form of integration is wholly absent in tertiary education which makes transfers among different types of tertiary institutions more daunting. For example, there is no reason why students in a community college should not be able to take some courses at a nearby university, if that fits their talents and interests.

Curricula

Aligning markets, objectives and capabilities

26. Finding: Some tertiary institutions in emerging markets have aligned their programmes with the evolving demands of their economies and societies by building models to simulate future demand. Some have sought to build close relationships with potential public and private sector employers. Some have retained traditional curricula on the grounds that subject matter learning is less important than critical thinking skills that can be subsequently applied to the acquisition of professional and technical skills. And some have wrestled with the challenge of reconciling the short term demands of business and industry with the need to provide students with adaptable lifetime skills. All emerging markets would benefit from the better articulation of curricula and demand.

Innovation and Technology

New chapters in the Book of Innovation

27. Finding: Until recently, it was assumed that economic and social change in emerging markets was mainly based on the adaptation and adoption of models developed in and for high income countries. Now, some emerging markets are not only meeting their own needs for ideas, techniques and products but, in some fields are leading the world. To the extent emerging market innovations can be generalized across cultural and other boundaries they will increasingly contribute to change in other emerging markets and to 'reverse flows' from emerging markets to higher income countries. In tertiary education, as in healthcare and urban management, emerging markets have breathed life in to the hackneyed adage that necessity is the mother of invention. Faced with larger, more urgent and in some ways unprecedented problems that no longer exist (if they existed at all) in higher income countries, emerging markets, with fewer resources and less experienced institutions are writing new chapters in the book of innovation.

Changing the game

28. Finding: The rapid and pervasive growth of information and communications technologies has changed the landscape of tertiary education in emerging markets. Some are at or near the cutting edge in creating low cost technology (e.g. the use of personal computer, mobile telephony and high speed broadband networks) to (i) Create new institutional possibilities; (ii) Increase the scope and range of tertiary curricula; (iii) Allow geographically dispersed populations to benefit from tertiary education; (iv) Provide access to tertiary education by socially and/or financially disadvantaged populations by minimizing fixed investment in plant and land and acquiring low cost technology; and (v) Eliminate barriers of spatial separation by allowing tertiary institutions in different countries and continents to participate in shared research and teaching. While these changes are as impressive as they are important emerging markets have barely begun to exploit the game-changing potential of technology to transform tertiary education.

Recommendations

The following recommendations are in three categories: (i) Those that lie beyond the domain of any individual country and call for action based on international collaboration; (ii) Those that call for action by individual emerging market governments; and (iii) Those that call for action by individual emerging market institutions.

A Joined-Up World

To address imperfections in the global market for tertiary education it is **recommended** that action be taken to:

- Relax constraints on education-related travel by teachers, students and researchers by:
    - Modifying, simplifying or expediting visa and border controls as they apply to educational travel;
      Removing residence limits for education purposes by foreign students, teachers and researchers; and
      Harmonizing income tax regimes for national and foreign teachers.
- Adopt global internet protocols and other measures to eliminate barriers to the flow of electronic information;
- Develop protocols to govern the international acceptance of professional qualifications awarded by recognized tertiary institutions while protecting agreed international standards;
- Promote international conventions to govern international migration by qualified professionals along the lines of the *WHO Global Code of Practice on the International Recruitment of Health Personnel* of May 2010;
- Promote international partnerships between tertiary institutions by publishing objective assessments of existing partnerships including analyses of critical success factors;
- Promote the flow of information between emerging markets and high income countries on organizational and managerial innovations in tertiary education; and
- Facilitate the global flow of information on tertiary education including admissions criteria, costs, curricula and residence requirements (excluding rankings).

With Joined-Up Nations

Comprehensive Strategies

The compartmentalization of tertiary institutions militates against national capacity building, institutional growth, the development of comparative advantages and capturing the benefits of cooperation. To attenuate the consequences of compartmentalisation, promote cooperation and capture collaborative advantages (that exist where collaborating institutions achieve outcomes they could not achieve separately) it is **recommended** that:

