a shorter list with 3,000 researchers. This led to some minor changes in scores, but no great upsets.

The Russian Round University Ranking (RUR) uses data supplied by Thomson Reuters. Research and teaching are given equal weightings at 40 percent, with "international diversity" and "financial sustainability" comprising the remainder at 10 percent each. An interesting point about this ranking, which is not otherwise groundbreaking, is that each university's scores for each indicator are available. This could make it an interesting alternative in an otherwise crowded market.

ARE THESE CHANGES TELLING US ANYTHING NEW?

There is plenty of international evidence showing how universities seek to manipulate or (more politely) influence their data. Because faculty numbers are a key denominator for research income, research students, publications, staff-student ratio, etc., there has been a consistent effort to recategorize faculty according to contract and employment status. There are determined efforts to clean up any mislabelling around institutional affiliation. There is also strong evidence around universities' efforts to raise student entry selectivity criteria, with knock-on implications for student completions, employability, and salary levels. While sensational, these examples are still relatively minor in the scheme of 18,000 higher education institutions worldwide.

Despite these changes, it is not clear that the rankings are telling us anything we did not already know. Universities change so slowly that it is difficult to understand how the level of change portrayed in annual rankings can realistically be ascribed to the institutions themselves. Ironically, the problem of fluctuation threatens to obscure the converse problem: the relative uniformity of rankings. Despite the appearance of movement, rankings are remarkably consistent; different institutions may appear in slightly different order, but essentially the same institutions appear at or near the top in all rankings. This should not be surprising because rankings are essentially measuring the same—wrong—things.

The tenacious "black box" nature of rankings depends upon governments, students, and the public not understanding or questioning what is inside.

Citius, Altius, Fortius: Global University Rankings as the "Olympic Games" of Higher Education?

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Note: Citius, altius, fortius—Latin for "faster, higher, stronger"—is the official motto of the Olympic Games.

What's in a metaphor? There are many metaphors that can be, and frequently are, applied to global university rankings. From our perspective, there are many gamelike qualities to the global university rankings, and some notable parallels between these major academic contests and another key global competition: the Olympic Games.

Rankings, in parallel with the Olympics, are highly competitive, offering participants the potential to earn prestigious prizes or rewards, that can shape their prospects for the future in profound and quite tangible ways. For athletes, this may result in national and international fame and opportunities for lucrative endorsements. Similarly, universities demonstrating outstanding performance in the global rankings gain high international visibility; interest from desirable prospective students and faculty; money from private funding agencies, industry, philanthropists, as well as government.

THE GLOBAL RANKINGS "PLAYING FIELD"

Both the Olympics and the global university rankings pull together actors who share both an appreciation for the highest levels of performance on a worldwide stage, and a drive to compete to win. Not all entrants in these contests are created equal, however. To perform well in these elite international competitions, being smart and rich helps. Deep familiarity and experience with the rules of the game is also a key asset, as success often hinges on leveraging key strengths and minimizing troublesome weaknesses.

Furthermore, inherent attributes may also explain the success enjoyed by some countries in the Olympic Games, as well as in the rankings. For example, the list of medalists in specific sports often represents countries where there are good natural training conditions for those sports. The phenomenon of inherent advantage also plays out in the world of rankings. Most obviously, it is generally accepted that the world's English-speaking countries and institutions are in a much more favorable position (vis a vis the rankings), in comparison to those situated in the non-English-speaking world, because their academic systems already function in the global language of science, and are home to many of the top scientific publications, and the peer reviewers who control access to those publications.

THE MEDAL COUNT: GOING FOR THE GOLD

Rankings positions—just like Olympic medals—are a zerosum game. At the Olympics, there is only gold medalist, one silver medalist, and one bronze medalist. In the global rankings, the same holds true. There is only one #1 university, and only 100 institutions can be named to the top 100—even though, in reality, excellence is not limited to any specific number of academic institutions.

Some countries make substantial efforts to be serious contenders—both in terms of rankings and with respect to such major international sporting events as the Olympics—and spend a lot of money to achieve this goal. They name top performance in such arenas as a national priority and consider the achievements in these spheres to be important in terms of political dynamics, as well. Several of the university or higher education excellence initiatives in a range of countries—including China, France, Germany, and Russia—explicitly mention better performance on the rankings as a key goal. Marshalling resources to achieve greatness in a global competition of universities is not dissimilar to what we see as countries mobilize their sports teams to participate in the Olympics.

EXCELLENCE BEGETS EXCELLENCE: THE NEED FOR FEEDER SYSTEMS

Among the ranks of the world's most elite athletes, and among the world's top universities, it is rare for winners to emerge from weak systems. This puts a premium on cultivating entire systems, which ultimately enable elite performance to emerge. To obtain top positions in rankings, it is necessary to invest in top universities, but also in the broader academic system in which these most competitive institutions operate.

