Introduction

The first global university ranking of note was by Shanghai Jiao Tong University in 2003.¹ The Times Higher Education followed in 2004.² In less than ten years global rankings have become very potent. They create many losers and few winners. But ranking drives real action in real time in many places.³ It determines policy and university strategy. Nations rich and poor dream of world top 20s and top 100s. Germany and France invest in excellence to dent US domination of the higher education sector. Saudi Arabia applies $10 billion to its new King Abdullah University of Science and Technology. Ranking shapes cross-border movements of students and faculty. It elevates research above teaching, and large research universities above all other higher education institutions.

Research performance is at the heart of global comparison. It is more readily counted than learning, and more universal in form. It is the proxy for value in this sector. Global research means English-language science. Global ranking drives

standardization on the basis of Anglo-American systems and models. It secures the dominance of the leading universities with scientific capacity, half of which are in the United States.

As leaders of great universities in Latin America, at the peak of society, what can you make of global rankings? How can global comparisons function to your benefit, and to the nation’s benefit? It would be a boom if it led to the advancement of knowledge and education. If it lifted the top universities and encouraged the others. If it enhanced the social, economic, cultural and political contributions of higher education. No one has shown that rankings have these effects. Perhaps the best thing they do is encourage investment in research some of the time.

**How good are global rankings?**

Do rankings provide essential information to guide our decisions? Global rankings tell us where research capacity lies and who has status. Rankings tell us nothing about teaching, though they often guide decisions on where to be educated. Overall, how accurate are rankings as a description of higher education? What parts of higher education do they highlight and what parts do they omit? There are rankings and rankings. Some provide better social science than others. Some are unsound, especially where they rely on surveys or self-reporting by universities. No one has produced sound data on teaching quality or learning achievement that are both objective, and internationally comparable. The use of proxies is a weakness, for example student-staff ratios deployed as indicators of teaching.

As social science, the best data are the single indicator tables based on research publication and citation from Scimago\(^4\) and Leiden University.\(^5\) These tables derive from the two principal data collections, Scopus from Elsevier and Web of Science from Thomson. Leiden’s data have an additional benefit: citation rates are normalized by field, to correct for bias in favour of research fields with high citation rates, such as medicine. Single indicators can be judged in their own terms and

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related to varying contexts. They also avoid the problem that bedevils all rankings based on composite indexes, that of weighting the indicators.\textsuperscript{6}

If rankings based on composite indicators confine themselves to one function, research, they can at least achieve close correlation between the indicators, as does the Shanghai ranking.\textsuperscript{7} But if they cover a broad spread of areas of activity—say research, surveys of satisfaction with teaching, resources—they generate indicators with little correlation. And the weightings are essentially arbitrary. Why should, say, the number of PhDs awarded be twice as important as the percentage of international staff? If the ratio is reversed and international staff become twice as important as PhDs, dozens of universities move up and down the league tables. What has that got to do with distinctions based on comparative performance? Different parties—governments, students, parents, faculty, industry, media—have different questions. Different questions generate different answers. Composite indicators obscure this. They claim there is only one possible answer.

These problems are known. Last year an article in the \textit{New Yorker} by Malcolm Gladwell demolished the \textit{US News and World Report} along these lines.\textsuperscript{8} But it’s water off a ranker’s back. Methodologies are refined and the wheels keep turning. Composite indicators survive and are used to mandate holistic judgments about ‘best universities’ in every respect, far beyond the bounds of validity.\textsuperscript{9}

People want a hierarchy that is clear, simple and stretched across all bases, all roles of higher education. So we are told. The point is that validity is not the only driver of rankings. Rankings are a normative device that order the higher education world in certain ways according to specific models of action. As long as

\begin{itemize}
\item \textsuperscript{7} Y. Cheng (2011), \textit{The History and Future of ARWU}. Paper presented to the inaugural meeting of the ARWU International Advisory Board, Shanghai, 30 October.
\item \textsuperscript{8} M. Gladwell (2011), The order of things, \textit{The New Yorker}, 14 February. http://www.newyorker.com/reporting/2011/02/14/110214fa_fact_gladwell
\item \textsuperscript{9} ‘Rankings frequently foster holistic judgments about institutions that are not strictly mandated by the data used to compile the rankings and the methods used to standardise and weigh the data’ - M. Van der Wende & D. Westerheijden (2009), op cit, p. 73.
\end{itemize}
people find those models plausible, they will be comfortable with the rankings that reflect them, and will continue to hit the websites in sufficient numbers.

