Research & Occasional Paper Series: CSHE.5.14
CSHE | Center for Studies in Higher Education
UNIVERSITY OF CALIFORNIA, BERKELEY
http://cshe.berkeley.edu/

PROFILING THE FLAGSHIP UNIVERSITY MODEL:
An Exploratory Proposal for Changing the Paradigm From Ranking to Relevancy*

April 2014

John Aubrey Douglass
UC Berkeley

ABSTRACT
It's a familiar if not fully explained paradigm. A "World Class University" (WCU) is supposed to have highly ranked research output, a culture of excellence, great facilities, and a brand name that transcends national borders. But perhaps most importantly, the particular institution needs to sit in the upper echelons of one or more world rankings generated each year by non-profit and for-profit entities. That is the ultimate proof for many government ministers and for much of the global higher education community. Or is it? It is not that current rankings are not useful and informative. The problem is that they represent a very narrow band of what it means to be a leading, or what might be best called a "*Flagship*" university within a region, within a nation. Further, WCU advocates do not provide much guidance, or knowledge, on what organizational behaviors and methods can lead to greater productivity in research, teaching, *and* public service that can best help universities meet the needs of the societies they must serve. In this essay I attempt to advocate the notion of the *Flagship University* as a more relevant ideal -- a model for public institutions, and perhaps some private institutions, one that could replace, or perhaps supplement and alter the perceptions, behaviors, and goals of ministries and universities in their drive for status and influence on society. It is a model that does not ignore international standards of excellence focused largely on research productivity, but is grounded in national and regional service, and with a specific set of characteristics and responsibilities that, admittedly, do not lend themselves to ranking regimes. Indeed, one goal here is to articulate a path, using the language of the *Flagship University*, that de-emphasizes rankings and that helps broaden the focus beyond research to relevancy and responsibility. Flagship Universities are research-intensive institutions, or in the process of becoming so, but have wider recognized goals. The great challenge for the network of universities that are truly leaders in their own national higher education systems is to shape their missions and, ultimately, to meaningfully expand their role in the societies that gave them life and purpose. The *Flagship University* profile explored here includes an outline of mission, culture, and operational features, and is intended as a possible construct for this cause.

Keywords: Flagship University, Research-Intensive Universities, University Management, Rankings, World Class Universities

It's a familiar if not fully explained paradigm. A "World Class University" is supposed to have highly ranked research output, a culture of excellence, great facilities, a brand name that transcends national borders. But perhaps most importantly, the particular institution needs to sit in the upper echelons of one or more world rankings generated each year by non-profit and for-profit entities. That is the ultimate proof for many government ministers and for much of the global higher education community. Or is it?

The relatively recent phenomena of international university rankings are fixated on a narrow ban of data and prestige scores. Citation indexes are biased toward the sciences and engineering, biased in which peer reviewed journals are included – (largely US and European, and the English language), and tilted to a select group of brand name universities who always rank high in surveys of prestige, the number of noble laureates and other markers of academic status.

* John Aubrey Douglass is Senior Research Fellow – Public Policy and Higher Education at the Center for Studies in Higher Education, UC Berkeley. A version of this study was presented at the Universitas21 Symposium - National Systems of Higher Education: Criteria for Evaluation, sponsored by Universitas 21 with assistance from Shanghai Jiaotong University, Shanghai, November 6, 2013, and a preliminary concept presentation "Considering the Flagship University: Changing the Paradigm from Ranking to Relevancy," at a meeting of the Higher Education Research and Advocacy Network in Africa (HERANA), Stellenbosch, South Africa, October 25, 2011. My thanks for comments and criticisms on earlier drafts by Marijk van der Wende, Ross Williams, John Hawkins, Ly Pham, Dan Julius, Nico Cloete, Cecile Hoareau, Richard Edelstein, Roopa Desai Trilokekar, Bjørn Stensaker, Igor Chirikov, C. Judson King, Ellen Switkes, and Ahmed Bawa. This paper is part of a cooperative CSHE and INCHER research project, *Research Universities Going Global*.

It is not that these indicators are not useful and informative. But government ministries are placing too much faith in a paradigm that is not achievable or useful for the economic and socio-economic mobility needs of their countries. They aim for some subset of their universities to inch up the scale of this or that ranking by building accountability systems that influence the behavior of university leaders, and ultimately faculty. Some of this is good, creating incentives to reshape the internal culture of some national university systems that have weak internal quality and accountability policies and practices. But it also induces gaming by university leaders and arguably is pushing institutional behaviors toward a vague model of global competitiveness that is not in the best interests of the nations they serve.

In the following, I attempt to advocate the notion of the *Flagship University* as a more relevant ideal -- a model for public institutions and perhaps some private institutions, one that could replace, or perhaps supplement and alter the perceptions, behaviors, and goals of ministries and universities in their drive for status and influence on society. It is a model that does not ignore international standards of excellence focused largely on research productivity, but is grounded in national and regional service, and with a specific set of characteristics and responsibilities that, admittedly, do not lend themselves to ranking regimes. Indeed, one goal here is to articulate a path, and the language of a *Flagship University*, that de-emphasizes rankings and that helps broaden the focus beyond research.[1] *Flagship Universities* are research-intensive institutions, or in the process of becoming so, but have wider recognized goals.

After a long period of governments and their ministries attempting to shape the mission and activities of universities, including various accountability schemes and demands focused on the normative World Class University (WCU) model, we need to enter a period in which institutions themselves gain greater autonomy and financial ability to create or sustain an internal culture of self-improvement and evidence based management. The great challenge for the network of universities that are truly leaders in their own national systems of higher education is to shape their missions and ultimately to meaningfully increase their role in the societies that gave them life and purpose. The *Flagship University* profile offered here includes an outline of the mission, culture, and operational features and is intended as a possible construct for this cause.

A. How Rankings Came to Determine World Class

A direct correlation exists between the emergence of international rankings of universities and the pervasive rhetoric and obsession with the WCU status. Building on a model first ventured by commercial rankings of colleges and universities in the U.S. as consumer guides for prospective students, international rankings based on similar formulas made their appearance around 2004.[2] As government ministries focused increasingly on universities as a path to economic development and their self-assessed need for some collection of top, research-intensive universities, they quickly embraced rankings as a quantifiable source for assessing the place of their universities in the global marketplace.

University administrators and academic scholars have also embraced the language of WCU and the focus on rankings, essentially reinforcing a paradigm that, as noted, focuses on a narrow band of activities, largely international measures of research productivity. [3] In my view, campus rankings are not all bad, but none are particularly good – whether it is a commercial enterprise or a university think-tank doing world rankings, or a government entity borrowing from such enterprises to create their own national ranking schemes. If you subscribe to the notion that the methodology is hopelessly inadequate, biased, and overly influential, then the answer for institutions not landing in the top ranks of, say, the widely cited Academic Ranking of World Universities ARWU: more rankings.

Dissatisfied with the poor ranking of Russian universities, the Russian Federation created its own world rankings that placed Moscow State University fifth, just ahead of Harvard University and the University of Cambridge. Consternation over the poor showing of French universities, and Europe in general relative to the UK and the US, led to a European Commission supported effort at ranking that would be "more objective and more favourable to European universities." (Is it a coincidence that the Time Higher Education (THE) rankings regularly places a number of British universities higher than in other world ranking products?). Known as the "Multi-Dimensional ranking of higher education institutions," or U-Multirank, the effort by the European Commission is largely intended as a consumer guide for prospective students.[4]

Commercial enterprises like Thomson Reuters have also attempted to have a larger presence in the rankings market, again with an eye to the information desires of students attempting to evaluate where they should apply and enroll, This is the significant and lucrative market that *US News and World Report* originally carved out in the US. Thomson Reuters' Global Institutional Profiles Project plots to generate university profiles using multiple aspects of a university mission as a tool for consumers and governments. It includes results of Thomson Reuters' Annual Academic Reputation Survey used in the THE rankings, data provided by universities, along with bibliometric data from the Web of Science. [5]

Widely acknowledge biases in world rankings have led to searches for alternative models. The international consortium known as Universitas21 seeks to rank the overall performance of national systems as opposed to individual campuses. This effort does not profess to find the "one best system," but adds to our understanding that the national context is important, including relative investment rates in higher education and research publications in relationship to a country's population (Williams *et al* 2013). Using many of the variables used by other international rankings (like citation analysis), plus new ones like "connectivity" (an analysis of on-line interactions and similar evidence of links with the global world), the results provide a contrary view of quality and productivity. And what are the top five countries in terms of overall performance: the United States, Sweden, Switzerland, Canada and Denmark.[6]

Figure 1 – A Consistent Bunch: Times Higher Education (UK based) World University Rankings 2013

1. Caltech
2. Harvard University
3. University of Oxford
4. Stanford University
5. MIT
6. Princeton University
7. University of Cambridge
8. UC Berkeley
9. University of Chicago
10. Imperial College London
11. Yale University
12. UCLA
13. Columbia University
14. ETH Zurich
15. Johns Hopkins University
16. University of Pennsylvania
17. Duke University
18. University of Michigan
19. Cornell University
20. University of Toronto
21. University College London
22. Northwestern University
23. University of Tokyo
24. Carnegie Mellon University
25. University of Washington

Source: *Times Higher Education*/Thomson Reuters World University Rankings

Universitas21's national rankings are a welcomed alternative and provide a nuanced view. Yet the global campus rankings computed each year by the THE-World University Rankings and the ARWU clearly have the market advantage in influencing ministerial and campus behaviors. The singular institutional ranking regimes are not overly complicated, creating an "accountability" tool that is hard to displace.

There are other problems with current campus rankings regimes that are important for this discussion. Besides being methodologically suspect, global rankings generate unachievable goals for the vast majority of aspiring universities. The top 10 to 25 universities in almost all the recognized world rankings have changed very little over the past decade, and they will likely not change that much in the future. It's a consistent bunch (see Figures 1 and 2) among the current crop of highly cited ranking efforts.[7] My purpose here is not to engage in a long discussion on the biases and inadequacies of these and other institutional ranking efforts, but it is worth noting the dominance of the US and the UK in academic journals (see Figure 3).[8] The heavy concentration of journals and their citation impact is a reflection of the historical strength of research universities and the dominance of English as the *lingua franca* of academia. As the use of English in the classroom and in research publications expands where English is a second language, this dominance in the location of journal publications may change over time. But clearly, it still provides an advantage for Anglo universities in the ranking game and stability in the rankings in the near- and perhaps long-term.

Figure 2 – A Consistent Bunch: Shanghai Jiaotong Academic Ranking of World Universities 2013

1. Harvard University
2. Stanford University
3. UC Berkeley
4. MIT
5. University of Cambridge
6. CalTech
7. Princeton University
8. Columbia University
9. University of Chicago
10. University of Oxford
11. Yale University
12. UCLA
13. Cornell
14. UC San Diego
15. University of Pennsylvania
16. University of Washington
17. Johns Hopkins University
18. UC San Francisco
19. University of Wisconsin
20. ETH Zurich
21. University of Tokyo
22. University College London
23. University of Michigan
24. Imperial College
25. University of Illinois

Source: Academic Ranking of World Universities 2013

Assuming that a WCU is an institution that ranks among, say, the top 50 or even 100 universities on some recognized world ranking, then it is a zero sum game, analogous with rating universities on a bell curve. Yet many governments and many universities strive for the WCU status under the assumption that the current ranking systems will decipher that moment in time.

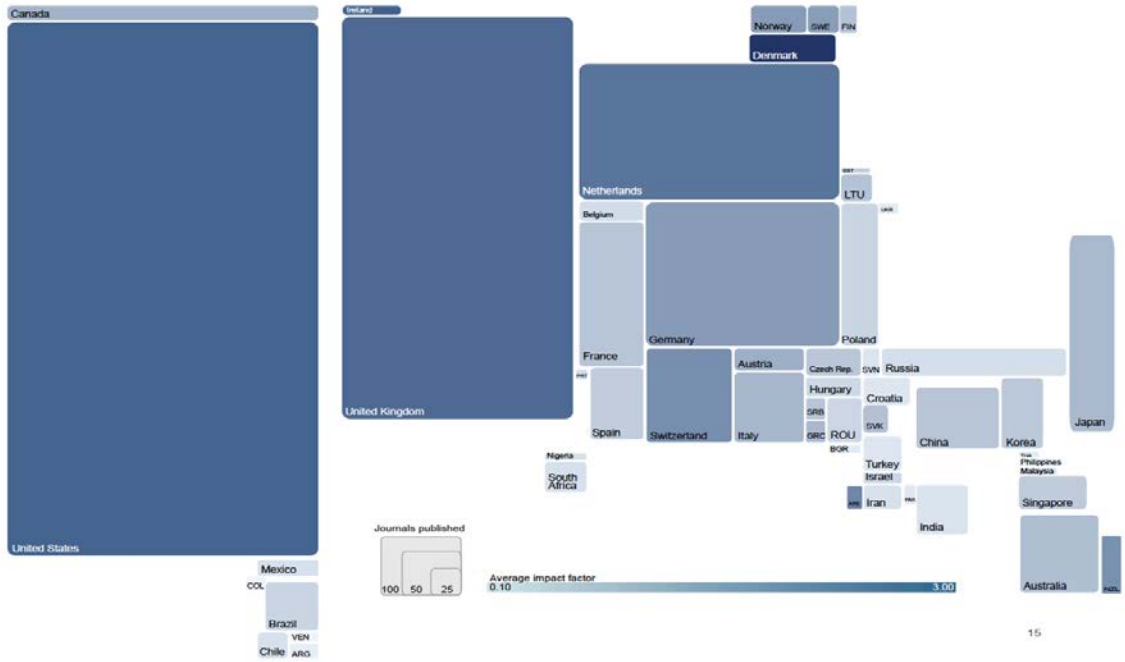
European governments complain that there are not enough European universities in the top 50 and many are spending money to do something about it. There is also a sense by governments of failed potential, or what has been called by the European Commission as the *European Paradox*: "whereby Europe has the necessary knowledge and research, but fails to transfer this into innovation and enhanced productivity and economic growth (van der Wende 2009)."

