# Where might we be headed?

## The key indicators: how to build success in a global university

CARL G. AMRHEIN, EDITOR, PROVOST AND VICE-PRESIDENT (ACADEMIC), UNIVERSITY OF ALBERTA, EDMONTON, CANADA AND SPECIAL EXECUTIVE ADVISOR, THE CONFERENCE BOARD OF CANADA, OTTAWA, CANADA

**The previous chapters present an overview of the recent history and present situation of university education in the countries covered. The goal of this book is to explore the role of international engagement in the affairs of universities, and assess how Canada fares on this world stage. Attention is on large, publicly funded comprehensive institutions. While the focus is on internationalization (or globalization in some cases), a number of themes have emerged that demonstrate the complexity inherent in public universities. Any single component, such as internationalization, is not easily separated from other components.**

As well as from the papers above, this chapter benefits from over 50 interviews conducted in China, New Zealand, Australia, Germany and Canada between October 2012 and September 2013. These interviews include

1. faculty, staff, students and administrators from various institutions (Universities, Colleges, Polytechnics, Fachhochschulen—or Universities of Applied Sciences (UAS) in Germany, and Research Institutes);
2. government officials in various ministries, embassies and high commissions;
3. leaders in not-for-profit agencies that support higher education;
4. leaders in industry; and
5. parliamentarians responsible for funding higher education in their respective countries.

A central challenge in any university is generating revenue (and managing the relationship between revenues and expenses). The changing patterns of public and private support, the different role of tuition (a private source), and different levels of tuition for domestic versus international students vary by country. Every country examined is currently facing, or has recently experienced, public discussions around funding:

1. the Brown report in the United Kingdom,
2. the challenges in various states in the United States since the recession took hold in 2009,
3. the recent decision by the Australian government to withdraw billions of dollars from the system after years of rapid enrolment growth,
4. the challenges examined in the recent report from the German Science Council, and the very recent discussion following national elections.

All of these situations are part of a set of worldwide discussions that question the value of higher education and the amount of public funding it should receive. Governments of all orders struggle with demographic changes, debt management and the rising costs of assisting aging populations.

In several countries, the financial discussion is part of a larger debate in which the usefulness of baccalaureate degrees in some disciplines is being challenged, and the very nature of the university is under intense scrutiny. Recently, in one day (September 7, 2013) there were at least four different items debating the value of a university degree in Canada's two national newspapers (*The Globe and Mail*, and the *National Post*) plus reviews of three new books (including the book by Derek Bok, the former President of Harvard, titled *Higher Education in America*). The volume of material appearing is sufficient that a new name for this genre of writing has been coined; it is now known as the "educational apocalypse"[1] genre of literature.

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No national system of PSE seems immune from pressure. Even in China, with the very large increases in funding for the national universities, institutions are struggling with legacy costs for retirees, very large loans for buildings and campus expansion, and a growing number of national mandates. While the infusion of new money is substantial, the even more rapid increase in expenses creates financial pressures.

Yet, as seen in the previous chapters, despite all of this doubt, national governments view universities as central to their ability to deliver on national priorities. How does all of this seemingly contradictory activity fit together? Part of the answer is found in which order of government has responsibility for which part of PSE. In many countries, the sub-national order of government (individual states, provinces, Länder) has responsibility for the operating funding and capacity of post-secondary institutions, while the national government has responsibility for economic growth and immigration policy. In addition, often sub-national governments are responsible for teaching, while national governments create research capacity. The following list highlights some of the issues raised.

[1] Chiose, *Vying for top marks in the 'educational apocalypse' category*.

**1. The role of national governments.** In every case except Canada, the role of the national government in the affairs of universities is central to their existence. Even in the case of Canada, Meekison describes the role of the Canadian federal government in the affairs of universities through on-going discussions, special targeted funding for research, student funding, tax policy, and (in a curious way) through efforts by the provinces to restrict the role of the federal government as much as possible.