Why do people believe in global rankings?

Global rankings were born in the slip stream of 1990s globalization. Web-based communications, cheaper air travel, research collaboration, faculty and student movement, all brought universities closer to each other. Every university web-page became visible to all others: a world-wide network, with the strongest universities highly visible to all the rest. And growing global convergence encouraged global comparison, as it always has. At the same time, something more ideological has been at work. That is the construction of higher education as a global market.

Higher education is understood in many different ways. As a process of economic production and consumption. In terms of vocational training and preparation for the first job. As cultural transmission. As person formation and the preparation of students for social, professional, national or global leadership. In sociological terms, as social opportunity and social stratification, as a perpetual war between meritocracy and the reproduction of elites. Or as competition for social status, in which students acquire ‘positional advantage’ in elite universities, which compete as bearers of university status and creators of graduate status. Or as open source knowledge exchange. Or as the home of radical democracy and social critique.

All these understandings of higher education tell us something about it, but not everything. Each leaves out much of what actually happens. The idea of higher education as a global market combines two of these paradigms: higher education as an economy, and higher education as status competition, in the global context.

Why has higher education as a global market competition taken hold? It’s an impoverished view of the global good. But it is consistent with the mainstream idea of international relations as a zero-sum contest between nations. And matches the contrary vision of global business, universities as stand-alone

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economic firms in competition with each other, regardless of national context or social responsibility. It fits with neo-liberalism, the policy of every economic ministry around the world; and with the leading global systems, the USA and UK. The language of the global market re-presents neo-imperial hegemony in higher education as the outcome of natural selection and economic modernization.

It is also consistent with the domestic ideology of US higher education as a market. US higher education is subsidized and politicized, for example the accreditation process, and the fostering of for-profits by Congress. But apple pie and mom talk about free markets and happy happy consumers disguises the function of US higher education as a normative and conservative system of power.

The idea that global higher education is essentially a market is a half truth that weakens collaboration and humiliates institutions below the top level. The present dominance of this idea is a strategic fact. But like all normative power systems, market competition in higher education, ordered by global university rankings, has its downsides. We need to face them. Consider the global geo-politics of rankings. Consider the message they send about the place of Latin America in the world.

**How does Latin America fare in the global rankings?**

We all value our own history and culture. But when the comparisons used for ranking are made on the basis of one monocultural university and superimposed onto the full worldwide diversity, the history, culture and the economics of every other system and institution becomes a source of disadvantage. That’s unless we are born as Oxford or Harvard. The raw fact is that in nearly all ranking systems, the Iberio-American world does not fare well, and Latin America does poorly.

Central and South America have 8.5 per cent of the world’s people. The region produced 8.7 per cent of world GDP on a PPP basis in 2011. But according to

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the Shanghai ranking, only 11 of the top 500 universities are in Latin America, 2.2 per cent. Three of the top 200, 1.5 per cent. Despite the fact that 7 per cent of the respondents to the 2011 *Times Higher* survey were from Latin America, there were just three Latin American universities in the *Times Higher Education* top 400, two from Brazil and one from Chile. Less than one per cent of the total.

I will not discuss the QS ranking because the methodology is not sufficiently robust to provide data valid as social science. Let’s look at the bibliometric data from Leiden and Scimago. There are 10 Latin American universities or research institutes in the Scimago top 400. That’s 2.5 per cent. Just 13 Latin American universities are among the 500 largest producers of scientific papers in the Leiden ranking of scientific output for the 2005-2009 period. That’s 2.6 per cent.

Latin America does a bit better on Internet presence in the webometrics ranking with nine of the top 200 world universities, 4.5 per cent.

Nearly all ranked universities are concentrated in four countries: Brazil, Argentina, Mexico, Chile, with a fifth country, Colombia, the next in line. Brazil is the strongest not only because of its total global research and number of research-intensive universities, but because of its rate of growth. Between 1995 and 2009 the number of Brazilian science papers multiplied by 3.6 times. The number of papers doubled in Mexico and Chile. It also multiplied by 3.8 times in Colombia, though from a low base. Since the mid 1990s Latin America has been the fastest growing region of world science, slightly ahead of Asia.