To encourage greater engagement with the economy, and improve rankings, Germany's federal Ministry of Education and Research launched a widely publicized national competition to identify about 10 among its 104 universities with the potential of becoming elite universities – the Excellence Program with an initial budget of €1.9 billion.[9] Under French President Sarkozy, and recently extended by President Hollande, France has a similar initiative to help boost the research productivity of the national universities. Despite plans to cut some €50 billion in general government spending over three years, Hollande pledged €2 billion for the creation of new regional university research centers as part of a second wave of '*Initiatives of Excellence*', or Idex (Marshall 2014).

Having helped to fuel the ranking frenzy, China plans on having 20 top universities that match MIT in productivity and prestige. In Africa, Nigeria hopes for 20 WCU's by 2020[10]; Sri Lanka wants at least one world-class university. Japan's ministry of education (known as MEXT) has a target of 30 universities becoming 'world-class' institutions (beyond the University of Tokyo) and with five in the top 30 global ranking and at least one breaking the top 10 mark.[11]

In 2013, and with slightly more sober expectations, the Russian government announced a plan to have at least five of its National Research Universities be in the top 100 WCU by 2020. They have designated which ones, besides Moscow State University, are to achieve this goal, providing (like Germany and others) special financial subsidies: Tomsk Polytechnic University, the Higher School of Economics - Moscow, the Engineering Physics Institute, the Moscow Institute of Steel and Alloys and the National Research University of Information Technologies, Mechanics and Optics.[12]

Figure 3 – Location of Academic Knowledge: Journals by Country and Citation Impact



Source: Graham, M., Hale, S. A., and Stephens, M. (2011) *Geographies of the World's Knowledge*, London, Convoco! Edition.

However, ambition cannot outpace reality if rankings in the shape of a bell curve are the standard. As the ranking competition has heated up, universities in some parts of the world have not only attempted to game the system via key faculty and sometimes temporary recruitments just in time for a government ranking exercises (a known practice in England), manipulating data, or seeking international students with on average higher standardized test scores (as in the US). There is some evidence that reporting on student-to-faculty ratios by US universities and colleges is becoming increasingly unreliable – a major factor in the US News and World Report college ranking. There is also speculation that some rankings agencies have been offered remuneration to help a university creep up a bit higher.

The construction of international and national campus ranking regimes that are largely similar has led to the question, and subsequently advice, on how to achieve the WCU status. Perhaps no agency has been more engaged in advocating the value and proper path than the World Bank,[13] although a small industry of various associated consultants has emerged, even a biennial conference on how to get there.[14] So what defines a WCU? According to the World Bank, and others, there are three rather generic but informative traits: a *high concentration of talent* (faculty and students), *abundant resources*, and a *favorable governance organization with a high level of autonomy.*[15]

Indeed, these are important, but they are not sufficient unto themselves.[16] While influencing government ministries in budget allocations and "excellence" initiatives, in relatively new national accreditation regimes and various accountability demands, and,

of course, the behaviors of institutions, there is increased recognition of the inadequacy of the WCU paradigms. It remains largely a model driven by a set of preferred outcomes (generally, citation indexes heavily weighted to STEM fields + research income + Nobel or other internationally recognized research awards + oftentimes, reputational surveys) and vagaries on how to achieve them (see Appendix 1 for one outline of what an institution needs to have to emerge as a WCU). Further, WCU advocates do not provide much guidance, or knowledge, on what organizational behaviors and methods can lead to greater productivity in research, teaching, *and* public service activities that can best help meet the needs of the societies that universities must serve. To some degree, the WCU audience is those universities, and officials in national ministries, who rank poorly; certainly, the advocates garner little interest from the research universities with the greatest productivity. And the advocates are largely outsiders peering into the workings of major research-intensive universities, seeing certain productivity outcomes and making some general observations, yet failing to attempt to decipher the culture, organizational behaviors and building blocks to achieve their advocated goals: higher rankings.

Even the initial proponents of the WCU model are recognizing its inadequacies and worry over its perhaps unexpected influence.[17] In an earlier 2006 analysis of the WCU movement that is still relevant today, Henry M. Levin and his co-authors noted one concern: "The subjective nature of world class status means that institutions will attempt to address those dimensions that are considered in assessing reputations and that are visible. In this respect, research activity, publications, citations, and major faculty awards are highly visible and measurable while the quality of the educational process is not." More recently, Marijk van der Wende has noted a desire for the inclusion of the quality of teaching" (van der Wende 2014). And more recently, two proponents, Phil Altbach and Jamil Salmi, while noting "different pathways" to WCU status and caution regarding overzealous national efforts and a narrow focus on rankings,[18] state that such institutions should be embedded in some form in local and national needs–although what this might mean remains vague.[19]

Ministries pouring funding into special initiatives intended to induce higher research productivity and higher scores on citation indices might also take heed of one conclusion by those studying how universities can achieve WCU status: it seems that most nation's without a highly ranked university will find the fastest path toward having one by starting a new institution from scratch, rather that attempting to shape, and fund, existing ones.[20]

Despite the complaints and words of caution, the reality is that the ranking and accountability regimes are here to stay in some form. Most national systems are transitioning to performance-based funding and often large-scale restructurings that include mergers of institutions (van der Wende 2014; Estermann *et al* 2013). For ministries concerned with the overall quality and efficiency of their national higher education systems, rankings provide some form of internationally recognized evidence of the effects of these and other reforms; at the same time, rankings are also driving the behaviors of universities and the policies of these ministries who now yearn to have many or at least some of their national universities in the top tier of WCU.

In part induced by the ranking anxiety, many of the "excellence" initiatives are having positive influences on the resources and the culture of national universities, largely because they are competitively distributed and are generating new initiatives by universities and their faculty. More funding, more competition, that is all good. Yet, as argued here, there is room for more innovative and broad thinking on what a leading university might or should be, indeed a thirst for an alternative or revised conceptual model. At least among a cadre of leading national universities, might the ranking paradigm, and the sometimes narrow thinking and gaming it is inducing, be amended?

B. The Origin of the Flagship Idea and Modern Adaptions

The notion of a public *Flagship University* relates to the early development of America's higher education system in the mid-1800s that, essentially, was a mix of influences including a devotion to the English tradition of the residential college, and the Humboldtian model of independent research and graduate studies. Academic research would, in turn, inform and shape teaching and build a stronger academic community.

These European traditions fed into the development of a very American public university model that sought relevance by advancing regionally and statewide socioeconomic mobility and economic development. This is the added element that made the *Flagship* model more practical, more engaged in society. The public universities that emerged in the mid- and late-1800s in mid-western and western states exuded a particularly American model of the public university and provided the foundation for America's subsequent pioneering effort to create the world's first mass higher systems – supported primarily by state government coffers. Historically in the US, this model included a number of unique characteristics:

- Access: The idea of creating public universities that would be open to a wide range of citizens from different economic, social and geographic backgrounds – and a marked contrast from an array of private colleges and universities that were

linked to sectarian communities and social classes. In the words of one famous 19th century advocate, the *Flagship* public university needs to provide "an uncommon education for the common man [and women]."

- Engaged Economic Development and Public Service: These universities would be comprehensive institutions, with academic programs in traditional liberal arts fields *and* programs with a direct link with local and regional economies. Both teaching and research in areas such as agriculture and engineering, along with extension programs providing outreach and educational programs and services to farmers and local businesses, would help fuel economic development and socio-economic mobility.

- Leadership: Public universities also had a responsibility to help set standards and develop other sectors of a state's evolving education system – from the elementary and secondary schools, to other public tertiary institutions. Throughout the US, state and local governments had the responsibility to build their education systems, and most initially invested in "common schools" (what today are elementary schools) and in one or more universities and colleges for teacher training, but not in secondary schools. State *Flagship Universities* became central players in helping to develop the public high school, in part out of self-interest to help generate students to enter the university, but also as part of their assigned role to increased educational attainment rates.

The use of the word "Flagship" to describe a university emerged in the late 1800s in the U.S., drawing on the nautical term in which the flagship or lead ship in a navy provided the primary means of coordinating naval maneuvers by an admiral or his staff. As US states developed a network of public colleges and universities, most designated one institution in the leadership position, eventually using the term "Flagship."

In the eastern seaboard, where the US population had first settled, private institutions tended to dominate and their development of public higher education was latent. Few established *Flagship* universities. In the Midwest and throughout the West of the US, however, states rushed to create new educational opportunities and established public universities committed to expanding access.

States had and still have the responsibility for organizing and coordinating their education systems; there is no equivalent power at the federal level in the US of a higher education ministry found in most other parts of the world. But the push toward the *Flagship* model had an extremely important impetus from Washington. In 1862, and in the midst of the Civil War, Congress passed and President Lincoln signed a bill entitled the Agricultural College Land Grant Act. It offered the one thing the federal government had lots of: land largely in the expansive West, given to each state to sell and generate income to establish or build existing universities, specifically degree programs and research that would support local economies.

Without excluding "classical studies," military training, and other scientific fields, the largess was, "to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Admittedly, the historical role of major public universities supporting and providing leadership for other education sectors in a state has waned. But I do think this ideal has important relevance for other parts of the world – particularly in developing economies and where higher education systems are undergoing dramatic reforms and increased access.

Perhaps influenced by the US, the notion of a *Flagship University* has emerged on occasions in other parts of the world. In the post-World War II era and into the 1960s, the South Korean government established what it called "Flagship National Universities" in each of its eight provinces and two independent cities. In this era of nation building following independence, and for a time in the midst of the Korean War, most of these institution where the result of mergers of existing, smaller regional colleges. Today, each of these ten institutions have medical schools and other semblances of public service, and like other designated national universities in Asia they have the most competitive entrance exams. But there is no clear description of what a *Flagship University* should be. Indeed, the language of a *Flagship University* in South Korea largely disappeared after 1968.

Borrowing to some degree the *Flagship* concept, some European nations, in particular Hungary, explored using this language to distinguish a number of universities. But an inherent political and organizational challenge of designating one or more existing institutions as leading and perhaps favored university, particularly within the context of a national system with politically powerful universities with thus far equal claim on public funding, essentially ended the reform drive. The need for mission differentiation, and with only a select few research-intensive universities adequately funded, is widely understood by ministries and those who

study higher education systems. Yet achieving this, either as a government directive as originally attempted in Hungary, or indirectly by competitive and selective funding of certain institutions, is difficult to achieve.

Perhaps borrowing a bit from an earlier version of this paper, a relatively new project based at the University of Oslo has adopted the general concept to explore how some European universities are adapted to the demands of ministries and businesses to become more engaged in economic development and social inclusions. In that project, funded by the Research Council of Norway, the investigators state that, "A 'FLAGSHIP' university is defined as a comprehensive research-intensive university, located in one of its country's largest urban areas. A FLAGSHIP university is in general among the oldest and largest institutions for higher learning of its country."[21] Its a research design that seeks to explore the activities and goals of a variety of existing departments in some eleven northern European universities–in essence, an inductive approach in which case studies will help define what the model might be.

And currently, a project focused on collecting data and supporting the development of eight sub-Sahara African universities by the Center for Higher Education Transformation based in Cape Town has used the *Flagship* title to help outline the current vibrancy, goals and challenges facing these institutions (Bunting et al, 2013). Under the title the Higher Education Research and Advocacy Network in Africa (HERANA), the project initially pursued the hard work of gathering comparative data among the universities and, via a collaborative mode, outlined the idea of the need for an Academic Core of variables (for example, like student to faculty ratios, the percentage of faculty with doctoral degrees) and correlations necessary for top tier national universities to pursue institutional improvement – a goal shared by this author and with some interaction with the project.[22] I will return to the concept of the Academic Core later in this paper.

For the *Flagship* model to have relevancy we need to explore what it might be. Its not simply a set of existing activities repackaged to then gain a new title, but a model and goal embraced in an institution's culture and, preferably but not necessarily, supported by government; it offers a path and policy realms to becoming research-intensive, or to maintain and bolster that status, but as part of a larger mission and understanding of the eco-system of what a truly productive and effective university should be.

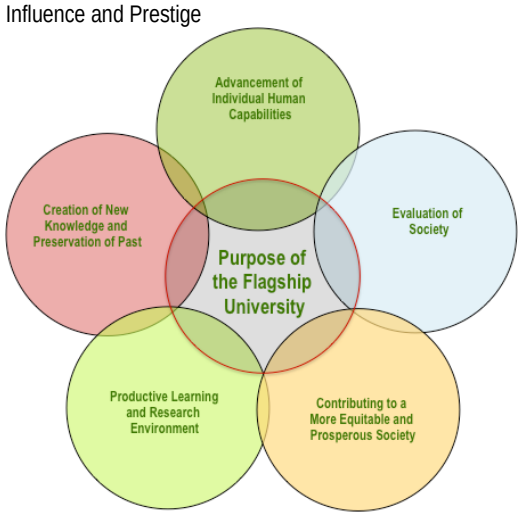
C. National and Regional Responsibility and Relevance as an Alternative Mantra

It is important to note that the current top ranked research-intensive universities, and particularly the public universities in the US, were not built around a narrow band of quantitative measures of research productivity or reputational surveys that characterizes the contemporary crop of international rankings. And while perhaps influenced at the margin by these rankings, their path to national and international relevance was, and is, rooted in their larger socio-economic purpose and practices.

National policies and, more importantly, institutional practices, whether in developed or developing economies, should focus on how to support and build in each nation one or more *Flagship Universities* that have the following goals:

- *Generally Comprehensive and Research Intensive Institutions* that are focused on being regionally and nationally relevant – this does not exclude institutions focused almost entirely on science and technology, for example, but they have more limited abilities to fully embrace the *Flagship Model*.
- *Highly Selective in Admissions Yet Also Broadly Accessible* so as to be representative of the socioeconomic and racial/ethnic demography of a country, while being open to international talent.
- *Broadly Engaged in Regional/National Economic Development and Public Service* in some form across all the disciplines.
- *Intent on Educating and Providing Talented Leaders,* generally for the regional and national societies they serve, but also to enhance engagement with the larger and increasingly international world.
- *Sufficiently Autonomous* and *Sufficiently Publicly Financed* so that institutions are leaders of knowledge generation and thought, not followers.
- Focused on an *Internal Culture of Evidence-Based Management*, the constant search for *Institutional Self- Improvement* – quality assurance that, ultimately, cannot be achieved by Ministerial policies and directives alone.