The Canadian context remains anomalous, even when compared with countries operating under comparable constitutional restrictions on the role of the national government in education (such as Australia and Germany). More commonly, federal ministries are becoming more involved, for example organizing groups of institutions to advance specific national goals such as increased student immigration and the increased use of "matching" funding.

**2. The role of technology.** Technology affects virtually every aspect of a university's operations.

Over the past few years a great deal has been written about the Massive Online Open Course (MOOC). The MOOC is best seen as one option in a range of options that utilize technology. It is also seen by some as a means to reduce the costs of instruction. MOOCs serve a particular need in a distribution of approaches ranging from no use of technology (the professor speaking in the front of the class) to complete technology (total online delivery with no direct peer or professor contact with the learner). Blended learning may be the emerging pedagogy in which online MOOC-like content replaces large classroom lectures, but is then supplemented with different types of hands-on learning experiences involving peer-to-peer, and peer-to-mentor/professor activity. Such an approach creates greater opportunity for research activity to be integrated into courses.

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Technology appears almost everywhere in applications that involve research data (for example, from the collection and storage of research information from remote devices, to digital information capture, to refined measuring capacity). Over the past few decades, entirely new research areas such as data-mining and pattern recognition have been enabled by technology. It is difficult to enumerate the variety and number of ways in which digital information technology has had an impact on research. The availability of large volumes of inexpensive computing power has increased the speed at which certain types of research can advance. Digital environments also permit research to occur in large teams separated by large distances. Canada/China partnerships are common. Connecting teams through the internet is both common and much less expensive than travel (although ultimately it is a supplement to, rather than an adequate replacement for, face-to-face contact).

In the operations of the university, the use of social media has revolutionized how universities track events that have a reputational or operational impact on the institution. The Internet permits institutions to keep in touch with friends and alumni all over the world. Various digital broadcast technologies extend the reach of events on campus to the world, facilitating a near constant range of opportunities that enable an institution to be part of the lives of current, past, and prospective (future) students.

Many national governments see universities as obvious agents that can recruit talented young people to stay in the host country. But donor countries want the students to return home, and universities historically have been reluctant to act as immigration agents for their government. This tension places university international officials in a very difficult situation; caught between the needs of their country and their ideals of internationalization.

**3. The role of universities in immigration policy.** In many western countries, the approaching retirement of the post-World War II baby boom cohort, and the graduation of their children from PSE, is placing significant pressure on many sectors of the economy. Governments are struggling with the twin burdens of the cost of caring for the retirees, while at the same time anticipating the reduction in the number of wage-earners in their prime working years. Simultaneously, growing economies such as China, Brazil and India—none of which has a "boom-bust-echo" demographic pattern as western countries do—are trying to accelerate their development to an advanced economic state by educating large numbers of students overseas, and hoping these students will return home. To some this appears to be a perfect match in that governments need talented people and universities recruit talented people. Many national governments see universities as obvious agents that can recruit talented young people to stay in the host country. But donor countries want the students to return home, and universities historically have been reluctant to act as immigration agents for their government. This tension places universities' international officials in a very difficult situation; caught between the needs of their country and their ideals of internationalization.

**4. The role of universities in economic policy.** In a manner similar to immigration policy, governments of all orders increasingly look to the universities to convert the output of publicly-funded research into commercially viable activity. Government ministers often exhort universities to pay more attention to the immediate needs of the economy, particularly the labour market, and to align efforts with stated government priorities. Universities often counter these comments with explanations about research pipelines and the length of time needed to commercialize research findings. Universities, in turn, ask industry to assume a greater role in commercialization. In countries such as Canada, this seems to be a particularly touchy point, with frequent reports suggesting that industry is the weak link in the commercialization supply chain, not the universities.[2] It is a broadly accepted fact that private sector investments in R&D in Canada have fallen behind the countries with which Canada competes.