- Emerging market governments should develop comprehensive national policies and strategies covering **all** forms of tertiary education and linkages between tertiary and secondary education;
- Every aspect of national life is directly or indirectly affected by the availability of leadership skills and managerial, professional and technical expertise. Accordingly, there should be broad public sector participation in the development of comprehensive and coordinated policies and strategies for tertiary education including the definition of relative priorities, the establishment of sustainable institutional missions within an agreed division of labour between different types of institution, the allocation of resources (including research resources) and the management of relevant standards;
- In light of the rapidly changing marketplace for skills and the consequent need for access to new skills, national tertiary education policies and strategies should give increasing emphasis to the development of lifelong learning systems, programmes and facilities;
- To accommodate changes in student preferences and allow for the late development of student aptitudes governments and institutions should facilitate accelerated transfers between different types of tertiary institutions and movement within them by means of conversion and transition programmes;
- In the interests of ensuring students acquire the skills they need and that institutions offer value for money, governments should empower regulatory bodies to develop and enforce nationally applicable accreditation standards in all public and private tertiary institutions including private for-profit and foreign based institutions taking account, wherever relevant, of international standards. Although, ideally, it might be desirable to let 100 flowers bloom and leave the market to sort it out, the private, for-profit sector in higher education in some high income countries has shown that without government regulation and accreditation exploitative tertiary education products can be brought to market and sold to unsuspecting students – especially those from poor families, and especially if these students receive government subsidies.
- While scrupulously respecting academic freedom and recognizing some tertiary institutions opt to specialize and others opt for broad based curricula covering fields of learning that are not directly aligned with marketplace demands, governments should ensure that tertiary institutions remain collectively relevant to changing national needs and employer demands and to that end should:
    - Establish and use consistent and transparent criteria for assessing the performance of tertiary institutions;
    - Encourage tertiary institutions to develop internal systems of continuous self-assessment and corresponding adjustment; and
    - Collaborate with the private sector to monitor the changing needs of employers through (for example) sector skills organisations responsible for developing labour market information and skills forecasting.
- Modulate *de facto* hierarchies of tertiary institutions by:
    - Nurturing excellence in relation to institutional missions in all tertiary institutions;
    - Favouring institutions/departments/programmes that are compatible with national priorities and sustainable comparative advantages; and

- Avoid focussing on elite institutions to the detriment of mainstream institutions given that national interests are likely to be best served by balancing the selective pursuit of excellence with the needs of mainstream students and promoting excellence in both.

Technology

To take full advantage of the potential of information and communications technologies it is **recommended** that emerging markets should:

- Emphasize the development of national high speed broadband networks to provide all teachers and students in tertiary institutions with reliable internet access;
- Adopt legislation and develop funding, supply and end-user support mechanisms to enable all students in tertiary education to acquire and use personal computers;
- Promote the development of internet based distance learning to expand the geographic coverage and increase the social penetration of tertiary education in existing institutions or in newly created distance learning institutions; and
- While recognizing that the concepts and related technologies are at a formative stage but also recognizing the potential benefits for research and teaching, monitor and evaluate opportunities offered by cloud computing.
- Take full advantage of the growing availability of high quality educational resources including open education resources and affordable eBooks.

Funding

Students

Recognizing that: (i) Tertiary education in virtually every emerging market is provided by a variable mix of public, private and hybrid institutions; (ii) This mix is partly affected by culture and tradition;(iii) The respective roles of households and the role of the state in financing tertiary education varies significantly around the world; (iv) A large part of the benefits of tertiary education are private goods; (v) Intense competition for public revenues will inevitably increase; and (vi) The use of scarce public revenues to finance all or most of the costs of tertiary education is unsustainable and (particularly where revenues are partially derived from taxes on low income households) regressive, it is **recommended** that:

- Financial policies should be aligned with the principle that subsidies to all students are regressive if the costs are borne by taxpayers particularly if the students concerned capture most of the benefits.
- All students should pay at least part of the cost of tertiary education by borrowing, earning or a combination of the two;
- Governments should:
    - Recognize that many poor individual students face the barrier of liquidity upon entry into tertiary education largely because efficient markets for human-capital financing (comparable to those for financing assets that can be used as collateral) do not exist;

- Consider the creation of loan markets or equity-investment markets for student financing (in the latter case repayment would be a stipulated fraction of a student's future income);
- Consider arrangements for deferred repayment. These could include (i) The use of minimum income thresholds (as in Australia and the UK); (ii) Where the taxation system is sufficiently robust and inclusive, the use of taxation as a medium for repayment; and (iii) Making allowance for the fact that students who devote part of their lives to producing public goods and earn less than others may qualify for different treatment;
- Recognize that student financing raises the question of whether tuition should be the same for all, regardless of the specific costs of courses (the cost per student in humanities being lower than that of medicine, sciences and, engineering); and
- Ensure student financing provides funds to *students* rather than institutions.