Figure 4 – The Purpose of Public *Flagship Universities*: Regional and National Relevance Leading to Global Influence and Prestige



From this institutional focus on regional and national relevance, and the support of government and the private sector, emerge truly globally important and productive universities. This is the history of the great US *Flagship Universities* who never sought to meet ranking metrics.

This does not mean institutions should not have international strategies that, for example, attract Nobel Laureates, repatriate academic stars, offer more courses in English, and attract international student and faculty, or robust research and degree programs focused on various parts of the world. But until these institutions emerge as independent nation-states divorced from their regional context or become completely virtual, they should primarily serve the goal of being regionally and nationally relevant. Globalization is a powerful force, yet our public universities remain tied in important ways to geography, culture, and the societies that need them the most to improve the quality of life.

Figure 4 offers one way to capture the output of the *Flagship* University model that is based in regional and national service, and that in turn is globally influential. These are characteristics shared by many different types of universities throughout the world, yet they have special meaning for *Flagships*. Outlining these general responsibilities is simply a reference point to the larger, and harder, questions on the path to truly being or expanding on the *Flagship* idea. The logical sequential path for nation/states and institutions is from regional/national engagement, then to global influence. There probably is no shortcut–although obviously many ministries are banking that external and targeted inducements will do the trick.

What are the characteristics, values, and practices of a small group of institutions we can identify as *Flagship Universities*? In the following I attempt to answer this question.

D. Profiling the Flagship Model

In the following, I attempt to provide an initial profile of the *Flagship University* model. The goal is to help define what are the characteristics and activities of *Flagships*, framed around the mission of research-intensive universities: Teaching and Learning, Research and Knowledge Production, and Public Service. I realize that this effort has many biases that reflect the historical development and current mission of some of the great flagship universities in the United States, and to some degree my own historical research on the purpose and influence of public universities.

To state the obvious, different nations and their universities have different ways of operating that reflect their own national culture, politics, expectations, and the realities of the socio-economic world in which they operate. The following also is not overly focused on the environmental conditions that allow for a *Flagship* institution to exist or emerge – the focus of much of the WCU literature and debate. The objective here is not to create a single template or a checklist, but a list of characteristics and practices that connect a selective group of universities to the socioeconomic environment in which they must participate and shape – a model that others might expand on and indigenize. Further, the *Flagship University* ideal is not, and could never be, a wholesale repudiation of rankings and global metrics, or the desire for a global presence. The model here is compatible with the WCU focus almost exclusively statistical analysis of research productivity, but aims much higher to, in some form, the soul and culture of the institution.

There are a few key assumptions to allow the *Flagship University* to mature and exist:

- Mission Differentiation - National systems of higher education require some form of mission differentiation among its network of postsecondary institutions, and including a limited number of research-intensive universities, some of which might be *Flagship Universities*.

- The *Flagship* Ethos – Either by government identification or self-appointment, *Flagship Universities* aspire to support regional and national socioeconomic mobility and economic development, educating the societal and business leaders of the future, and understanding and seeking a role in supporting other segments of a nation's education system. They also have or seek a culture of self-improvement. The best universities are always looking to get better at what they do, how they can positively influence society at large.

  But to pursue this ethos, they need the political, financial and policy support of their national governments and in a manner that aligns with the overall management of a national higher education system and that meets the needs of various stakeholders – from students and their families, to business interests, and local and national government. While the *Flagship Model* advocated here is largely focused on internal cultures and behaviors, government plays a critical role in a variety of ways, including:

- Using funding to steer the higher education sector to respond to labor market requirements and human welfare needs;
- Incentivizing research and innovation in selected universities.
- Pursuing a close link between national and regional economic policy development and higher education planning.[23]

- A Comprehensive Array of Academic Programs – *Flagship Universities* have or aspire to offering degree programs across the disciplines, and including professional fields such as engineering, law, medicine, education (including teacher education), and social welfare.

- A Sufficient "Academic Core" – Universities that exude the values of the *Flagship Model* can do so only if they have sufficient funding and a baseline of Core characteristics, including manageable student-to-faculty ratios, a significant population of permanent faculty with doctoral degrees, sufficient numbers of masters and in particular doctoral students, and evidence of sufficient graduation rates and research productivity.

  Research and analysis on a group of sub-Sahara African universities by the Center for Higher Education Transformation (CHET) based in Cape Town has outlined the Academic Core concept first in 2011 (Cloete et al 2011; Bunting et al, 2013). CHET's baseline criteria focused on the developmental needs of African Universities; but they provide a useful framework for all universities that are early in the stages of maturation, and often in developing economies. The Academic Core includes input and output variables that links an institution's capacity to positively influence regional economic and social development with its capacity for knowledge production.[24] In the following, I adopt the criteria from CHET and with a few additions (in italics):

  Input Indicators:
  - *Proportion of academic staff with doctoral degrees* – at least 40% of the permanent should have doctoral degrees, and at least 25% of the permanent faculty (defined as full-time) should be in the senior ranks (defined as a full or associate rank or equivalent). An antecedent is the ratio of female to male senior faculty – *universities dominated by one gender over another, or one religion or other caste malady are probably less productive and reflect divisions in society that are not conducive to the Flagship Model – a theme return to later in this essay.*
  - *Academic staff-to-student ratios* – counting undergraduate and graduate Student Full-Time Equivalents (meaning student with full course-load) Faculty FTE, *the ratio should not exceed 25 to 1, and based on the average ratio among top public research universities in the US a target of around 16 to 1.*
  - *Postgraduate enrollments* – research-intensive universities require a healthy balance of postgraduate students to undergraduate students, *with a floor of at least 20 percent of students in master's and doctoral programs, and a preferred ration of approximately 30 percent.*
  - *Research funding per academic* - Research requires government and institutional funding and 'third-stream' funding from external sources such as industry and foreign donors; *Flagship* institutions have a balance of income streams funding faculty directed research activity.
  - *Balanced Enrollment Portfolios - Although the historical purpose of an institution and the needs of the society it serves may vary, generally a goal is to have 30 to 40% of students in science, technology engineering, and math (STEM) fields.*

  Output indicators:
  - *Graduation rates* - in its analysis of selected, top tier, sub-Sahara African University, a CHET report notes that important markers related to doctoral graduates and the number of STEM graduates at both the undergraduate and graduates level, particularly for universities in developing economies. The author's also outline the idea of dividing the number of permanent senior faculty (full and associate) by the total number of doctoral graduates granted in a given year. The resulting ratios should be at least .15 doctoral graduates per permanent [full] professor and associate professor. *For many developing economies almost all with growing populations, the master level degree production is key for local economies; doctoral degree production is absolutely vital for expanding the ranks of qualified and productive faculty.*
  - *Knowledge production* – similarly, dividing the number of permanent senior faculty (full and associate) by the number of publications by all permanent faculty (senior and otherwise), the resulting annual ratios should be "at least 1.0 research articles per permanent [full] professor and associate professor."

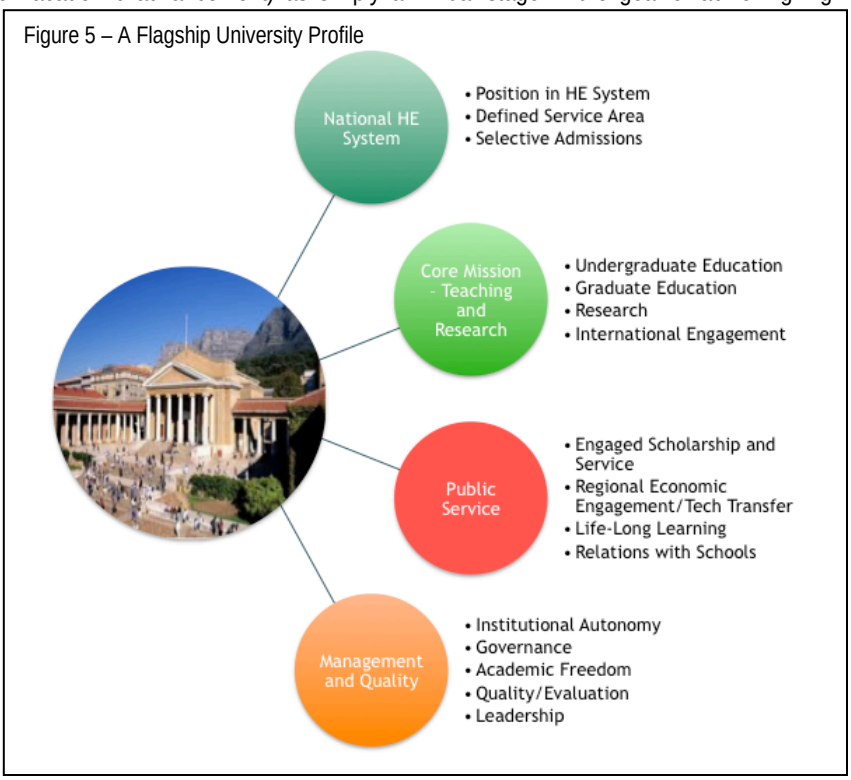
These are simply example matrixes that provide an indicator of the strength of the Academic Core, with particular relevance to universities in developing economies and where there is often a low number of faculty with doctoral degrees (and hence trained in research methodologies and knowledgeable about the important and tactics of mentoring students).

The important point is that there is a healthy balance in the various ratios of first degree and graduate students, permanent faculty, and a general assessment of productivity in graduates and research output (here focused on research articles). A key additional concept observed by the HERANA effort, and one reiterated strongly in the following section of this essay, is the crucial importance of proper incentives and expectations for academic staff, along with the conditions in which they must work.

- Institutionally Driven Quality Assurance - While ministries of education can positively or negatively influence the quality of university academic programs and activities, ultimately top tier institutions require sufficient independence to develop internal cultures of quality and excellence *and* incentives. This must include merit-based academic personnel policies. If there is any one major theme that helps determine what are the most effective universities, it is the quality of the faculty, their ability to carry out their duties, high expectations regarding their talents, duties, and performance that never ends, and driven by a process of peer and post-tenure review. The quality of students, and to a large degree their academic and other forms of engagement, follow.

  An ancillary assumption: government policy regimes and induced efforts to improve the quality and performance of all or a select group of national universities reflect doubt about the ability of their universities to become top, globally competitive institutions, and often with good reason; but ministries should view such government requirements and often one-size-fits all policies (such as national policies on academic advancement) as simply an initial stage in the goal of achieving high performing *Flagship* universities, with the next and more important stage focused on sufficient autonomy to support *a culture of campus based institutional self-improvement.*

Figure 5 – A Flagship University Profile



Flagship Universities are mindful of their global interaction and impact (including journal citations) *and* their regional responsibilities and influence in areas such as economic development and socio-economic mobility. They are mindful of ranking systems that essentially encourage them to be what one might call "universities of the cosmos" (e.g., with research and quality goals that are not tied to location or more directly to societal needs), but they must remain grounded in a set of values and activities that make them essential to the societies they must operate in and serve.

The following *Flagship* Profile is organized in four categories summarized in Figure 5, and related to their external responsibilities, and their internal operations. The idea is that, within the context of a larger national higher education system, *Flagship* institutions have a set of goals, shared good practices, logics and the resources to pursue them. Generally, the sequence is from the larger external context, to the mission of the institutions and goals, to the management structure to make it happen. Put another way, my effort here simply attempts to help create coherency, and to provide some guides and examples, for what many universities are already doing or are thinking of doing, but with emphasis on internal culture and processes for evaluation and self-improvement.

Profile I: Flagship Institutions and National Higher Education Systems

1. *Position within a Larger National Higher Education* – As noted previously, the idea of the Flagship University, like the idea of the World Class University, assumes that national higher education systems required mission differentiation among an often growing number of tertiary institutions.

   Most nation-states have come to realize that it is neither cost-effective nor possible to develop high quality higher education systems in which all universities are all things to all people. Within a larger, hopefully coherent network of public and private tertiary institutions, it is in fact vital that a select subgroup provide leadership and pursue a range of activities, and with high quality, that can help nations pursue economic development and improved socio-economic mobility.

   But the number of "flagship" institutions in a nation can vary and be determined by geography, population density, socio-economic needs, and financial resources; the primary identifier is their characteristics that include traditional notions of quality like research productivity and their overall impact regionally, *and* a commitment to helping to produce leaders in business and civic affairs.

2. *Defining Service Area* – Most public universities have a sense of their responsibilities in regards to student admissions by some defined geographic area, with a caveat related to international students. But they have a more vague understanding of their role in economic development and public service. Greater and overt definition of a distinct "service area" – without exclusion of larger regional and international activities – is an important framework for directing or encouraging universities activities, and for evaluating their effectiveness.

3. *Selective Admissions* – Conditioned by its position within a larger set of universities and service area, the Flagship University's admission focuses on enrollment largely on a national and regional pool of talented students. But this should not be to exclusion of a drawing talent from a continental and international pool – with different goals at the first degree and graduate and professional levels.

   Admissions criteria at the first-degree level is often regulated or structured by national policies focused on a single national test. Flagship Universities need greater flexibility for determining the talent and potential of prospective students and to balance their selection of an entering class with other considerations, including the socioeconomic background of their student body, geographic representation, and exceptions for students with special talents. [See section 13 on the "Four Essential Freedoms" of Flagship Universities]

Profile II: Flagship Core Mission – Teaching and Research

4. *First-Degree/Undergraduate Education Goals* – An essential goal of the Flagship University is to provide first-degree students with an education that is engaged, promotes creativity and scholarship, and results in high order skills. Different universities face different challenges in pursuing these goals, including the entering skill levels of students, their socio-economic background, cultural tradition related to learning, along with limited resources that influence student to faculty ratios to the development of student support programs (e.g., tutoring and counseling services). But the educational goals remain relatively similar to create an environment of "Engaged Student Scholarship" (See Figure 6).

5. *Graduate Education* – Flagship universities have special responsibilities for graduate and professional education, and should have a ratio of first degree and second degree students that reflects the purpose: generally, having 30 to 50 percent of all student enrollment in graduate education, and with an array of doctoral and professional degree programs. Another important marker are the number of degrees granted, along with on-going quality assurance measures.

   In addition, Flagship universities need to have and develop graduate programs intended to educate and prepare future academics and researchers, but also professionals that directly benefit the host nation and greater region. The presence of professional master's and doctoral programs and degrees does not feed into the current notions of a WCU, but I would argue they are an important component of universities that are comprehensive and vital to regional economic development.