[2] The Conference Board of Canada, *The State of Firm-Level Innovation in Canada*, 2. Council of Canadian Academies, *Innovation and Business Strategy*, 59.

There is a parallel argument that relates to teaching programs. It is common to read about the mismatch between the immediate needs of the labour market, and the enrolment patterns in university programs. Some argue for a reallocation of enrolment capacity, while others argue for mandatory courses on entrepreneurship. Some argue for internships and international experiences, while others argue that every program should be linked to work experience. The debate is intense, and challenges the academy to review at a foundational level the basic assumptions that support the structure of the baccalaureate degree.

**5. The centrality of universities in the thinking of national governments.** Prior to World War II, governments tended to view universities as important but elite institutions. A secondary school credential, perhaps with some additional vocational-school training or apprenticeship experience, was the common level of education needed to drive the economy and enable access to the middle class. In the west, commercial innovation often emerged from company laboratories. In the US, companies such as Westinghouse, General Electric, General Motors, Ford, American Telephone and Telegraph, and United States Steel generated waves of innovation. Each western economy had its list of innovators. During the war, governments began to turn to their universities to create new technologies in support of the war effort. Institutions such as MIT in the US grew dramatically and emerged from the war as research centres of excellence (before the war, MIT was a small technical institute serving local needs). The post-war period saw rapid "supply-side" expansion of publicly-funded instructional capacity, and a new partnership between university research and national defense. The end of the Cold War saw a new pattern established of universities as sources of commercially viable discoveries. This pattern accelerated rapidly after the passage of the Bayh-Dole Act (or Patent and Trademark Law Amendments Act) in 1980, which clarified the ownership of intellectual property arising from government funding. The provisions of this act were adopted, in various forms, across the western world.

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As the need for employees with advanced training grew, governments began looking to the post-secondary institutions as the source of supply. By the end of the 20th century, international competition put pressure on the profit margins of corporations, and in-house training and research was reduced. In response, governments and industry began to assume that universities would fill the gap. The transfer of responsibility from industry to universities went largely unnoticed. In some countries, such as Canada, the transfer of responsibility seems complete and difficult to reverse. Many companies now argue that they should not invest in advanced skill sets for employees that may leave for another company. In other countries, such as Germany, this transfer is far less advanced, with large companies still investing in employ-

ee development and many small and medium-sized companies partnering with post-secondary institutions of various types.

The question about investing in advanced training and research skills is more complex when citizens of other countries are involved, citizens that may return home. As international enrolment increases, the debate about who pays for education and who has access to research projects intensifies. National—not just company—interests enter the discussion. At times, national security concerns also enter the conversations, placing university officials in complicated situations that require not only a response to national government concerns, but also the protection of the autonomy and academic freedom of faculty, staff and students—regardless of the home country.

Many students in the traditional social sciences and humanities express a desire to start a company, and consequently ask for training in topics such as entrepreneurship. Increasing numbers of students (although still a small percentage of the total) graduate from a traditional university degree and then enroll in courses that teach basic skills in accounting, marketing, and communications.

**6. The changing demands of students: hands-on, engaged, experiential learning with an integration of teaching and research.** In many societies young people expect to change jobs several times before retirement. This is in contrast to the employment stability enjoyed by their parents, and especially their grandparents since 1945. There are now warnings that people graduating from degree programs today should expect to earn less in their lifetimes than did their parents. Given the looming labour shortages it is not always clear why this is the case, but students have heard the message, right or wrong. Many students in the traditional social sciences and humanities express a desire to start a company, and consequently ask for training in topics such as entrepreneurship. Increasing numbers of students (although still a small percentage of the total) graduate from a traditional university degree and then enroll in courses that teach basic skills in accounting, marketing, and communications. Some see this trend as a failure by the universities. Others see the trend as student-driven and healthy, although there are worries about the length of time required between secondary school graduation and entry into the permanent workforce.