After Chile and Colombia the science falls away, however. Much capacity building lies ahead, if every nation is to connect effectively with global science.

The standout universities in the rankings are Sao Paulo and UNAM. Sao Paulo is the eighth largest university producer of English-language science in the world, a

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major presence in the knowledge economy, though its citation rate is low. If non-English language papers are included, the citation rate falls. Papers in Portuguese or Spanish are rarely cited outside the Iberoamerican countries, and many non-English language journals are excluded from global data bases. The brute fact is that while eleven languages have more than 100 million mother tongue speakers, only papers in English can help a global citation ranking.

Sao Paulo is at 102-150 in the Shanghai ranking. Its Medicine and Pharmacy research are in the Shanghai top 100 in that field. It is at 178 in the Times Higher ranking but world top 70 on reputation alone. It is 20th in webometrics. Sao Paulo, UNAM and UBA gain in several rankings because of size. However, when it comes to competition for the top 100 positions in Shanghai or the Times Higher ranking, being a mega-university like UNAM with many social, cultural and economic responsibilities is a disadvantage. Rankings are mostly led by somewhat smaller and less accessible institutions that put most resources into research.

Why does research dominate the global rankings?

What does the eclipse of Latin American mean? It is partly the result of reality—Latin American science is too weak. That is within the power of Latin American governments to address. And it is partly the result of ideology—the standard of comparison is largely confined to global science. That is harder to change from here. All rankings focus exclusively on research, like Scimago and Leiden, or are led by it. The Times Higher thoroughly overhauled its methodology in 2010. It covers more ground than research, but research dominates the composite index. Research activity, training, conditions, performance and reputation together constitute 73.25 per cent. Shanghai is 100 per cent about research.

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17 M. Van der Wende & D. Westerheijden (2009), op cit, p. 73.
As noted, the normative ordering the sector on the basis of research favours comprehensive research universities fluent in English,\(^{18}\) especially universities with a critical mass of high performance researchers—and in the Shanghai ranking, with Nobel Prizes. In 2009 Harvard had 31 Nobel Laureates on staff, Stanford 18, MIT 17.\(^{19}\) This is more than UNAM and UBA. UNAM and UBA have other assets. But many of these assets, including strength in the humanities, in diverse languages of scholarship and in most social science and professional disciplines, make no difference to global rank. Nor does teaching quality, social access or service to government. Citation impact means impact in research literature. Not social impact.\(^{20}\) No global ranking measures social impact, except for the participation and access indicator used in the U21 system ranking.\(^{21}\)

Why does research dominate in the global rankings? The two easy answers are that research data are strong and the global science system makes standardized comparison possible. We can do this in few other areas. Even with global mobility data there are problems of definition: ‘foreign’ versus ‘international’ students.

But there are deeper reasons for the dominance of research. First, policy. It is becoming clear that in future all nations will need universities that can ‘participate effectively in the global knowledge network on an equal basis with the top academic institutions in the world’,\(^{22}\) as Altbach and Salmi put it in their book on world-class universities—just as they will need clean water, stable governance and a viable financial system. Nations unable to interpret and understand research, a capacity that must rest on personnel capable of creating research, will be trapped in continuing dependence. This is one reason why research is growing almost

\(^{18}\) M. Van der Wende & D. Westerheijden (2009), \textit{op cit}, p. 71. ‘Countries with different configurations of national higher education systems are pushed to imitate the configuration of countries which were the initial breeding ground of rankings (i.e. those with a steeply stratified higher education system)’ – U. Teichler (2011), \textit{op cit}, p. 64.


everywhere. In 2009 48 countries produced over one thousand journal papers in science, compared to 38 countries in 1995. Much of the growth has been in Asia.

Second, market forces. In higher education global status competition is competition between institutional (and national) ‘brands’. What determines brand value? Research. Status is a relative or positional concept. It is not the quality of outputs that matters, but the order of producers. Rankings provide systems and technologies for ordering producers that can be readily understood.

Technically, rankings based on publication and citation enable precise status distinctions on a common basis, with no information asymmetry between producer and consumer (as there is in knowledge of teaching). Metaphorically, distinctions in measured research are proxies for generic differences in intellectual firepower.