6. *Research* – High levels of research productivity by faculty is a significant characteristic of Flagship universities, a responsibility that is roughly equal to teaching responsibilities, and with a variety of purposes that include:

   - *Discovery* – Basic or Blue Sky research that has not immediate application, commercial or otherwise;

- *Integration* - synthesis of information across disciplines, across topics within a discipline, or across time;
- *Societal Engagement* – rigor and application of disciplinary expertise with results that can be shared with and/or evaluated by peers; and
- *Teaching and Learning* - systematic study of teaching and learning processes. It differs from scholarly teaching in that it requires a format that will allow public sharing and the opportunity for application and evaluation by others.

7. *International Engagement* – All Flagship Universities should have goals and programs related to various forms of international engagement – from student enrollment and support, to curriculum and research activity. The range of this activity and focus, however, will and should vary depending on the geographic location, language, political considerations, national policies (such as granting travel visas) and the "brain gain" or "brain circulation" needs of a nation or region. A more expansive outline of the types of international engagements among universities is offered later in this profile (section IV.19).

   While the emphasis in the *Flagship* model offered here is on regional and national responsibility and relevancy, it is also true that, as noted in a recent study of international research engagements among "Ibero-American" [Latin American] nations, "International cooperation is not only a trend, but it is almost a mandatory practice for any individual, research group or country . . .."[25] The exchange of students and other forms of cross-border experiences is also a common component of research-intensive universities, along with an increasing number of joint degree programs.

   Yet it is important to note that most universities do not have very clear strategies on international engagement, in part because of the decentralized nature of academic activity and the autonomy of faculty. In the rush toward global engagement, institutions generally need to focus more on the quality of the interaction and how it fits into the institution's mission, and less on the volume of interactions and agreements.

Figure 6 – Characteristics of Engaged Student Scholarship:

- Collaborative and participatory.
- Draws on many sources of distributed knowledge.
- Based on partnerships – among students/among students and faculty.
- Is shaped by multiple perspectives and expectations.
- Deals with difficult, intractable and evolving questions; these complex issues may constantly shift.
- Long term, in both effort and impact, often with episodic bursts of progress.
- Requires diverse strategies and approaches.
- Crosses disciplinary lines – a challenge for institutions organized around disciplines.

Profile III: Flagship Universities and Public Service/Economic Engagement

8. *Engaged Scholarship and Civic Service* – Flagship Universities promote public service in various forms by faculty, students and staff via formal programs and incentives. This form of "outreach" is extremely important, providing a significant impact on local and regional communities and direct evidence of a Flagship University's priorities.

   a. *Community Volunteering* – faculty, students, and staff at most universities interact informally (as individuals) in various forms of community service. But Flagship Universities should include formal mechanisms, such as "community service centers" that attempt to identify and link the university community with opportunities for volunteer work
   b. *Student Civic Service Learning* – Universities should offer opportunities for students to engage in learning opportunities, including course requirements and course credits) that also support public service objectives. This is a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development.
   c. *Faculty Engaged Policy Research* - Flagship universities look for ways to encourage academically relevant work that simultaneously meets campus mission and goals as well as community needs. In essence, it is a scholarly agenda that integrates community issues as a value for faculty. In this

Figure 7 - Student Civic Service Learning Outcomes:

- Increases retention, particularly among first-generation college students.
- Increases diversity of local enrollment as a form of outreach
- Enhances achievement of core learning goals and has an effect on progress to degree.
- Makes learning more relevant to students, helping them clarify their talents and interests at an early stage of their academic career; it often impacts choice of major selection and eventual career.
- Develops students' social, civic, and leadership skills.
- Strengthens undergraduate research skills and capabilities.
- Encourages students to be productive participants in the community by connecting them to their surroundings.

definition community is broadly defined to include audiences external to the campus that are part of a collaborative process to contribute to the public good.

9. *Regional Economic Engagement* – This is a key mission of the *Flagship University*, critical for justifying it's funding and role in society – essentially, one avenue for making university generated basic and applied research (intellectual property) relevant.

    a. *Labor Needs* – While *Flagship Universities* are engaged in the education and training of talent for national, indeed global labor markets, they must include a conscious effort to support regional economies. This is a dynamic process with two general routes:
        - Supporting local labor markets and the needs of businesses and municipal and regional government via public service activities, research engagement usually via faculty directed projects, and by part-time work. Public service and research engagement activities, in particular, can act as apprenticeship opportunities and often help guide both student career interests and shapes local economies.
        - Education and Training sometimes for specific professional careers like engineering, law, and medicine, but just as often via students entering the labor market with high order skills – such as writing and analytical abilities.

    b. *Technology Transfer* - Effective Tech Transfer relates not only to faculty-generated research (and the national/regional systems that support their work), but organizational issues at the campus level and relations with the private sector and government. The major steps in technology transfer are: disclosure of inventions; record keeping and management; evaluation and marketing; patent prosecution; negotiation and drafting of license agreements; and management of active licenses. University technology transfer is mainly a system of disclosure, patenting, licensing and enforcement of patents and licenses. Among the issues that require policies:

        - *Goals of Tech Transfer* – While the specter of substantial and steady income from patents and licenses, or university associated businesses, is often a goal of *Flagship Universities*, this is rarely a reality. Costs can be high for getting university inventions into the market place, and to then protect them against infringement. Much more importantly, Tech Transfer is part of a larger effort to promote economic development and interaction of faculty and students with local and regional business and industries – a major route for brain circulation between the public and private sectors. It is important to note that patent and licensing activity and the number of spin-offs is not necessarily the most important evidence of the key role of universities in promoting economic development. The flow of information between university and business sectors and, perhaps most importantly, the movement of personnel to and from the academy are often cited as the critical factors for promoting a vibrant business climate.[26] The structure of a nation's economy, along with a stable government and legal framework for businesses and universities to operate in, are also important influences on the ability of universities to strategically increase their role in the economy.
        - *Organization and Support* – Most major universities have an Office of Technology Transfer with varying levels of authority and effectiveness. The trend is for universities to first set up a centralized office for a campus to liaison with faculty, help assess the value of ideas and inventions, help in the process of patenting and licensing, and providing links with venture capital and potential business partners. But large universities with robust research programs in science and technology fields tend to evolve by creating technology transfer staff that work in specific disciplines.
        - *Rules on Ownership of Intellectual Property* – Policies are generally set at the national and institutional level, with it becoming increasingly common that university researchers share in the ownership of Intellectual Property, and in any resulting income, with the university, and sometimes with the source of research funding – often a government agency. The structure and ratio of ownership may vary, but the driving principle is some form of self-interest by the inventor and the university to get ideas and inventions into the market, and facilitating "spin-office" businesses.

10. *Life-Long Learning/Cooperative Extension* – A critical component in the strategy to extend university based research-based knowledge is to offer non-formal educational programs and services in the field (some defined service area) and that relate to key economic development activities. Historically, this has been an extremely important part of the mission of *Flagship Universities* in the US, with a focus on agriculture and food, home and family, the environment, community economic development. Elements of this type of activity exists throughout the world; but it is often not organized and financed in a way that places it more centrally into the array of university activities.

11. *Relations with Schools* – Another key concept in the *Flagship* model are indirect and direct influences and assistance to schools within a universities designated service area. This includes:

    a. *Shaping Curriculum Standards* – Through its admissions criteria (e.g., required courses) or other means such as creating or participating in national/regional curricular standards, or special courses in subjects such as math and composition via Cooperative Extension, *Flagship Universities* can and should have a significant influence on school development – particularly at the secondary level.
    b. *Teacher Training* – All *Flagship Universities* should operate teaching training programs that are selective in admissions. They need not be large, but viewed as setting standards in teaching education. Historically, many *Flagship Universities* have also established "Laboratory Schools" owned or jointly owned and operated by the university, creating a school that can employ innovative curricular ideas and unique training opportunities that should also reflect socio-economic realities of the societies they serve.
    c. *School Principal Education* – As part of their critical role in supporting local schools, and the path to a postsecondary education, many *Flagship Universities* have distinct graduate programs for current and future heads of schools, often with a focus on secondary schools.
    d. *School and Student Outreach* – *Flagship University* faculty, staff, and students should provide opportunities for students from designated service area schools to visit and be introduced to what it means to be a tertiary student via formal programs.

12. *Relations with Other Postsecondary HEI's* – The *Flagship* model assumes formal and informal forms of coordination and mutual support with other major tertiary institutions in a service area and beyond. Admittedly, this runs counter to the political culture of many major research universities where national norms tend to view each institution as an island, seemingly disconnected from the operation and welfare of what are sometimes viewed as competitors. Among the forms of coordination:

    a. *Course Coordination and Articulation*. – In some instances, *Flagship Universities* may develop programs at the first degree and professional level jointly with other usually nearby institutions. Where there are binary higher education systems with polytechnics-vocational oriented institutions, *Flagship Universities* can create avenues for students to matriculate to degree programs.
    b. *Transfer Programs* – Course articulation can also lead to formal programs between institutions in which students matriculate at a designated stage at one institution to the *Flagship University*.
    c. *Joint Community Outreach Efforts* – *Flagship Universities* should lead and collaborate in efforts to expand access to higher education for lower income and other disadvantaged groups at the secondary and lower levels of education. This can include providing secondary students information and personal contacts on what it will take to enter a higher education institutions (and not just the *Flagship University*), and programs at the *Flagship* and other post-secondary institutions in which targeted students come to a campus and are exposed to its environment and gain a sense that they have an opportunity to aspire to a university degree within a supportive academic community.

Profile IV: Flagship Universities – The Building Blocks for Management and Quality

13. *Institutional Autonomy* – The organization and management of higher education systems are changing globally, generally moving toward greater levels of autonomy for institutional decision-making *and* demands for greater accountability. Yet this still means national and cultural differences–some heavily influenced by traditions of command economies–are significant. Generally, however, *Flagship Universities* should have "Four Essential Freedoms" as outlined in a series of important court cases on academic freedom[27]:

    a. The right to *select students* – within some general framework of national and sometimes regional policy.
    b. To determine *what to teach*.
    c. How it will be taught
    d. And *who will teach.*

14. *Governance* – The level of autonomy provided by governments and their ministries varies tremendously, although generally characterized by greater levels of freedom in financial and academic decision-making, and increased management authority among university administrators.

Without significant levels of autonomy, including budget management (e.g., the ability at the university level to shift some or all allocated funds to campus identified needs), and the distribution of personnel (e.g., the allocation or reallocation of faculty positions), self-anointed *Flagship's* cannot compete as top quality universities or meet their responsibilities.

At the same time, a high-level of institutional autonomy (via law, via government provisions) is not sufficient into itself to support the goals of a *Flagship*. It must be accompanied by a governing and management structure that allows for decision-making with relatively clear lines of authority and rules on shared governance.

a. Governing Board – Common to all *Flagship Universities* in the US, and increasingly at major, top tier research universities throughout the world, is some form of a governing board that includes members from the larger society that the university serves and that is sufficiently autonomous from national ministries and government in general.
b. Executive Leadership - In many countries, the role of the president (or the equivalent title of rector, vice chancellor, warden, etc.) has been extremely weak, largely either a ceremonial position or a temporal, elected position in the university community with no distinct authority to manage an institution. Similarly, the extensive, often invasive, authority of ministries and rules and regulations generated by national governments on university activity has provided little room for institutional governing boards of any significance to arise. This is changing in most parts of the world, with formal government policies creating broader authority for university presidents, including greater authority in budget management and administrative authority.

   The respective role of top university administrators and the faculty is a source of significant tension and confusion. As Michael Shattock notes in an article focused on British universities, the rise in 'the executive' university leader "at the expense of traditional components of university governance" may "push academic participation to the periphery" and may lead to "a loss of academic vitality and distinctiveness" (Shattock 2013). The redefinition of the respective roles of university leaders, governing boards, and faculty, however, is even more dramatic in much of continental Europe, including France, and Latin America, where greater autonomy, and new accountability regimes, require new relationships and a greater ability to actually shape university activities and output. Perhaps the most challenging aspect related to these new relationships and sources of authority is to define the role of faculty in that process. Most universities have never fully articulated that role in formal policy, instead working from precedent and more often then not with very weak university leadership.
c. Faculty and Shared Governance – Depending on the cultural traditions of various nation-states, the distinct role of faculty in the academic management directly relates to the long-term quality and performance of universities. With the increased authority of academic leaders, such as the president, there is a need for a clearly articulated role for the faculty, particularly in issues related to the academic activities of a university, including academic programs and curriculum, academic advancement, and admissions policies (where there is institutional discretion).

   Generally, higher education institutions must have a formal faculty representative organization (a "faculty senate" or equivalent) with authority over its own self-organization, and stated areas of primary authority (decisions related to academic programs), shared authority (faculty appointments), and consultative rights (major budget decisions related to academic programs).

   The University of California has one of most clearly articulated policy on shared governance that includes a series of delegated authority to its Academic Senate – a representative body of the faculty. Authority granted by the UC Board of Regents include:

   - The authority to determine the conditions for admission.
   - The authority to establish conditions for degrees and to supervise courses and curricula. The Senate has the responsibility to monitor the quality of the educational programs that students must complete to earn their degrees and to maintain the quality of the components of those programs.
   - The authority to determine the membership of the faculty has two elements. The Senate has a responsibility to monitor the quality of the faculty who teach courses, who develop the educational program and who conduct research at the University of California. Faculty are evaluated under a uniform set of criteria that are intended to maintain a level of excellence on each campus. Second, in order to ensure the quality of the faculty, the Senate monitors faculty welfare issues that affect recruitment and retention of high quality faculty.
   - The authority to advise on the budget of the campuses and the University empowers the Senate to advocate budget allocations that channel resources into activities that enhance the academic programs of the University.

- The authority to conduct hearings in disciplinary cases charges the faculty with responsibility for enforcing standards of faculty conduct that are embodied in the Faculty Code of Conduct and other policies of the University.