Teachers

Recognizing that the quality of tertiary education is largely determined by the quality of teaching it is **recommended** that:

- Governments should ensure that teachers in tertiary institutions receive compensation that recognizes their critical roles in economic, social and cultural development at the level needed to attract and retain them in tertiary education;
- The terms and conditions of their employment should be competitive with those in other fields in which their expertise might alternatively be employed;
- Compensation and other conditions should vary between different areas of specialization in line with differentials in the external world;
- Policies should allow for variations to attract and retain skilled personnel in certain strategic areas, such as science and industry-oriented research; and
- Governments should ensure teachers receive support to ensure they keep pace with changes in technology, communication and teaching methods.

Research

Recognizing there are intimate links between teaching and research in tertiary institutions; assuming that some types of research (particularly where research outputs may be private goods) should be funded, at least in part, by private enterprise; and accepting that research generates public benefits, it is **recommended** that emerging market governments should:

- Develop coherent, consistent and equitable policies to govern the allocation of resources for publicly funded research on the basis of intellectual merit;
- Align publicly funded research with national economic, social and cultural priorities and the expansion of national innovation capacity;
- Build and retain a critical mass of research personnel using a mix of international and local training, and sustain institutional capacities to access world systems and data bases for research and innovation;

- Encourage researchers to leverage their careers and capacity by partnering with institutions and scholars in high income countries; and
- Develop consistent and transparent arrangements for sharing the costs of research with the private sector.

Social Mobility

Given: (i) Regressive trends in the distribution of wealth and income in emerging markets; (ii) The potential consequences of these trends for the integrity of their social (and political) fabrics; (iii) Underlying principles of social justice; and (iv) The fact that the denial of tertiary education to those who could benefit from it wastes human capital it is **recommended** that governments and institutions ensure that:

- Access to conventional or distance learning tertiary education is open to all qualified students without regard to family circumstances or ability to pay;
- Tertiary institutions make concerted efforts to attract and retain traditionally excluded students; and
- Access to tertiary education for all students is based on cost sharing.

And Joined-Up Institutions

Emerging market policies should balance the *controls* that are required to create a coherent framework for tertiary education with measures that promote *cooperation* between tertiary institutions with the *autonomy* needed by every institution to cherish its traditions, develop its identity, nurture its community and compete nationally and internationally. The balance of control, cooperation and autonomy will reflect distinctive national political systems. Some will allow individual institutions almost untrammelled freedom to pursue their objectives. Others will insist on limited autonomy, tighter regulation and greater conformity. Because, irrespective of its degrees of freedom, every tertiary institution in every emerging market must shape its own future, it is **recommended** that each institution should ensure:

- Its mission remains relevant in a changing economic and social environment and is informed by international as well as national developments;
- Its curriculum offers a manageable balance between the demands of the external marketplace and the need to nurture the ethical values, professional standards and social skills its students will need to function;
- It continuously evaluates its competitive and collaborative advantages, the breadth and depth of its programmes and the relevance of its resource allocations;
- Its admissions criteria and procedures and (insofar as it controls them) financial aid policies are compatible with ensuring social and financial disadvantages do not unduly impede access to tertiary education;
- Its strategic vision is grounded in local and global economic and social realities;
- Its governance includes adequate representation from business and civil society;

- It serves the needs of both foreign and domestic students without compromising academic standards or giving undue weight to financial criteria; and
- It has robust organisational and academic governance mechanisms that ensure the integrity and quality of its programs and processes.

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[1] Tertiary institutions in some high income countries, often supported by tax-financed institutional budgets or private endowments have traditionally been able to manage themselves as producer-cooperatives and to decide what types of human capital to produce with scant reference to the evolving requirements of national economies.

[2] The third factor – which mainly applies to countries with ample capacity to deliver high quality tertiary education (e.g. Japan, Korea and parts of Western Europe) – points to specific demands for educational experience and foreign experience.

[3] If (i) A good or service is freely available to everyone who wants it; (ii) Its use or enjoyment by one person neither restricts nor diminishes its use or enjoyment by others; and (iii) Nobody can be excluded from its use or enjoyment, it is a *public good*. Conversely, if (i) Access to a good or service is constrained or excluded by cost or other barriers; (ii) Its use or enjoyment by one person reduces its availability to others because scarce resources are depleted by its production; or (iii) It can be rejected, it is a *private good*.

[4] The Gini-coefficient is the most commonly used measure of income inequality. It varies between 0, which reflects complete equality and 1, which indicates complete inequality.

[5] If cost effectiveness criteria were applied to tertiary education in, for example, the USA, the Ivy League institutions would rank below less prestigious institutions in terms of value added per unit, particularly if account were taken of their selective admissions processes.

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