Institutions are straining to deliver the new programming requested by students; programming that is often much more expensive than the old model of large lecture sections. At the same time, with growing numbers of international students paying higher tuition than domestic students, there is growing demand (from students and their funders) to provide special programming (such as English language programming in speaking and writing) designed to help international students improve their chances of success. The end result is a set of financial pressures that strains programming budgets and shifts some of the agenda from revenue to costs.

*7.* **Competition within national systems, and the ranking game.** Institutions struggle to meet the many demands they confront. Other than private donations, the source of incremental funding is often students willing to pay

higher tuition. These students are usually found internationally. To succeed in recruiting these students, universities have become very aware of what the "competition" is doing. Competition for students is fierce in some jurisdictions and stories about elaborate facilities in student residence halls have been widely publicized. Rather than specialize, many institutions have decided to try to be comprehensive or, as in the case of Australia, forced to be so by government decree. In context of Australia's intervention most governments have been reluctant to intervene directly and allocate responsibility for specialized programs to specific institutions.

The most commonly used tools in this competitive environment are international rankings. But international rankings create an environment in which everyone is judged on the same small number of variables, often reflecting research output, faculty credentials, student characteristics and reputation, although not with equal weighting. Efforts to define specialized niches are not rewarded. Strengths are offset by weaknesses, and vice versa. Furthermore, agencies in other countries rely on these rankings to define an acceptable group of institutions that will receive funding to support students sent abroad, increasing pressure on institutions to compete for ranking positions.

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While the debate is ongoing, an increasingly common view is that rankings are harmful to the differential evolution of national systems, discourage innovation and risk, and neutralize strategy in favor of an institutional mono-culture. Rankings are nevertheless important since so many government agencies around the world use the league tables to allocate "performance funding" opportunities. There is, as a result, a complex feedback loop surrounding the worldwide system of universities. Universities need international students and the revenue they bring, and government funding for international students is often limited to groups of institutions defined as "high achieving" by certain international rankings. To succeed institutions have to do well in the international rankings, and internal decisions are made accordingly. Governments are reluctant to interfere in the internal operations of the institutions, so there is little countervailing influence to that of the organization doing the ranking.

The end result is that international rankings, often created for purposes related to selling advertising rather than improving education, have a surprisingly large influence on institutional decision making. If there is value in providing a range of differentiated programming alternatives to students in a national university system, then the rankings are harmful. Efforts to provide a more student-useful set of rankings face a surprising level of opposition. Similarly, efforts to shift from ranking methodologies based on inputs to methodologies based on student outcomes have become mired in debates about data and measurements.

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**8. Formation of coalitions between national governments and subsets of post-secondary institutions.** Given the importance of international students and partnerships to the ability of governments to advance their agendas, it is not surprising that there is a noticeable trend that involves national governments working with subsets of their PSE institutions on the world stage. Australia is a prominent example of effective government-institution collaboration. Canada is prominent for the absence of such collaboration. The contrast between Canada and Australia is all the more informative given the similarity between the two countries in terms of size, population, history, economy, constitutional structure, and educational structure at the post-secondary level. As the international arena becomes more competitive and western governments come to rely more on international students, it is inevitable that governments will become more engaged. Successful coalitions between governments and their institutions may become a critical variable in national prosperity. Australia seems to have this figured out across the range of higher education. Other countries have special-purpose arrangements that serve national interests well. For example, France has its elite engineering and civil administration schools, Germany has its overseas exchange service and its network of extra-university research agencies (the Max Planck Society for the Advancement of Science, the Helmholtz Association of German Research Centres, the Fraunhofer-Gesellschaft, and the Gottfried Wilhelm Leibniz Scientific Community), and China has the China Scholarship Council. Countries with a relatively weak level of national government involvement in the affairs of the universities may be at a disadvantage in the competition for talented people.