Yet it is also important to note that relatively well articulated designations of authority for faculty and administrators is not sufficient unto itself for effective modes of shared governance. There also needs to be a culture of a shared burden and mutual respect within the academic community. In his study of the changing nature of shared governance among Nordic universities (Helsinki, Copenhagen, Oslo, Lund, Uppsala), Bjorn Stensaker and Agnete Vabø note that while most universities are emphasizing leadership and governance capacity, most efforts "overlook the cultural and symbolic aspects of governance along the way" (Stensaker and Vabø 2013). In universities undergoing major shifts in authority, and the role of faculty, creating such an environment can be very difficult and will take time.[28]

15. *Academic Freedom* – Critical to the success of the *Flagship University* is the principle of Academic Freedom which can be defined as the following:

> *The freedom of faculty to determine the content of what they teach and the manner in which it is taught and the freedom to choose the subjects of their research and publish the results. It also guarantees that they will not be penalized for expressions of opinion or associations in their private or civic capacity.*[29]

This is Columbia University's statement on academic freedom. But there are many similar statements, including the recent "Hefei Statement on the Ten Characteristics of Contemporary Research Universities" formulated as an international declaration and jointly sponsored by the Association of American Universities, the Group of Eight Australia, and the League of European Research Universities. The statement reads: "The responsible exercise of academic freedom by faculty to produce and disseminate knowledge through research, teaching and service without undue constraint within a research culture based on open inquiry and the continued testing of current understanding, and which extends beyond the vocational or instrumental, sees beyond immediate needs and seeks to develop the understanding, skills and expertise necessary to fashion the future and help interpret our changing world." [30]

Similar rights should be extended to students, in regards to freedom of expression. Yet for both faculty and students, there are restraints in all societies in some form regarding speech – including "hate speech" or varying forms of sedition. The cultural and political environment in which *Flagship Universities* operate cannot be ignored; yet each should have some formal statement of Academic Freedom, including an axiom that in some fashion states that no political test shall ever be considered in the appointment and promotion of any faculty member or employee.

16. *Quality/Evaluation* – In all nations with advanced systems of higher education, ministries or other government entities have evolving efforts of insuring quality and accountability. Yet the marker of a *Flagship University* is its own internally derived efforts at institutional quality intended to induce a culture of constant self-improvement and that links its teaching, research, and public services mission with rules and behaviors of faculty and other members of the academic community.

In their study of two top tier research-intensive universities, MIT and UC Berkeley, Jean-Claude Thoenig and Catherine Paradeise, note the central role of an organizational culture that focuses on the attracting and pushing talented faculty, and measures of productivity that are largely discipline based, with two interrelated features which they call "the primacy of evaluation":

- Uniqueness and talent, and innovation, are ultimate yardsticks for assessing academic quality and that a regular process of peer evaluation is "an ordinary business about an extraordinary issue."
- Institutional cultural values and social processes build a strong university-wide community identity, as opposed to simply pockets of quality. [31]

The corner stone for academic quality is a process of regular and meaningful, peer evaluation that includes both post-tenure review and program review. Thoenig and Paradeise comment on two contrasting approaches to academic appointments and expectations, the first fairly common internationally but now on the wane but that is illustrative of an academic culture that is to be avoided:

> At one end of the spectrum, the production of quality may be neglected when not ignored, bureaucratic procedures being used to control commitment and performance. For instance, the only rule individuals might have to conform to could be to list their annual or semester teaching, research and service activities, and to send the list to some

> administrative office that consigns it to the archives. Quality performance would not really be assessed academically and would not induce any major consequence. Impersonal criteria such as seniority would have much more weight in managing individual faculty members. Quality at this extreme is really nobody's concern. At the other end of the spectrum, academic quality is elevated to a priority and even a collective obsession that pursues every academic all along his/her academic career. Individual reports are read and performance assessed in detail according to norms shared by the university community. Performance evaluation and especially the quality of a person's research is considered vital not only for that person, but the whole local community.[32]

The following outlines how a system of regular evaluation can function, with the purpose of setting meaningful expectations for faculty that can encompass a wide variety of creative and innovative activity with the core functions of a *Flagship University*.

a. *Faculty Appointment and Advancement (Post-Tenure Review)* – As noted, faculty at *Flagship Universities* need clear outlines of expectations that help shape behaviors and advance the broad range of responsibilities of an institution, and that are based on a process of regular (every 2 to three years) and, as noted, meaningful peer review – and not on a civil service structure. It is important to recognize considerable variation in the research interests of faculty, and that those interests need to evolve over time; indeed, faculty advancement should revolve around how innovative faculty are over the course of their career. The following provides a sample of criteria within the University of California[33]:

   Teaching — Clearly demonstrated evidence of high quality in teaching is an essential criterion for appointment, advancement, or promotion that includes documentation of ability and diligence in the teaching role. In judging the effectiveness of a candidate's teaching, peer review should consider such points as the following: the candidate's command of the subject; continuous growth in the subject field; ability to organize material and to present it with force and logic; capacity to awaken in students an awareness of the relationship of the subject to other fields of knowledge; fostering of student independence and capability to reason; spirit and enthusiasm which vitalize the candidate's learning and teaching; ability to arouse curiosity in beginning students, to encourage high standards, and to stimulate advanced students to creative work; personal attributes as they affect teaching and students; extent and skill of the candidate's participation in the general guidance, mentoring, and advising of students; effectiveness in creating an academic environment that is open and encouraging to all students, including development of particularly effective strategies for the educational advancement of students in various underrepresented groups. The committee should pay due attention to the variety of demands placed on instructors by the types of teaching called for in various disciplines and at various levels, and should judge the total performance of the candidate with proper reference to assigned teaching responsibilities.

   Research and Creative Work — Evidence of a productive and creative mind should be sought in the candidate's published research or recognized artistic production in original architectural or engineering designs, or the like. Publications in research and other creative accomplishment should be evaluated, not merely enumerated. There should be evidence that the candidate is continuously and effectively engaged in creative activity of high quality and significance. Work in progress should be assessed whenever possible. When published work in joint authorship (or other product of joint effort) is presented as evidence, it is the responsibility of the department chair to establish as clearly as possible the role of the candidate in the joint effort. It should be recognized that special cases of collaboration occur in the performing arts and that the contribution of a particular collaborator may not be readily discernible by those viewing the finished work.

   Professional Competence and Activity — In certain positions in the professional schools and colleges, such as architecture, business administration, dentistry, engineering, law, medicine, etc., a demonstrated distinction in the special competencies appropriate to the field and its characteristic activities should be recognized as a criterion for appointment or promotion. The candidate's professional activities should be scrutinized for evidence of achievement and leadership in the field and of demonstrated progressiveness in the development or utilization of new approaches and techniques for the solution of professional problems, including those that specifically address the professional advancement of individuals in underrepresented groups in the candidate's field.

   University and Public Service — The faculty plays an important role in the administration of the University and in the formulation of its policies. Recognition should therefore be given to scholars who prove themselves to be able administrators and who participate effectively and imaginatively in faculty government and the formulation of departmental, college, and University policies. Services by members of the faculty to the community, State, and nation,

both in their special capacities as scholars and in areas beyond those special capacities when the work done is at a sufficiently high level and of sufficiently high quality, should likewise be recognized as evidence for promotion. Faculty service activities related to the improvement of elementary and secondary education represent one example of this kind of service. Similarly, contributions to student welfare through service on student-faculty committees and as advisers to student organizations should be recognized as evidence, as should contributions furthering diversity and equal opportunity within the University through participation in such activities as recruitment, retention, and mentoring of scholars and students.

b. *Standards of Ethical Conduct and Conflict of Interest Policies* – Faculty, and staff, are increasingly engaged in activities outside of the university, often serving the larger public service role of the university, sometimes with additional compensation. Universities need policies that insure that these university employees are maintaining their commitments in time and service, such as teaching courses and mentoring students. They must also avoid engaging in consulting and research grants in which their financial interests may interfere with normal duties as university employees or their impartial judgment as researchers.

National or regional governments may have general policies related to ethical conduct, but universities need to have their own set of policies and the means to enforce them. Here is an example of policies at the University of California that reflect state policies:

> Employee members of the University community are expected to devote primary professional allegiance to the University and to the mission of teaching, research and public service. Outside employment must not interfere with University duties. Outside professional activities, personal financial interests, or acceptance of benefits from third parties can create actual or perceived conflicts between the University's mission and an individual's private interests. University community members who have certain professional or financial interests are expected to disclose them in compliance with applicable conflict of interest/conflict of commitment policies. *In all matters, community members are expected to take appropriate steps, including consultation if issues are unclear, to avoid both conflicts of interest and the appearance of such conflicts.*[34]

c. *Program Review* - Reviews of existing academic programs ensure that standards of excellence are maintained and that schools and departments have an opportunity to plan strategically for the future.

In many parts of the world, academic program review, like post-tenure review, are new concepts. Increasingly, ministries of education are creating requirements for forms of program review and accreditation. But the most significant path for institutional self-improvement, and evidence based management, are internal, campus driven review processes that can offer an honest assessment of the strengths and weakness of a department, like history, or physics, or a college.

Effective Academic program reviews are designed to elicit input from faculty, students and staff of the department under review. The model at Berkeley, and similar to that at other top public universities, is to perform a review of an academic department, school or program that includes the following:

- A Program Review Committee of the Academic Senate coordinates and monitors the review process, with staff support offered by the campus' office of institutional research.
- Each department, school or program undertakes a self-study, assessing its intellectual agenda, its programmatic goals and resources, and identifying critical challenges and opportunities facing it. The department, or unit, is supported in this effort by data provided by the Office of Planning and Analysis.
- A carefully selected external committee completes a report based on its interviews with faculty, students, and staff and relevant review documents provided by an institutional research office. The academic program being reviewed has the opportunity to respond to the committee's report and to one written by the member of the Senate's Program Review Committee. Subsequently, all review documents are submitted to the Academic Senate for the committees' and the Executive Vice Chancellor (or EVC, the head academic officer at Berkeley) response.
- Reviews culminate in an outcome letter that delineates action items for units, deans and central administrators. The dean responsible for the program under review completes the EVC and senate reports are distributed to units after the review.
- The EVC outcome letter is formally transmitted to the unit, which concludes the review. At this point, all review reports and the outcome letter become part of the public record.

- The unit is expected to take actions to address the findings of the program review. The outcome letter designates the timeline for acting on the recommendations. The unit is expected to report on actions it has taken as part of its annual request for new or replacement faculty positions to the responsible dean unless otherwise negotiated at the wrap-up meeting. The dean is expected to comment on the unit's progress in his/her annual FTE request. The institutional research office is responsible for maintaining a database of initiatives undertaken in response to the recommendations.

17. *Diversity of Funding Sources* – Most universities in the world are seeking a greater array of financial sources, moving away from a funding model dependent completely or largely from the government (national or municipal). Should *Flagship Universities* have a certain mix or balance of funding sources? Besides the particulars of the nation/state they operate in and, specifically, the dependency level on ministerial funding, it also depends on the array of programs and activities of an institutions.

    In the US, for example, state governments were the primary source of operating funds for institutions such as Berkeley, Michigan, Texas, and North Carolina. In the 1950s, state funding would have represented some 70% of a public universities operating budget. Today, Berkeley, for example, has only 12% of its operating budget coming from state government, with the other major sources of funding coming from tuition and fees, research grants and contracts, and income from patents and gifts. On the one hand, this reflects significant decline in state investment in higher education, accelerated by the Great Recession); on the other hand, it reflects they growing diversity of activities by research intensive universities – a trend that is global.

    The key is that while *Flagship Universities* generally are diversifying their funding sources, they retain a commitment to their regional and/or national socioeconomic role. At the same time, a diversified funding portfolio promises greater funding stability and, in most circumstances, a path to greater institutional autonomy.

18. *Institutional Research Capacity* – All universities need to pursue evidence bases decision-making. IR is a vital component to increased management responsibility, and for seeking institutional self-improvement. Most universities throughout the world have had very limited formal policies and strategies for gathering institutional data, and for employing trained staff to provide the information and analysis required for competent and innovative management and leadership of higher education institutions. One catalyst for increasing IR capacity is the growing demands of ministries for information to fit into their evolving accountability schemes; various international and national ranking efforts are also generating campus efforts to generate and maintain data bases and formulate strategies for improving citation index scores and similar measures of output.

    Yet there remains in many research-intensive universities a lack of IR capacity and a lack of understanding among campus leaders of the critical role and potential benefits of a more organized effort essential to advanced management and information based decision-making at all levels of university administration. *Flagship Universities* need to focus on their own data and analysis needs, including internal accountability efforts like Program Review, and not simply react to external demands. One explanation of three internal purposes is rather generic and simple, but useful: first, institutional reporting and administrative policy analysis, and I would add collection and maintenance of campus data; strategic planning, enrolment and financial management; and three, outcomes assessments, program reviews, internal and external accountability reporting, accreditation and measures of institutional effectiveness. [35]

    At the same time, all universities need to, at a minimum, seek and support a professional staff, and seek to collaborate with similar regional or national universities to build a network focused on IR needs and establish professionals in the field. This is particularly important at leading research-intensive universities, like *Flagships*. Many universities, sometimes lacking a central campus administration with sufficient authority to direct strategic efforts, have simply sought out faculty to temporarily and without adequate backgrounds provide IR functions. Often these have been on a project basis, and not in full consideration of the breadth of data and analysis needs of a campus. Major universities should maintain a divide between faculty responsibilities and those of professional IR staff – although interaction is obviously important and some faculty may want to take on a full-time professional role in IR.

    Information is power. It is of course ironic that most universities have extremely limited IR capabilities, partially understandable, as most universities have had a decentralized structure of decision-making and, until recently, limited accountability demands externally. Organizational models may differ, including the focus of IR efforts that are influenced by the varying demands of ministries.[36] Yet I sense that all campuses need some form of a centralized IR office and that, as

over time, and since information is power and helpful in requesting resources, for example, IR capacity will be increasingly found at various levels of campus administration.

19. *International Cooperation and Consortia* – While *Flagship Universities* should have a strong focus on the regional and national needs, they must also leverage collaborations with faculty, programs, and more generally universities in other parts of the world. There are numerous opportunities to bolster the teaching, research, and public service activities, and to also learn about best practices and build specific program and institutional strategies based, in part, on a comparative view.