Studies of student choice find most students prefer a high status research university to a lesser status institution with better teaching. It is unrealistic to talk of higher education as a competition in institutional ‘quality’ or student satisfaction, unless ‘quality’ means the market power of university brands. Comparative indicators on student learning achievement, forshadowed by OECD, will not change this. These indicators will matter but will vary by discipline and context. They will not dislodge the generic role of research in determining brand value.

**Are global rankings meritocratic?**

But competition policy says that meritocratic competition drives performance and innovation. Are global rankings meritocratic? League tables are dominated by research-strong universities and universities from wealthy countries. The two go together. Of the Shanghai top 200 only four are in countries with a per capita Gross National Income of under $25,000 USD a year: mainland China, Russia, India and Brazil.

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Brazil, Argentina and Mexico. Each has one university in the top 200. Of the Shanghai top 500, 32 (6.4 per cent) are in countries with per capita GNI below the world average: 23 in China, seven in Brazil, where income is just below the average, one in Egypt, one in India. Where research performance is improving it is investment driven, as in Chile, Argentina, Mexico and Brazil. Even so Latin America should have done better given its levels of national wealth. Neither government nor the private sector invests enough in R&D, especially in Mexico. Most Latin American nations have a small tax base by world standards. Brazil has the most advanced infrastructure in R&D and innovation.

Science is much more than competition. It is a vast collaborative network in which all gain and all contribute when conditions are right. But there are competitive elements in discovery, and status hierarchies in disciplines. This opens the door to competitive systems of organizing and funding research, and the agendas of global competition states. And governments assume that competitive rankings measure the nation’s strength in science and innovation.

But this assumption contains a fallacy. Rankings are zero-sum. Few winners, many losers. Shouldn’t modernization and innovation be goals that all nations can achieve? Shouldn’t they be positive sum? Measure, incentive and goal are out of whack.

Governments also hope the rankings competition will drive performance. Sometimes yes, sometimes no. This is not meritocratic competition. Zero-sum competition does not foster meritocracy. The starting positions are very unequal. In status markets leading universities are hard to displace. There is an absolute limit to the number of top universities. There is one Harvard and room for only one. World leading universities are dominant for decades, even centuries. Once set

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they readily hold their position. They make the rules. They define university status. Ranking reinforces the status closure. Rankings feed reputation, which feeds into resources, which sustain reputation and maintain ranking position. And so on.

Realistically, at global level rankings provide meritocratic competition only for the band of countries within reach of the top. For those at the edge of the leading nations, like China, Taiwan, Singapore and Korea, global ranking has effectively spurred university improvement and the rapid growth of research. With difficulty these nations will prise open a small number of positions in the top 100. Eventually China will break through at scale. Global rankings are also meaningful in EU systems striving to narrow the gap with the United States. But ranking is not a universal driver. The world standard does not help developing countries. It is too far beyond their reach. Until a nation has the economic capacity to sustain a broad scientific infrastructure, it should use regional rankings and local benchmarks to drive improvement. Not global rankings. Despite this, global rankings hypnotize many policy makers in poorer nations. In 2008 the Deputy Prime Minister of Vietnam, a nation with a per capita income of just over $3000 USD, announced that Vietnam wanted a university in the top 200 by 2020. In twelve years. But ranking is a zero sum game. There could not be places in the top 100 or 200 for every emerging nation even if it was a fair competition. And it is not.

Many governments, like France, Germany and China, have increased inequality within their systems to push the strong universities up the rankings as fast as possible. But at the expense of the system as a whole. This is Ellen Hazelkorn’s criticism of rankings. Policy fostered inequalities are not caused by rankings per se. But ranking provides the goal, legitimation and targets of concentration.

The rational kernel of concentration policy is that nations need global research-intensive universities as centres of innovation. They do, but growing educational participation is also needed, and lesser status institutions need funds. The trend to greater inequality in higher education reinforces larger trends. Gini coefficients are

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31 See the discussion in U. Teichler (2011), op cit, pp. 64-66.
rising in most countries. Ten Latin American nations already rank among the 15 most unequal in the world. This is associated with high social inequality in access to education.\textsuperscript{34} You do not want to worsen it. Even from the neo-liberal standpoint greater system inequality is self-defeating. In weakening the common capability, it reinforces status closure and limits potential meritocratic competition from below.

**Where do we go from here?**

Where to from here? You might say that higher education experts merely interpret university rankings—the point, however, is to change them.