There is an additional component to this process that relates to social equity. The countries represented in this book have set ambitious targets for higher levels of participation in post-secondary education. So far this has been discussed as an economic strategy. As a social equity strategy, or as an unintended consequence of the economic strategy, this trend creates a new financial pressure on society. Since rates of participation for the upper class and most of the middle class are already as high they can reasonably be, the new targets will have to increase participation in the lower economic classes. Meeting such a goal will increase the cost of financial aid to such an extent that it cannot be simply fixed by tuition fee policy and tuition set-asides.

## Conclusion

Are there any clear conclusions to be drawn from this list of challenges and pressures? Can an answer of some sort be offered to the question in the title of this chapter? What might the world of post-secondary institutions, especially universities, look like 15 or 30 years from now?

1. Few institutions in each country will survive to be effective global "players." As funding agencies insist on some league table performance, such as the "top 150 ," and new institutions enter the rankings, others will fall from the list. Governments will have to plan explicitly to make sure they have at least one institution on the premier list. Such national efforts will require an element of explicit public policy to enter national discussions. However, with or without government intervention, the evolution of globally engaged institutions will happen. Some governments will manage this evolution; others will simply watch it occur in systems other than their own.

Few institutions in each country will survive to be effective global "players."

2. The current pattern of flows of students into and out of various countries is not stable. The list of issues above does not take into account country-specific initiatives that will affect the number of students sent abroad. For example, the top national universities in China are working to introduce an English-language curriculum into their schools. They will be successful at the baccalaureate level just as they already are successful at the post-baccalaureate level. The evolution of English language programs will permit China to successfully recruit some of the very best academics from around the world. All of this is occurring at the same time that China faces a dramatic reduction in the number of university-age young people as a result of the maturation of the one-child policy. In short, China in the decades ahead will reach a point where it will no longer be sending so many of its students abroad.

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India, with a very different demographic forecast, is already English-based. The very successful growth and evolution of the India Institutes network of institutions suggests that, in due course, there will emerge a set of elite comprehensive universities. When this occurs, India too will become a recruiter of international students as well as a reduced exporter of students. With a low current participation rate that is likely to rise, India may be a major exporter of students for quite some time, but there will be a transition eventually.

Receiving institutions around the world will either have to develop new sources of students, perhaps from Africa and South America, or become smaller institutions since the domestic demographic forecasts for much of the west and Japan are not encouraging. Brazil and India alone may be able to fill the seats no longer needed by China for a number of years, but they too are building capacity in their own institutions. Globally engaged institutions, in the years ahead, will have to develop a two-pronged strategy:

Firstly, the institution will have to constantly plan for and develop the relationships and expertise necessary for the immediate term, the near term, and the long term. They might focus on China in the immediate term, Brazil and India in the near term, and perhaps Vietnam in the long term.

Secondly, as large systems like China, then Brazil and India, develop their own capacity, there eventually will be a reduction in the total number of students moving around the world from these countries. "Eventually" may be several decades in the future as participation rates rise. However, some of the most successful international strategies today represent efforts that began many decades ago. For example, the German Academic Exchange Service (known as the Deutscher Akademischer Austauschdienst or DAAD) has built and maintained relationships since it was founded in 1925. The second characteristic of institutions that will be successful in the long term will relate to their ability to define specialized niches—areas of expertise in which they are among the top dozen in the world. With such an identity, governments and their agencies will see value in sending students to such an institution to stay up-to-date. Efforts at creating this identity should start now.

The current flow of professors among countries also is not stable.

3. The current flow of professors among countries also is not stable. For the same reasons listed above, the proliferation of English language programs and the availability of English-fluent colleagues will provide mobile professors many more opportunities to consider. Small changes in funding levels at home institutions will trigger mobility among certain professors. In addition, as the pressures to produce increase, successful professors will see value in having blended appointments in more than one institution. Such hybrid positions will provide professors with access to more equipment, more funding opportunities, more colleagues, and (critically) more students and post-doctoral fellows than will ever be available in one institution. With information technology, a professor can keep in touch with two groups far removed from each other in space (for example, India and Canada). These professors can be more productive, but the administrative challenges involved in such appointments are significant. Several institutions already permit such blended appointments.