Why is this the case? The best national universities need to have a renewable supply of new academic talent. Similarly, to be competitive in the Olympics, a well-developed and adequately funded infrastructure supporting child development and youth sports must be in place. Furthermore, for strong universities to meet their full potential, they require a competitive environment in which to operate. Ideally, they need to be placed in a position where they must actively compete with other universities for students, funding, and faculty. Without the experience of a competitive environment at the local or national level, it becomes extremely difficult for institutions to be competitive at the international level. The same can be argued in the context of sports: the opportunity to practice with, and compete against, the best in one's field provides aspiring champions with essential opportunities to discover their weaknesses, hone their skills, and stretch to new heights.

The ability of systems to draw talent to them is another parallel that can be made between countries that do well in the Olympics and those with strong higher education systems. In the Olympics, national teams representing a specific country may include athletes (or coaches/trainers) who are originally from other countries, but who accept citizenship in the adopted country and join the national team as legitimate national players. Many universities around the world are similarly engaged in attracting top talent to their teams in an effort to improve their competitive standing on the global university rankings.

Rankings, in parallel with the Olympics, are highly competitive, offering participants the potential to earn prestigious prizes or rewards, that can shape their prospects for the future in profound and quite tangible ways.

LOST LUSTER: THE DARK SIDE OF THE RACE FOR GOLD

Sadly, there is a dark side to the competitions we see around us. From corruption in the world of professional soccer to the longstanding culture of doping in competitive cycling, including in the Olympics, there are clear examples that not everyone plays fair. So, while athletes may indulge in doping to enhance their performance, performance enhancing strategies in the world of university rankings could include publishing in fake for-profit journals that are mistakenly indexed in major databases, such as Web of Science and/or Scopus. Equally, it must be conceded that some of the ranking organizations are as focused on commercial gain as they are on objective measurement of the quality of universities.

Why does this kind of behavior take place? Achieving greatness in the rankings, as on the Olympic playing field, requires a decisive commitment to win, and the potential cost of failure may be enough to encourage contenders to do whatever it takes to secure a strong finish.

CITIUS, ALTIUS, FORTIUS—THE RIGHT MOTTO, THE WRONG GAME?

Faster, higher, stronger—who would not be moved by such an inspiring call to greatness? However, while the awarding of rank-order medals on the basis of performance on a given day during an Olympic competition may satisfy the world's top athletes, the evaluation of the achievements of the world's universities must extend beyond the tiers of a podium or the rank-order positions on a list. A university's commitment to pursue a path toward greatness—faster, higher, stronger—should rest on a deep understanding of the complex and multifaceted nature of the university itself, and on a sophisticated examination of how the institution can best foster both its own health and dynamism and that of the broader public good. These bedrock efforts must be allowed to unfold beyond the fanfare of lights and anthems, in thoughtful, steady, and sustainable ways. At the same time, there needs to be recognition that not all universities should focus on Olympic level competition, but rather should focus on providing access, educating students well, and serving local and regional needs. The rankings, like the Olympics, are the preserve of a small number of highly competitive contenders.

A Good National System of Higher Education: the Lessons of the U21 Rankings

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It is the nature and quality of the higher education system as a whole, not just that of research intensive universities, that matters for the economic, social, and cultural development of a nation. However, the international rankings

of universities are based heavily on research performance, largely ignoring teaching and training, scholarship, and community engagement. These rankings are influencing university behavior, especially in Europe, Asia, and Australasia, and act to reduce the diversity of higher education institutions.

In an attempt to move discussion away from institutions to higher education systems as a whole, in 2012 the U21 group of universities commissioned a project to quantify the performance of national systems.

THE U21 RANKING METHODOLOGY

In an attempt to move discussion away from institutions to higher education systems as a whole, in 2012 the U21 group of universities commissioned a project to quantify the performance of national systems. The coverage is all tertiary institutions, that is, all institutions that offer at least a twoyear program after final year schooling. Fifty countries are included, spanning the per capita income range from Indonesia and India at one end to high income developed countries at the other. Performance is evaluated over 25 variables grouped into four modules: resources, the policy environment, connectivity/engagement and output. The resource measures cover private and public expenditure as a share of GDP and expenditure per student. The policy environment measures include the degree of financial and academic independence of institutions, diversity of institutions, the monitoring of standards, and the views of business. Connectivity is measured by joint publications with industry and with international coauthors, web connectivity, surveys of business attitudes, and the relative importance of international students. The output measures include research performance, participation rates and the standing of a country's top three universities. Internationally comparative data are not available on the quality of graduates, but a measure of whether the mix and standard of graduates are meeting community expectations is provided by unemployment rates of graduates, relative to school leavers.

For each measure scores are standardized relative to the best performing country which is scored at 100. The measures are then weighted to give a score (out of 100) and rank for each of the four modules, and subsequently an overall score and rank. The overall score is obtained giving