Ignoring global rankings is not an option. They are too potent. In any case, comparison is as basic a social function as any. It will survive and evolve in higher education. Cross-border comparisons will continue to fascinate people. We should want to influence those comparisons. I see three strategic questions for this gathering. The use of rankings data. The design of rankings. The strategic problem of Latin American higher education. These issues can all be connected.

First, the use of rankings. There are two social justifications for comparison and rank-ordering in higher education. To provide useful information, and encourage improvement. Global rankings help to guide capacity building. Social participation in education, and research, should both be evaluated in absolute and comparative terms. We need to know whether an institution or system has a strong presence within the world circuits of knowledge exchange. This affects the economic, social and demographic potentials of cities and nations, including their capacity to impact global conversations and resource flows. In future only those nations, languages and cultures that help to make the world are likely to flourish at home. Even so, rankings should not holistically dictate priorities. Rankings are ‘under-complex’. Many activities of value are not included.\textsuperscript{35} To strip back those activities simply to boost the rankings indicators is to lose control of not just policy but identity.

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\textsuperscript{34} This is partly because of the unusually regressive structure of the taxation and government spending equation. See OECD (2011), *op cit*, p. 86 & pp. 91-93.

And ranking should help to build capacity, not undermine university standing and confidence. The right comparisons at the right time. It must be said that universal rankings of the ‘best universities’ based on a weighted index are not helping Latin America. The universities of the region need different comparisons. It is impossible to block global rankings but every effort should be made to reform those rankings, while supplementing them with more constructive regional approaches.

Second, the design of rankings. I have argued today that if rank-order is used the most useful are single issue indicators valid in social science terms. Single issue rankings are free of the manipulated character of weightings systems, where the rankers can shape the outcomes. The more single rankings the better. Even a single issue table based on a reputational survey tells us something important, as long as it does not pretend to be objective. A large number of single issue tables provides more information and de-authorizes the claim of any one indicator or set of indicators to normative status. Both Leiden and Scimago provide outstanding collections within their limits, offering a number of single ways to evaluate and rank-order large strong comprehensive research universities. UNESCO provides good global data on participation and reasonable data on education spending.

Composite rankings with little correlation between the elements stretch validity to breaking point. It is possible to know who has most citations in engineering research, the best co-publishing with industry, or the highest adult participation rates. A tricked up claim about who is best at ‘everything’ has no solid foundation. At bottom, best at everything means nothing. Reputation building for reputation’s sake, headline hunting for headlines’ sake.

Over time we should put pressure on composite rankers to disaggregate the indicators that compose their data sets. If they must provide a holistic ranking, they should also provide a ranking for every single indicator. This can educate the public in the limits of holistic rankings and the benefits of solid facts, and make transparent the processes of standardization and weighting where rank-order is shaped.

36 The same point is made by R. Holmes (2011), Leiden ranking: Many ways to rate research, University World News, 202, 18 December.
The U21 ranking of national systems provides separated rankings of resources, outcomes, environment and connectivity, alongside the combined table. Five rank orders not one. More data for policy makers.\(^{37}\) It could be further disaggregated.

At the same time, there is a limit to what reform of global rankings can achieve. The English language bias and science bias are impossible to fix. The under-representation of Iberoamerican universities—there are only six research schools in the world top 100 in their field—will continue. This is because by definition, only globally standardized disciplines and works can enter global rankings. Multilingual scholarship in the humanities, or works of art, cannot be reduced to universal measures like journal papers in genetics. Nor would we want them to be so reduced. The virtues of the humanities lie partly in their diversity, heterogeneity and incommensurability.

However, it is possible to devise rankings in languages other than English, and co-lingual rankings in areas where more than one language is used. This brings us to the third issue, strategy in Latin America.

**Is there scope for ranking within the region?**

One feature of global higher education is the growing integration at regional level. It is partly triggered by globalization—global convergence encourages larger pools of shared activity with near neighbours—and partly a reaction against globalization, or rather, against neo-imperialism in the global space. Like-minded universities and systems band together to join resources, sustain their distinctive identities and advance a global competitive position. Europe is far ahead of other regions but there is cooperation in Latin America, in the Association of Southeast Asian Nations (ASEAN), and in student mobility schemes in Northeast Asia.