    This essay assumes that there is significant policy convergence in the activities, and social and economic demands, being made of public universities; a corollary is that institutions, and national ministries, can learn much from each other and benefit greatly by exposure and participation in how institutions can best meet their missions and, ultimately, to improve.[37] Indeed, international cooperation and joint activities can be transformative interactions.[38]

    At the same time, universities, whether a *Flagship* or otherwise, need to focus their international engagement so that it supports and does not detract from its mission. Arguably, there are institutions who have formed various forms of international agreements and programs that are not well focused on this goal and, sometimes, appear to value the volume of engagements than in their value and the costs to the institution – in money, but also faculty time etc. This is not to discourage experimentation and risk taking. But we are in the early stages of volume and various forms of international engagements by universities, by nation's subsidizing, for example, branch campuses.[39]

    In a previous article, Richard Edelstein and I developed a taxonomy of actions and logics used by universities to initiate international activities, engagements, and academic programs.[40] The taxonomy is organized utilizing the concepts of *activity clusters, modes of engagement,* and *institutional logics*. Its purpose is to provide a framework for scholars and institutions to better evaluate and understand what has become a rush by many universities to become more engaged globally.

    The taxonomy of actions and logics is conceptualized as a list of *modes of engagement* that can be organized into seven *clusters of activity* (see Figure 8). *Clusters* include individual faculty initiatives; the management of institutional demography; mobility initiatives; curricular and pedagogical change; transnational institutional engagements; network building; and campus culture, ethos, and leadership. Nine *institutional logics* are described and proposed as possible explanatory variables as to how universities interpret their global environment and justify strategies, policies, and actions they undertake.

Figure 8 - Clusters and Modes of International Engagement

Cluster 1 – Individual Faculty Initiatives
- Research Collaboration
- Teaching and Curriculum Development
- Academic Program Leadership
- Sanctioning Authority

Cluster 2 – Managing Institutional Demography
- International Student Recruitment
- Recruitment of Foreign Academic and Administrative Staff
- Visiting Scholars and Lecturers
- Short Courses, Conferences and Visiting Delegations
- Summer Sessions, Extension Programs and Language Acquisition Programs

Cluster 3 – Mobility Initiatives
- Exchange and Mobility Programs
- Study Abroad Programs, Internships, Service Learning, Research Projects and Practicums

Cluster 4 – Curricular and Pedagogical Change
- Incremental Curricular Change
- Foreign Language and Culture
- Cross-Cultural Communication and Inter-Cultural Competence
- New Pedagogies and Learning Technologies
- Extra-Curricular and Student Initiated Activities

Cluster 5 – Transnational Engagements
- Collaboration and Partnerships with Foreign Institutions
- Dual, Double and Joint Degrees
- Multi-site Joint Degrees
- Articulation Agreements, Twinning, Franchising
- Research Intensive Partnerships
- Strategic Alliances
- Branch Campuses, Satellite Offices and Gateways

Cluster 6 – Network Building
- Academic and Scholarly Networks
- Consortia
- Alumni Networks

Cluster 7 – Campus Culture, Ethos, and Symbolic Action
- An International Ethos: Changing Campus Culture
- Engaged Leadership

E. National Context and Other Variables

The *Flagship University* model purposefully provides an alternative conceptual approach to the rather vague World Class University paradigm that now dominates much of the international discussion, and in academic conferences and journal articles. Yet the goal here is even more ambitious: to support the ethos and an institutional culture among a select group of institutions, self-identified or formally so by national or even regional governments, and rooted in an ethos of national and regional relevancy and supported by internally derived accountability activities and behaviors.

The best universities are ones that are always striving to get better, and not simply in the realm of research, the primary concern of the rhetoric and policy initiatives associated with achieving the World Class designation via international rankings. It's a much broader charge that includes teaching, and public service, and internal mechanisms for supporting quality and excellence.

As in the debate regarding how to construct a WCU, there are national and regional contextual or environmental variables that influence the sustainability or emergence of an institution's desire to claim the *Flagship University* title. These include but are not limited to the following set of interrelated variables:

- *History of Higher Education System Building* - Nations have significantly different histories of how they have approached building their higher education systems, which, in turn, conditions and shapes any effort at higher education reform. As noted previously, if the national political culture has traditionally supported uniformity in funding and missions of its particular network of universities, then any effort to create differentiated missions among existing and oftentimes politically powerful universities will hinder any official government designation of the *Flagship* title and the required financial resources. Yet leading universities in a region or nation, with components of the *Flagship* model, including a breadth of academic programs across the disciplines and a culture and programs focused on public service, may self-identify as a *Flagship*, adopt the language and perhaps use it in helping to shape its institutional culture and the nature of discussions with ministries and the public.

- *Demographic Variables and Economic Growth* – Nation/states with growing populations, often accompanied by increased diversity, including immigrant groups, are in particular need of universities that claim or exude the ethos of the *Flagship University*. Generally, but not always, universities are then operating in an environment of increased enrollment demand and financial resources for higher education institutions. Stable or declining populations and economies create a more difficult environment for the *Flagship* model, but may lead them to a focus on certain aspects of the model, including public service, tech transfer and regional economic development.

- *Gender, Racial and Class Discrimination* – A variable related to demography are those policies and cultural practices that discriminate on the basis of gender, race or class. All societies suffer to some or to a great extent this social malady that excludes or segregate groups not by actual or potential academic ability, but based on societal biases. One extreme is gender discrimination that excludes women from some or all forms of higher education. Severe forms of formal and sometimes informal discrimination essentially bars any nation from achieving a *Flagship University*–or any claims to World Class University status.

- *Democratic Traditions and Stable Governments* – Nations that have strong democratic traditions and widespread faith in the capability and openness of government generally provide the foundation, along with diversified and growing economies, for a viable higher education system and the *Flagship* model. Failed states, or highly centralized and controlling oligarchies create significant limits on the ability of universities to be fully engaged in the *Flagship* ideal, or to make any claim to be a World Class University. At the same time, some nations with strong democratic traditions can also have ministries that are constantly pursuing major changes in accountability regimes and funding models, creating an unstable policy environment requiring increased effort by universities to adjust to external demands as opposed to a focus on internally derived mechanisms for quality assurance and strategies for regional and national relevance.

- *Quality Feeder System of Students* – The path to the university, including the quality of secondary education available to the general population of a nation, is a major factor for buttressing one of the *Flagship Universities* main goals: equitable access and to serve as a robust path for socioeconomic mobility. Almost all universities, including those who are ranked or view themselves as among the elite and best quality, have thus far largely neglected their potential to help shape and influence the quality of their respective national school systems. As outlined in the *Flagship* model, there are a wide array of activities in which universities can be engaged in shaping the curriculum and experience of prospective students, and generally the education of all students, and providing outreach to regional schools systems.

- *Open Societies* – Societies that suffer from extreme forms of discrimination, and those that do not have an ability to provide significant levels of freedom of speech and widely understood standards of academic freedom, are excluding themselves from the pantheon of truly great universities, including the *Flagship University* model. University academics and leaders understand this and have made various attempts to articulate it, and to seek improvements in nations that have significant government controls on information and designated forms of sedition.[41]

- *Attracting and Retaining Talented Faculty* – It is a simple truth: the quality and achievements of a university, *Flagship* or otherwise, is determined by the quality and morale of its faculty. From this fact come other markers of quality and excellence, including top quality graduate students who are increasingly operating in a global market for academic degree programs. But there are many variables that make the process of recruiting and retaining high quality faculty difficult. Particularly in developing economies, there is generally a shortage of Ph.D. programs and graduates trained as both

teachers and researchers. Faculty with the appropriate credentials and abilities are generally more mobile with many educated abroad in more developed economies. They can be difficult to retain when better paying options abroad can seem attractive.

A series of studies developed by the Centre for Higher Education Transformation has outlined the capacity challenges for sub-Sahara African universities due to a significant degree to the lack of faculty with the doctorate, a poor pipeline to supply the growing number of faculty positions, along with other factors including inadequate time and funding for faculty directed research.[42]

The global mobility of talent, whether faculty, staff, or students, poses great opportunities and challenges. What strategies universities can use to create a critical mass of good to top quality academics, and to retain them, varies tremendously, influenced by quality of life issues, pay, teaching loads, and the sense of purpose and vibrancy of the university itself. The *Flagship* model focuses on institutional values and expectations of faculty, and their appropriate role in management and governance. However, unstable governments, constant external policy shifts by ministries, societies with gross forms of discrimination, or lack of academic freedom, all raise the level of difficulty achieving or maintaining an aspiring and talented pool of faculty, and staff.

- *University Management and Governance Capacity* – Much of the *Flagship* model focuses on the operational aspects of an institution, including the appropriate levels of institutional autonomy, the role of faculty in management versus that of the academic administration, expectations for faculty and the process for their advancement, policies related to academic freedom, etc. Yet there are other elements related to the management and governance capacity of institutions that include the quality and respect faculty have for a university's leadership team, and the ability to create a process of consultation and consensus for major policy initiatives, and the spending of resources. Institutions that are constantly reacting to ministerial directives, including where and how funding should be spent, or, to provide another example, that have highly decentralized organizations in which department or schools are seemingly immune to universitywide efforts at reform and resource re-allocation, each reduces the capacity of institution to mature and expand their role in society.

Beyond these contextual variables that affect the conditions for top quality universities, difficulties abound in the *Flagship* model thus far conceived. Admittedly, this is only an exploratory effort to give meaning to the idea of the *Flagship Universities*, hindered in part because it has never been fully articulated and identified even in the US context. To explore and test its weaknesses and strengths, the following outlines a number of questions and partial answers regarding the model and its applicability.

- *Is the Model Relevant in Developed versus Transitional and Developing Economies?* - The *Flagship* model presented here is relevant in both developed and transitional (like Spain or Greece) and developing economies, but with potentially the most impact on nation-states still in the process of expanding and shaping their higher education system. Developed economies have generally a mature mix of existing universities and sometimes, as in Germany and France, a network of highly productive research institutions such as the Max Planck Institutes and the CNRS/*Grands Etablissements* that have, thus far, operated largely separately from the public university sector. This means that the leadership role of designated or aspirational *Flagship Universities* in shaping national education systems is very limited, and politically difficult to achieve. Yet the saliency of regional and national relevancy, the array of academic programs, and policy and activities of institutions outlined still have applicability, necessarily adjusted to the local political environment and sources of funding.

  Developing economies provide greater room for a *Flagship University* to positively influence and help shape the larger national system of education. There are generally more opportunities to build academic programs and for outreach to businesses and local community government agencies.

  But there are also often significant challenges related to funding and, for example in Africa, training, attracting and retaining talented faculty. Low faculty salaries relative to the cost of living correlates with faculty having to find other forms of income – often teaching at another institution. Inadequate university administration organizations and forms of shared governance, or simply poor and inexperienced university leadership, sometimes leads to talented faculty seeking funding and running their research activities in an agency or institute outside of their home university. Another variable related to national context: some institutions operate within cultures with significant levels of corruption. It can be largely external to the institutions, but often is a component of daily life. For example, and particularly where faculty salaries are extremely low relative to the cost of living, students of means may pay for an improved grade in a class. Such conditions pose tremendous difficulties for institutions, even if among the most highly ranked in a nation, to mature into anything like the *Flagship* model.

Some regions of the world also have severe rules and customs constraining the ability of women to gain an advanced education or to enter the labor market as equals with men. Some nations have policies and practices limiting academic freedom and free speech. All of these are variables that make the ideals and practices of the *Flagship University* nearly impossible to achieve.

Institutions that aspire to the *Flagship* model in developing economies, or in transitional economies, also face questions related to the supply and demand for their graduates, and for producing talent that may seek more robust economies and universities in developed economies – the "brain drain" threat that remains a serious policy concern. We still see significant movement of academic talent from the southern to the northern hemisphere. The desire is that the brain drain phenomenon is eventually superseded by the concept of "brain circulation" as talent--in the form of students and faculty, and researchers, and business people–increasingly move between nation-states and economies. We see this pattern among most developed economies, and to a lesser degree among some regions of the world such as Europe. Many nations with developing economies have established programs to attract talented academics, mostly scientists and engineers, and often former citizens, to their top universities. The *Flagship* model, including the profile of characteristics and behaviors, could assist in these efforts, making institutions that espouse its values more attractive.

At the same time, many nations face a problem with providing appropriate employment opportunities for university graduates, like in China, Spain, and even the US. This is a disjuncture that in part reflects the structure of economies. In China, for example, the service sector and other economic sectors in need of advanced education remains relatively small, although growing.[43] In Spain, there are similar challenges, yet with unemployment for university graduates clearly exacerbated by the downturn in the global economy and the slow pace of a recovery in business activity. Yet one of the great stories in the growth of the US economy, and the support of socioeconomic mobility, was that most state governments sought to create a supply of higher education opportunities before their was significant demand, eventually fueling long-term economic growth. I sense that this historical lesson remains salient for today.

- *Are the "National Universities" Found in Many Nations Essentially Flagship Universities?* - Many have aspects of the *Flagship*, but lack sufficient autonomy, or the breadth of academic programs (many top ranked universities are largely focused on science and technology fields), or the public service responsibilities, and internal management capabilities and policies, or some combination of all of these.

  At the same time, National Universities, or a similar set of influential and prestigious universities in a nation, some of which are aspiring to the World Class model in part to gain government grants, are the most likely candidates.

- *Does the Flagship Model Require an Official Government Identification and Funding?* - As indicated previously, the *Flagship* model can be aspirational, helping to guide the behavior of relatively to highly mature universities that see value in its outline of public purpose, and potentially a revision or replacement for the World Class paradigm. There is a growing recognition that greater mission differentiation, in which institutions excel in their area of responsibility as members of a system of higher education, means that not all institutions are alike. The World Class race is just one example of this recognition; more common are indirect efforts at differentiation, like revised funding regimes for research found in England.

  Ultimately, the preferred evolution is to have a certain number of institutions, possibly through a government devised competition, attain the *Flagship* title – amending or revising the World Class infatuation of ministries and some universities. The aspirational, self-identified Flagship is the likely path, the path of least resistance, but perhaps a longer road to expanding the model if there are no additional general operational resources offered to institutions. Some institutions, however, could claim the *Flagship* mantel, offering a strategy or academic plan that appeals to ministries or other funding sources.