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4. New forms of institutional arrangements will arise as institutions attempt to define themselves uniquely in a crowded global environment. This trend can be seen in examples such as the Warwick-Monash relationship (in which a new legal entity has been created ), the NYU-East China Normal partnership in Shanghai, and the recent announcement of Tsinghua University (one of the China Nine and one of the top two institutions in China) in London. All of the examples currently established are young and the final verdict on the success of these arrangements is not yet known. However, they are different from the traditional "campus abroad" model found in many places such as University City in Qatar, and they present additional challenges for government. For example, how do governments regulate off-shore extensions of domestic institutions? How do the quality assurance agencies of governments (such as Australia's Tertiary Education Quality Standards Agency) deal with these off-shore entities?

5. Public funding levels in the west that were common in the 70s and 80s will not be seen again as governments wrestle with the pressures of an aging population in an environment of international competition for talent, resources and jobs, and given the demographic transition discussed above. The cost of the aging post-World War II cohort, together with the declining domestic birth rate, will strain all western governments as well as Japan (and others). Accumulated levels of both public debt and current account deficits will limit government flexibility for some time. Pension deficits in the private and public sector will add additional stress. Whether there will be greater freedom for public universities to set tuition levels is unknown, but the pressure in the U.S. to deal with student debt is likely to define the debate. In short, successful global institutions will be successful in diversifying their revenue streams and containing expenses. Inevitably, cost containment will put pressure on the traditional form of the professoriate, in which every professor is deeply engaged in teaching, research and service.

Public funding levels in the west that were common in the 70s and 80s will not be seen again as governments wrestle with the pressures of an aging population in an environment of international competition for talent, resources and jobs, and given the demographic transition discussed above.

6. Students will want to study in multiple institutions of different types and in different locations, both within a country and internationally. National economies are becoming more tightly integrated into international economic systems. The best jobs will have a certain international component, whether through assignments abroad or by buying/selling with customers/suppliers in other countries. Globally engaged institutions will use a variety of methods to accommodate these students through hybrid degree programs of various types. A number of examples are already operating. Across the board, more institutions are creating more opportunities. Structural barriers to forming such partnerships will limit an institution's ability to innovate in this arena.

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7. As traditional lecture content becomes more universally available through technology, campus-based activities will have to be much more sensitive to the quality of the student experience. If what was the traditional in-class component of the learning is no longer location-specific, then non-classroom experience will come more and more to define both the student experience and the ability of institutions to attract students. Hybrid approaches that blend various types of learning experiences will offer opportunities that are not so widely available. Engaged scholarship, experiential learning, research experiences, entrepreneurship opportunities, internships, co-op placements, and work-study arrangements will play an important role in defining the attractiveness of an institution. International experiences will be very important in this mix. The ability of a student to spend a significant part of a program experience abroad will be a distinct advantage and will be seen to provide important skills that are attractive to employers.

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In summary, a complex world confronts post-secondary institutions. Institutions that are constantly scanning the world and are both nimble and quick to evolve will survive and perhaps prosper. There will not be time for long discussions that span years. Students and faculty will move quickly. Institutions will not solely be defined as campus-specific, but also by the type of experience offered to students. Many will try to change, but many will not succeed. Some, perhaps most in some countries, should not try. There will be a small group of global institutions in each country, and this group will be supplied by, and will draw upon, a much larger group of feeder institutions. This is already a reality in some countries and this pattern is likely to appear in more and more countries in the years ahead.

There will not be time for long discussions that span years. Students and faculty will move quickly. Institutions will not solely be defined as campus-specific, but also by the type of experience offered to students.

While the specifics of this forecast will vary, the basic conditions on which it rests are already present in most countries. Which institutions move into the premier league will be heavily influenced by the talent and the flexibility of their academic leaders and professors, and the ability of the administrative team.

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