In higher education and elsewhere, regional developments rest on four conditions. First, geographical proximity. Regions don’t function in the manner of cross-world

\(^{37}\) R. Williams (2012), *op cit.*
empires. They depend on large-scale contiguous movement. Second, cultural commonality, which grounds inter-dependence and identity. A common language or cultural tradition strengthens regional networks. Third, political will. The crucial ingredient. Neighbouring higher education systems must want to cooperate and strong government support is essential. All three factors are present in the European Higher Education Area.

The fourth condition is a common threshold level of socio-economic development. If there are wide disparities between national higher education systems the stronger systems must sink resources into capacity building the weaker systems. This can work up to a point but has limits. Southeast Asia is handicapped by unequal modernization, ranging from Singapore (per capita income $55,790 USD) to Myanmar ($1950). Over half the nations have less than $5000. Latin America is better balanced, with a large number of middle income countries. This favours regional action in higher education.

After more than a decade of cooperation in higher education and research, the European systems have evolved a counter-approach to global rankings. The first step was the continent-wide system of classifying higher education institutions, U-Map. It groups institutions according to six dimensions: teaching and learning profile, student profile, research activity, involvement in knowledge exchange, international activity, and regional engagement. U-Map groups like institutions with like, enabling meaningful comparisons, while also valuing diversity of institutional mission and profile. This instrument maps and opens up the European higher education landscape. It also enables students, faculty, governments, employers and the public to focus on those institutional activities of most interest to them. U-Map rests on clear indicators and robust data collection in each dimension.

The second step is U-Multirank. This has successfully completed a two-year pilot in three disciplines and 150 higher education institutions in 50 countries. It is an

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38 IMF (2012), op cit.
instrument for comparing institutions in dimensions of activity identified in U-Map. Indicators on teaching, research and international activity have proven largely unproblematic. Knowledge transfer, regional engagement, graduate employability and non-traditional research have been challenging. In the domain of teaching, U-Multirank depends on subjective data with limited value. But the system is on track for full development across all disciplines and institutions, the second stage.\textsuperscript{40}

U-Multirank democratizes rankings. The data base is on the web. There is a large selection of single indicators. U-Multirank refuses to create a holistic rank-order based on its own weightings. Instead users design their own comparisons based on their preferred indicators. Rank order is determined by user purposes, not the ranking organization’s design and ideology. Institutions and programs can be compared only when missions and activity profiles are sufficiently similar to permit comparison. U-Multirank also provides data on all kinds of institution—single purpose colleges in medicine, business and the arts; technical and vocational training; local degree-granting colleges as well as global research universities. These features avoid most of the downsides of rankings. However, U-Multirank is less compelling and more complex than league tables, and confined to Europe. Alongside U-Multirank, Europeans will continue to access the global rankings.

You know more than I about the potential of regional approaches in Latin America and Iberoamerica. Something like U-Map and U-Multirank, done well, would generate much useful data. Single issue regional league tables in domains such as social inclusion, vocational training and research could spur improvement. The Estudio Comparativo de Universidades Mexicanas is an important development.

In regional comparisons and rank-ordering, the secret is to manage the inclusions carefully so the behavioural incentives are right. Institutions that specialize primarily in vocational training should be compared with each other not with UBA. Research tables should include all scholarship in Spanish and Portuguese and not just global science. Universities in the least developed systems should be

compared against each other not the region as a whole, so as to nurture rather
than inhibit their evolution.

In many respects the future is bright. Prospects are changing. At world level
educational participation is growing rapidly, driven by the absorption of pre-
capitalist sectors into modern economies, and rising social demand. Consider the
growth of the global middle class. According to the EU Institute for Security
Studies, between 2009 and 2030 the global middle class grows from 1.8 to 4.9
billion people. In one generation! In Latin America the middle class expands from
181 to 313 million and equals the middle class in US and Canada. And the new
middle class families will want higher education.

Research will also grow rapidly, powered by the innovation economy and the
competition state, the astonishing rise of science in East Asia, and global ranking.
The drivers of educational participation differ from the drivers of research. But it is
clear they will coincide in a great expansion of comprehensive universities. What is
less clear is the future regional character and global role of Latin American
universities. This depends on levels of investment, and on the right combination of
global engagement and strength, with local capacity and identity.

That future is in your hands. I honour you and wish you all good fortune in the
years to come!

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interconnected-and-polycentric-world/