- *Can A Private University Become a National Flagship University?* - The *Flagship* ideal has its historical roots in public universities with their primary responsibility, in the US and increasingly internationally, to be inclusive and to focus much of their activity on promoting socioeconomic mobility and economic development. Yet many private institutions, including many of the Catholic-affiliated universities, exude elements of the *Flagship* model and might aspire to some or all of the profile offered previously.

Among the weaknesses of the *Flagship University* model presented here is that it focuses on the culture, behaviors, and internal accountability mechanisms of those institutions that seek the greatest possible positive impact for the societies they serve. In this exploratory effort, I have not sought to generate some elaborate scheme to measure outcomes – what many ministries thirst for. While some sort of framework for assessing the success of a *Flagship* can undoubtedly be created, like all existing outcome

models it could only offer a partial understanding of the complex benefits and costs of what a highly productive university brings to the world.

Instead, my focus here is to point to what I think is true: There exists a void in understanding what defines a leading universities and what their aspirations should be. Thus far, the WCU rhetoric is the driving force, influencing government policy (not all bad) and institutional behaviors (not all bad) that have, in my view, an exceedingly limited vision, indeed a constraining force, on what major national universities should be and can achieve.

The *Flagship University*, and the exploratory profile offered here is a supplemental and, certainly, more holistic model applicable to some sub-group of major universities. While governments and other stakeholders have a legitimate claim to influence and shape the operations and missions of their universities, the *Flagship* model may provide a path for some universities to explain and seek greater institutional identity, to build a stronger internal culture of self-improvement, and, ultimately, a greater contribution to economic development and socioeconomic mobility that all societies seek. For that to happen, some group of institutions will need to embrace on their own terms some version of the model and articulate it clearly and loudly.

APPENDIX 1

Assigned Characteristics of a WCU

Sources: Jamil Salmi, The Challenge of Creating a World Class University," World Bank 2009; Alden, J., and G. Lin. 2004. "Benchmarking the Characteristics of a World-Class University: Developing an International Strategy at University Level." Leadership Foundation for Higher Education, London.

- Has an international reputation for its research;
- Has an international reputation for its teaching;
- Has a number of research stars and world leaders in their fields;
- Recognized not only by other world-class universities (for example, U.S. Ivy League) but also outside the world of higher education;
- Has a number of world-class departments (that is, not necessarily all);
- Identifies and builds on its research strengths and has a distinctive reputation and focus (that is, its "lead" subjects);
- Generates innovative ideas and produces basic and applied research in abundance;
- Produces groundbreaking research output recognized by peers and prizes (for example, Nobel Prize winners);
- Attracts the most able students and produces the best graduates;
- Can attract and retain the best staff;
- Can recruit staff and students from an international market;
- Attracts a high proportion of postgraduate students, both taught and research;
- Attracts a high proportion of students from overseas;
- Operates within a global market and is international in many activities (for example, research links, student and staff exchanges, and throughput of visitors of international standing);
- Has a very sound financial base;
- Receives large endowment capital and income;
- Has diversified sources of income (for example, government, private companies sector, research income, and overseas student fees);
- Provides a high-quality and supportive research and educational environment for both its staff and its students (for example, high-quality buildings and facilities/high-quality campus);
- Has a first-class management team with strategic vision and implementation plans;
- Produces graduates who end up in positions of influence and/or power (that is, movers and shakers such as prime ministers and presidents);
- Often has a long history of superior achievement (for example, the Universities of Oxford and Cambridge in the United Kingdom and Harvard University in the United States);
- Makes a big contribution to society and our times;
- Continually benchmarks with top universities and departments worldwide; and
- Has the confidence to set its own agenda.

Source: Alden

PARTIAL LIST OF REFERENCES

Alden, J., and G. Lin. (2004). "Benchmarking the Characteristics of a World-Class University: Developing an International Strategy at University Level." Leadership Foundation for Higher Education, London.

Altbach, Philip (2005). "A world class country without world class higher education: India's 21st century dilemma," International Higher Education Summer 2005.

Altbach, Philip (2003). "The costs and benefits of world-class universities," International Higher Education (Fall 2003)

Asian Development Bank News (2001). "Viet Nam to Build its First World-Class University." http://www.adb.org/Documents/News/VRM/vrm_200107.asp

Bunting, I. Cloete, N. and van Schalkwyk, F. (2013). *An Empirical Overview of Eight Flagship Universities in Africa: 2001-2011*. Centre for Higher Education Transformation. Cape Town, South Africa)

Business Weekly (2002). "Building top-notch universities." (April 24, 2002) Web-site: http://www.chinadaily.com.cn/chinagate/doc/2002-04/24/content_247215.htm

Chirikov, Igor (2013). "Research Universities as Knowledge Networks: The Role of Institutional Research, *Studies in Higher Education*, Vol. 38. No. 3: 456-469.

Cloete. N. Bailey, T. Pillay, P. Bunting, I. and Maassen, P. (2011). *Universities and Economic Development in Africa*, Higher Education Research and Advocacy Network in Africa (HERANA) Centre for Higher Education Transformation, Cape Town, South Africa: http://chet.org.za/books/universities-and-economic-development-africa-0

Douglass, J.A. (1998). "Shared Governance at the University of California," CSHE Research and Occasional Papers, CSHE.1.98 (March) http://cshe.berkeley.edu/shared-governance-university-california-historical-review;

Douglass, J.A. (2009). "Higher Education's New Global Order: How and Why Governments are Creating Structured Opportunity Markets," CSHE Research and Occasional Papers Series, December: http://cshe.berkeley.edu/publications/publications.php?id=348.

Douglass, J.A. (2009). "The Race for Human Capital" in J. A. Douglass, C.J King and I. Feller (ed.), *Globalization's Muse: Universities and Higher Education Systems in a Changing World* (Berkeley Public Policy Press 2009).

Douglass, J.A. (2012). "China Futurisms: Research Universities and Leaders or Followers?" *Social Research: An International Quarterly*, vol.79, no. 3, pp. 639-688.

Estermann, T., E. Benntot Pruvot & A.L.C. Laeys-Kulik (2013). *Designing strategies for efficient funding of higher education in Europe*. Brussels: European Association of Universities.

Eaton, Judith (2004). "The opportunity cost of the pursuit of international quality standards," International Higher Education (Summer 2004)

Fong, Pang, & Linda Lim (2003). "Evolving great universities in small and developing countries," International Higher Education (Fall 2003)

Frazer, Malcolm (1994). "Quality in Higher Education: An International Perspective," in Diana Green, ed., What Is Quality in Higher Education? London: Society for Research into Higher Education, 1994, pp. 101-111

Huisman, J. (2008). World-class universities. Higher Education Policy, 21(1), 1–4.

Hobbs, Arthur (1997). "World Class University and cultural diversity," Web-site: http://www.math.tamu.edu/~arthur.hobbs/3d.html

Jackman, W. Robert and Randolph M. Siverson (1996). "Ratings the Rating: An Analysis of the National Research Council's Appraisal of Political Science Ph. D. Programs." PS: Political Science and Politics, Vol. 29, No. 2 (Jun., 1996), 155-160.

Jiang, Xueqin (2001). "China's Top 2 Universities Try for 'World Class' Status." The Chronicle of Higher Education Web-site: http://chronicle.com/weekly/v48/i17/17a03301.htm

King, R. (2011). Universities Globally: Organizations, Regulation and Rankings. Cheltenham: Edward Elgar.

King, Christine (2003). "World Class?" Web-site: http://education.guardian.co.uk/worldclass/story/0,14048,1085324,00.html

Knobel, Marcelo, Tania Patricia Simoes, and Carlos Henrique de Brito Cruz (2013). "International Collaborations Between Universities: Experiences and Best Practices," *Studies in Higher Education*, 2013, Vol. 38. No. 3: 405-424.

Lee, Gilton (2000). "Brain Korea 21: A development-oriented national policy in Korean higher education," International Higher Education (Spring 2000)

Lee, E., and Bowen, F. (1971). The Multicampus Univesrity: A Study of Academic Governance. Carnegie Commission on Higher Education. McGraw-Hill Book Co.

Liu, N. C., Wang, Q., & Cheng, Y. (Eds.). (2011). Paths to a World-Class University. Global Perspectives in Higher Education, 43. Rotterdam: Sense Publishers.

Ma, W. (2008). The University of California at Berkeley: An emerging global research university. Higher Education Policy, 21(1), 65–81.

Marginson, S. (2008). "Ideas of a University for the global era." Paper for seminar on Positioning University in the Globalized World: Changing Governance and Coping Strategies in Asia. Centre of Asian Studies, The University of Hong Kong; Central Policy Unit, HKSAR Government; and The Hong Kong Institute of Education, 10-11 December, The University of Hong Kong.

Academy Press. Marginson, S. (2011). Higher Education in East Asia and Singapore: Rise of the confucian model. Higher Education, 61(5), 587–611.

Marshall, J. (2014). "Hollande pledges €2 billion for excellence Initiatives." *University World News*, February 12, Issue No. 307: http://www.universityworldnews.com/article.php?story=20140212135224632

Mohrman, Kathryn (2005). "World-class universities and Chinese higher education reform," International Higher Education (Spring 2005).

Mowery, David C., Richard R. Nelson, Bhaven N. Sampat, and Arvids A. Zeidonis (2004). *Ivory Tower and University-Industry Technological Transfer Before and After the Bayh-Dole Act*, Stanford CA: Stanford University Press.

National Research Council (1995). Research-Doctorate Programs in the United States: Continuity and Change. Washington, DC: National

Ngok, Kenglun & Weiging Guo (2008). The Quest for World Class Universities in China: critical reflections, Policy Futures in Education, Vol 6, No 5.

Niland, John (2000). "The challenge of building world class universities in the Asian region," On Line opinion (Australia's e-journal of social and political debate) Website: http://www.onlineopinion.com.au/view.asp?article=997

Postiglione, G. (2011). The rise of research universities: The Hong Kong University of Science and Technology. In P. Altbach & J. Salmi (Eds.), The Road to Academic Excellence: The Making of World-Class Research Universities (pp. 63–100). Washington: The World Bank.

Proctor, Lita M (2005). "Presentation to the President's commission of the future of FSU," Web-site: http://www.fsu.edu/~future/proctor.html

Proulx, R. (2005). "Criteria for ranking universities with affiliated components" In Liu, Nian Cai, ed. (2005) Proceedings of the First International Conference on World-Class Universities (WCU-1) (Shanghai: Shanghai Jiao Tong University).

Shattock, M. (2013). "University Governance, Leadership and Management in a Decade of Diversification and Uncertainty," *Higher Education Quarterly*, Vol 67, No 2, pp. 217-233.

Stensaker, B. and Vabø, A. (2013). "Re-Inventing Shared Governance: Implications for Organizational Culture and Institutional Leadership, *Higher Education Quarterly*, Vol 67, No 2, pp. 256-274.

Salmi, Jamil, and Alenoush Saroyan (2007). League Tables as Policy Instruments: Uses and Misuses. *Higher Education Management and Policy* 19 (2): 31–68.

Thoenig, J-C. and and Paradeise, C. (2014). "Organizational Governance and Production of Academic Quality: Lessons from Two Top U.S. Research Universities," pending publication *Minerva.*

Tijani, Ibikunle H. (2013). "Developing World Class Universities in Nigeria: Challenges, Prospects and Implications," paper delivered at the 2nd FUNAI Leadership Development Seminar, Federal University Ndufu-Alike Ikwo, Ebonyi State, Nagieria, June 5.

Vest, Charles (2005). "World class universities: American lessons," International Higher Education (Winter 2005).

Volkwein, Fredericks J., Ying Liu, and James Woodell (2012). "The Structure and Functions of Institutional Research Offices," in Howard, Richard D., Gerald W. MacLaughlin, and William E. Kight (ed), The Handbook of Institutional Research, San Francisco: Josse-Bass.

Wang, Yingjie (2001). "Building the world-class university in a developing country: universals, uniqueness, and cooperation." Asia Pacific Education Review (2001), Vol. 2, No.2.

Wende, M. C. van der. (2009). European Responses to Global Competitiveness in Higher Education. Research and Occasional Paper Series, No.7, 2009. Berkeley: Center for Studies in higher Education, University of California: http://cshe.berkeley.edu/european-responses-global-competitiveness-higher-education.

Wende, M. C. van der (2014 forthcoming). On Mergers and Missions: Implications for Institutional Governance and Governmental Steering. In: Global Outreach of World-Class Universities: How It is Affecting Higher Education Systems. Centre for World-Class Universities. Jiao Tong University, Shanghai. Sense Publishers.

Williams, R., G. de Rassenfosse, P. Jensen & S. Marginson (2013). U21 Ranking of National Higher *Education Systems 2013*. University of Melbourne. Better to quote paper which sets it all out and is now published as (same authors) "The Determinants of Quality National Higher Education Systems", *Journal of Higher Education Policy and Management*, Vol. 35, No. 6, 2013, pp. 599-611

ENDNOTES

[1] Offering a similar critique of rankings and the WC university model, Simon Marginson and Ma Wanhua have offered the idea of "the criterion-referenced notion of the "Global Research University" (Ma, 2008; Marginson, 2008), which allows for the material elements underpinning the performance of institutions to be observed and measured. Moreover, there is no limit to the number of universities (and systems) that can acquire these qualities, for the tag "global research university" is not confined to the top 50 or 100 institutions." See Marginson, S. (2008). "Ideas of a University" for the global era. Paper for seminar on Positioning University in the Globalized World: Changing Governance and Coping Strategies in Asia. Centre of Asian Studies, The University of Hong Kong; Central Policy Unit, HKSAR Government; and The Hong Kong Institute of Education, 10-11 December, The University of Hong Kong; Ma, W. (2008). The University of California at Berkeley: An emerging global research university. Higher Education Policy, 21(1), 65–81.I see value in this revision to the WC model, but it remains largely a research focused concept of what a leading university should be, whereas the Flagship concept is a broader view of the appropriate the ideals of an institutions mission and role in society.

