

University World News

THE GLOBAL WINDOW ON HIGHER EDUCATION

GLOBAL

Improving Latin American universities' global ranking

Simon Marginson 10 June 2012 Issue No: 225

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We all value our own history and culture. But when the comparisons used for global rankings of higher education are made on the basis of one monocultural university and superimposed onto the full worldwide diversity, the history, culture and economics of every other system and institution becomes a source of disadvantage.

That is, unless we are born as Oxford or Harvard.

The raw fact is that in nearly all ranking systems, the Ibero-American world does not fare well, and Latin America does poorly.

Central and South America have 8.5% of the world's people. The region produced 8.7% of world gross domestic produce on a purchasing power parity basis in 2011.

But according to the Shanghai ranking, only 11 of the world's top 500 universities are in Latin America (2.2%) and only three in are in the top 200 (1.5%).

Despite the fact that 7% of the respondents to the 2011 Times Higher Education survey were from Latin America, there were just three Latin American universities in its top 400: two from Brazil and one from Chile – less than 1% 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 the University of Leiden and Scimago rankings. There are 10 Latin American universities or research institutes in the Scimago top 400 – 2.5%. Just 13 Latin American universities are among the 500 largest producers of scientific papers in the Leiden ranking of scientific output for the 2005-09 period, or 2.6%.

Latin America does a bit better on internet presence in the Webometrics ranking, with nine of the top 200 world universities, 4.5%.

Nearly all ranked universities are concentrated in four countries: Brazil, Argentina, Mexico and 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 also 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

The standout universities in the rankings are São Paulo and UNAM – Universidad Nacional Autónoma de México.

São Paulo is the eighth largest university producer of English-language science in the world, a 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 Ibero-American countries, and many non-English language journals are excluded from global databases. The brute fact is that while 11 languages have more than 100 million mother-tongue speakers, only papers in English can help a global citation ranking.

São 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 Education ranking but world top 70 on reputation alone. It is 20th in Webometrics.

São Paulo, UNAM and the University of Buenos Aires (UBA) gain in several rankings because of size. However, when it comes to competition for the top 100 positions in the Shanghai or Times Higher Education rankings, 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, which put the most resources into research.

What does this mean?

What does the eclipse of Latin America 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.

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%. Shanghai is 100% about research.

The normative ordering of the sector on the basis of research favours comprehensive research universities fluent in English, 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 and MIT 17. This is more than UNAM and UBA. They 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. No global ranking measures social impact, except for the participation and access indicator used in the U21 system ranking.

In a league table based solely on social inclusion, some Latin American universities would do better. However, there is a limit to what reform of global rankings can achieve. The English language bias and science bias are impossible to fix.

What to do?

The under-representation of Ibero-American universities – there are only six research schools in the world top 100 in their field – will continue. This is because by definition, only globally standardised disciplines and works can enter global rankings.

Multi-language 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.

Another factor that could help Latin American universities is growing integration at regional level. It is partly triggered by globalisation – global convergence encourages larger pools of shared activity with near neighbours – and partly a reaction against globalisation, 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 South East Asian Nations, 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 empires. They depend on large-scale, contiguous movement. Second, cultural commonality, which grounds interdependence 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 building the capacity of the weaker systems. This can work up to a point, but has limits.

Southeast Asia is handicapped by unequal modernisation, ranging from Singapore (per capita income US\$55,790) to Myanmar (US\$1,950). Over half of the nations have less than US\$5,000 as per capita income. Latin America is better balanced, with a large

number of middle-income countries. This favours regional action in higher education.

The European counter-approach to rankings

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, making possible 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 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.

U-Multirank democratises rankings. The database 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 organisation's design and ideology. Institutions and programmes 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.

Something like U-Map and U-Multirank, done well, would generate much useful data in Latin America. Single issue regional league tables in domains such as social inclusion, vocational training and research could also 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 specialise primarily in vocational training should be compared with one another, using an appropriate classification system, not with the University of Buenos Aires.

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 one another, not against 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 the United States and Canada. And 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.

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* This is an edited version of a longer paper, "Global University Rankings: The strategic issues", delivered as the keynote address at a conference of Latin American rectors at UNAM in May.