[2] In the US, there have been a long history of academic efforts at ranking the quality of institutions, or graduate programs. The arrival of commercial rankings came in 1985. That year, seeking new forms of income, the *U.S. News & World Report* published its first "America's Best Colleges" report -- the most widely quoted of their kind in the United States. Since 2003, Shanghai Jiao Tong University has produced the *Academic Ranking of World Universities*, analyzing the top universities in the world on quality of faculty (40%), research output (40%), quality of education (10%) and performance vs. size (10%).[14] Its ranking is exclusively of research universities, mainly in the empirical sciences. The *Times Higher Education* publishing its first annual *Times Higher Education–QS World University Rankings* in November 2004. On 30 October 2009 *Times HigherEducation* broke with QS, then its partner in compiling the Rankings, and signed an agreement with Thomson Reuters to provide the data instead.

[3] Francisco O. Ramirez and Dijana Tiplic provide an analysis of the growth in the focus on WCU in higher education journals over time, with a significant jump in the use of World Class University beginning in 2006. Francisco O. Ramirez and Dijana Tiplic (2013). In Pursuit of Excellence? Discursive Patterns in European Higher Education Research," *Higher Education*, published on-line 16 November: http://link.springer.com/article/10.1007/s10734-013-9681-1

[4] U-Multirank is based on a proposal in the Commission Communication on modernisation of Europe's higher education systems (COM (2011) 567 final) [1] (accompanied by Staff Working Document (SEC (2011) 1063 final), p. 5-6) and is implemented by a consortium of research organisations – CHERPA Network (Consortium for Higher Education and Research Performance Assessment) under a two-year project funded by the European Commission. A preparatory study "Design and Testing the Feasibility of a Multidimensional Global University Ranking" concluded in June 2011 demonstrated the feasibility of this project.

[5] "[A]s the world continues to flatten and specialize, profile databases must broaden in scope, deepen in content, and become increasingly flexible," states Thomson Reuters project website. In some ways this reflects a similar effort to move away from the computational rankings of institutions toward program and other sub-unit forms of analysis[5] for the European Higher Education Area noted previously.See http://ip-science.thomsonreuters.com/globalprofilesproject/

[6] Universitas21 and the Melbourne Institute of Applied Economics and Social Research, *U21 Ranking of National Higher Education Systems 2013,* University of Melbourne, May 2013: http://www.universitas21.com/article/projects/details/152/u21-ranking-of-national-higher-education-systems

[7] The Times Higher Education World Rankings claim that it is, "the only global university performance tables to judge world class universities across all of their core missions - teaching, research, knowledge transfer and international outlook. The top universities rankings employ 13 carefully calibrated performance indicators to provide the most comprehensive and balanced comparisons available, which are trusted by students, academics, university leaders, industry and governments."

[8] The production and publication of academic knowledge has distinct geographies. This map uses data from the Web of Knowledge Journal Citation Reports (JCR) from 2009, allowing us to measure the locations and impact factors of journals. The JCR Science Edition contains references from over 7,300 journals in science and technology. The JCR Social Sciences edition contains references from over 2,200 journals in the social sciences. A reference for each of the 9,500 journals in the sciences and social sciences was downloaded to extract the journal's location. A cartogram is used in which each country is represented by a box that is sized according to the number of journals published from within it. The shading of each country indicates the average impact factor (a measure of how often articles within a journal are cited) of journals within that country.

[9] Germany's Excellence Program, see: http://www.germaninnovation.org/research-and-innovation/higher-education-in-germany/excellence-initiative

[10] Ibikunle H. Tijani, "Developing World Class Universities in Nigeria: Challenges, Prospects and Implications," paper delivered at the 2nd FUNAI Leadership Development Seminar, Federal University Ndufu-Alike Ikwo, Ebonyi State, Nagieria, June 5, 2013; "Guidelines for raising Nigerian universities to world class status," Report submitted to the National Universities Commission (NUC) and the Association of Vice Chancellors of Nigerian Universities (AVCNU), September 27-29, 2010

[11] Jannuzi, Charles (2008). "Japan Aims for 'World Class' Universities," Japan Higher Education Outline, Feb 5, 2008: http://japanheo.blogspot.jp/2008/02/japan-aims-for-world-class-universities.html; Kenglun Ngok & Weiging Guo, The Quest for World Class Universities in China: critical reflections, Policy Futures in Education, Vol 6, No 5, 2008.

[12] Eugene Vorotnikov, "Government approves universities for world-class bid," University World News, September 11, 2013 Issue No. 287: http://www.universityworldnews.com/article.php?story=20130911144451887;
Smolentseva, Anna. 2010. —In Search for World-Class Universities: The Case of Russia.‖ *International Higher Education* 58: 20–22.

[13] Among the publications sponsored by the World Bank is a professed "guide" to build a "research university from scratch." See Philip G. Altbach and Jamil Salmi, *The Road to Academic Excellence: The Making of World-Class Research Universities*, Directions in Development Series,

[14] Held in Shanghai and supported by the Academic Ranking of World Universities based at Shanghai Jiaotong University, the 5th International Conference on World-Class Universities occurred on November 3-8, 2013. Participants general come from campuses that do not rank among the top universities under the ARWU ranking. See: http://www.shanghairanking.com/wcu/cp.html

[15] Jamil Salmi, The Challenge *of Establishing World-Class Universities,* Directions in Development, World Bank: Washington D.C., 2009; Deem, R., K. H. Mok, and L. Lucas. 2008. Transforming Higher Education in Whose Image? Exploring the Concept of the 'World-Class' University in Europe and Asia. *Higher Education Policy* 21 (1): 83–97.

[16] In a paper presented in 2006 attempting to help define what a World Class University is, Henry M. Levin, Dong Wook Jeong and Dongshu Ou at Teachers College, Columbia University, noted the subjectivity of the title, noting for example: "Although teaching, service to society, and research are all emphasized in the statements on what makes a great university, reputational ratings seem to be limited largely to the research dimension on the basis of our statistical analysis." Henry M. Levin, Dong Wook Jeong and Dongshu Ou, "What is a World Class University?", Paper presented at the Conference on Comparative & International Education Society, Honolulu, Hawaii, March 16, 2006: http://www.tc.columbia.edu/centers/coce/pdf_files/c12.pdf

[17] *Ibid.,* Jamil Salmi, a major proponent of the WCU model writes warnings: "Avoid overdramatization of the value and importance of world-class institutions and distortions in resource allocation patterns within national tertiary education systems. Even in a global knowledge economy, where every nation, both industrial and developing, is seeking to increase its share of the economic pie, the hype surrounding world-class institutions far exceeds the need and capacity for many systems to benefit from such advanced education and research opportunities, at least in the short term. Indeed, in some countries where the existing tertiary education institutions are of higher quality than the economic opportunities available to graduates, excellent tertiary education may exacerbate existing brain-drain problems."

[18] Salmi, Jamil, and Alenoush Saroyan (2007). League Tables as Policy Instruments: Uses and Misuses. *Higher Education Management and Policy* 19 (2): 31–68

[19] There are examples of serious discussions within major universities on how to absorb the meaning of rankings and the WC nomenclature. The University of Cape Town. Danie Visser and Marilet Sienaert outline how "the University of Cape Town has taken a rather "soft" approach. Aware of the university community's varied reactions and opinions to university rankings, the university helped its faculty to understand the emerging global university rankings, including goals and philosophies behind the rankings, biases, strengths and weaknesses, as well as rankings' impact on funders and policy makers. The university actively engaged the faculty in identifying relevant issues and indicators in their specific departments, and prompted them to understand that rational analysis of rankings provides the means of evaluating their own performance in relation to the university's goals. Through this practice, the university decided upon four strategies and principles that will specifically enable it as a university in the global south to achieve excellence in an increasingly globalized and competitive world, these being an increasing focus on its specific location in Africa, increasing international collaboration, increasing research visibility and increasing support

to researchers at all levels." See Danie Visser and Marilet Sienaert, "Rational and Constructive Use of Rankings: A Challenge for Universities in the Global South," Qi Wang, Ying Cheng and Nian Cai Liu (Ed.) *Building World-Class Universities: Difference Approaches to a Shared Goal, Sense Publishers, 2012.*

[20] Philip G. Altbach and Jamil Salmi (2011), *The Road to Academic Excellence: The Making of World-Class Research Universities*, Directions in Development Series. The World Bank.

[21] Based at the ARENA Centre for European Studies at the University of Oslo, the research project is entitled European Flagship Universities: Balancing Academic Excellence and Social Relevance. See: http://www.sv.uio.no/arena/english/research/projects/flagship/

[22] The HERANA project is supported by funding by the Ford Foundation and the Carnegie Corporation and includes the University of Botswana, Cape Town, Dares Salaam (Tanzania), Eduardo Mondlane University (Mozambique), University of Ghana, Makerere University (Uganda), Mauritius and the University of Nairobi (Kenya). Beyond developing comparative data and analysis, has the goal as, "to disseminate the findings of the research projects, better co-ordinate existing sources of information on higher education in Africa, develop a media strategy, and put in place a policy dialogue (via seminars and information technology) that facilitates interactions between researchers, institutional leaders and decision-makers." See: http://chet.org.za/programmes/herana/

[23] In an important analysis of the role of universities in socio-economic development in developing economies in Africa, a study by the Center for Higher Education Transformation notes, "A condition for effective university contributions to development is the existence of a broad pact between government, universities and core socio- economic actors about the nature of the role of universities in development." Cloete. N. Bailey, T. Pillay, P. Bunting, I. and Maassen, P. (2011). *Universities and Economic Development in Africa*, Higher Education Research and Advocacy Network in Africa (HERANA) Centre for Higher Education Transformation, Cape Town, South Africa: http://chet.org.za/books/universities-and-economic-development-africa-0

[24] Bunting, I. Cloete, N. and van Schalkwyk, F. (2013). *An Empirical Overview of Eight Flagship Universities in Africa: 2001-2011*. Centre for Higher Education Transformation. Cape Town, South Africa).

[25] Knobel, Marcelo, Tania Patricia Simoes, and Carlos Henrique de Brito Cruz (2013). "International Collaborations Between Universities: Experiences and Best Practices," *Studies in Higher Education*, 2013, Vol. 38. No. 3: 405-424.

[26] David C. Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids A. Zeidonis, *Ivory Tower and University-Industry Technological Transfer Before and After the Bayh-Dole Act* (Stanford CA: Stanford University Press, 2004).

[27] In 1957, Justice Felix Frankfurter set an anchor for academic freedom in the U.S., drawing from language of South African educators then fighting their nation's ban on education of whites and non-whites in the same university: *". . . It is the business of a university to provide that atmosphere which is most conducive to speculation, experiment and creation. It is an atmosphere in which there prevail `the four essential freedoms' of a university - to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study."* Sweezy v. New Hampshire 354 U.S. 234 (1957).

[28] For a brief history of share governance at the University of California, see John Aubrey Douglass, "Shared Governance at the University of California," CSHE Research and Occasional Papers, CSHE.1.98 (March 1998) http://cshe.berkeley.edu/shared-governance-university-california-historical-review.

[29] This is one sample statement drawn from Columbia University, but many similar statements can be found at major research universities.

[30] "Hefei Statement on the Ten Characteristics of Contemporary Research Universities" joint statement of the Association of American Universiities, Group of Eight, League of European Research Universities, Chinese 9 Universities October 10, 2013: See http://www.leru.org/files/news/Hefei_statement.pdf

[31] Jean-Claude Thoenig and Catherine Paradeise, "Organizational Governance and Production of Academic Quality: Lessons from Two Top U.S. Research Universities," pending publication *Minerva.*

[32] *Ibid.*

[33] This outline of criteria is adopted from the University of California's Academic Personnel Manual (APM), section 120.

[34] See http://policy.ucop.edu/doc/1220367/BFB-G-39

[35] Volkwein, Fredericks J., Ying Liu, and James Woodell (2012). "The Structure and Functions of Institutional Research Offices," in Howard, Richard D., Gerald W. MacLaughlin, and William E. Kight (ed), The Handbook of Institutional Research, San Francisco: Josse-Bass.

[36] Igor Chirikov, "Research Universities as Knowledge Networks: The Role of Institutional Research, *Studies in Higher Education*, 2013, Vol. 38. No. 3: 456-469.

[37] John Aubrey Douglass (2009). "Higher Education's New Global Order: How and Why Governments are Creating Structured Opportunity Markets," CSHE Research and Occasional Papers Series, December: http://cshe.berkeley.edu/publications/publications.php?id=348; also John Aubrey Douglass, "The Race for Human Capital" in J. Douglass, C.J King and I. Feller (ed.), *Globalization's Muse: Universities and Higher Education Systems in a Changing World* (Berkeley Public Policy Press 2009).

[38] For a discussion of models for international consortia, see "Marc Tadaki and Christopher Tremewan, "Reimagining Internationalization in Higher Education: International Consortia as Transformative Space? *Studies in Higher Education*, Vol. 38. No. 3: 367-387.

[39] See Richard Edelstein and John Aubrey Douglass "The Truth About Branch Campuses" with Richard Edelstein, *Chronicle of Higher Education*, February 27, 2012: http://chronicle.com/article/To-Judge-International-Branch/130952/

[40] Richard J Edelstein and John Aubrey Douglass, "Comprehending the International Initiatives of Universities: A Taxonomy of Modes of Engagement and Institutional Logics," Research and Occasional Papers Series (ROPS), Center for Studies in Higher Education, CSHE 19.12 (December 2012): http://cshe.berkeley.edu/publications/publications.php?id=426; a version published on-line on Global Higher Education and *Inside Higher Education*, March 24, 2013: http://www.insidehighered.com/blogs/globalhighered/internationalization-taxonomy-engagement-and-institutional-logic.

[41] "Hefei Statement on the Ten Characteristics of Contemporary Research Universities" joint statement of the Association of American Universities, Group of Eight, League of European Research Universities, Chinese 9 Universities October 10, 2013: See http://www.leru.org/files/news/Hefei_statement.pdf

[42] Nico Cloete *et al* (2011). *Universities and Economic Development in Africa*, Higher Education Research and Advocacy Network in Africa (HERANA) Centre for Higher Education Transformation, Cape Town, South Africa.

[43] For a discussion of the challenges facing Chinese higher education, see John Aubrey Douglass, "China Futurisms: Research Universities and Leaders or Followers?" *Social Research: An International Quarterly*, vol.79, no. 3 Fall 2012, pp. 639-688: http://socialresearch.metapress.com/link.asp?id=bv6l4755157834u4 ; a version published in *University World News* Dec 16, 2012 Issue No 252: http://www.universityworldnews.com/article.php?story=20121212160450595