Asian Journal of Innovation and Policy (2016) 5.1: 019-034
DOI: http//dx.doi.org/10.7545/ajip.2016.5.1.019

The Role of Flagship Universities in Developing Countries: The Case of the University of the Philippines

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Abstract In the face of globalization and other recent developments, flagship universities in developing countries must deal with significant challenges to come up with new strategies to serve their respective countries better. They have to confront the issue of international university ranking and its implication on social relevance. They have to remain at the forefront of research as research universities and must lead in promoting internationalization of higher education. More importantly, flagship universities must engage actively in industry-academe-government collaboration as a necessary approach towards strengthening their nations' innovation systems. This paper is at best conceptual and takes a cursory look at the role of flagship universities in developing countries, citing the case of the University of the Philippines and its strategy towards fulfilling its role as the country's only national university.

Keywords Flagship universities, university-government-industry collaboration, innovation

I. Introduction

Universities worldwide have played an important role in the creation of new knowledge and the generation of human capital that makes for more innovative societies (Dan, 2012; Couchman et al., 2008; Clark, 1998; Berács, 2014). For developing countries, globalization and the increased focus on internationalization have created greater challenges compared perhaps to more advanced economies, resulting in greater expectations from higher education institutions, more so from flagship universities, which are assumed to receive substantial support from the national government. There is tremendous pressure for these institutions to formulate new strategies, not only to make themselves sustainable, but also to be of better service to their respective countries.

Submitted, October 27, 2015; 1st Revised, March 14, 2016; Accepted, April 1, 2016
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The purpose of this paper is to highlight the major responsibilities of flagship universities in developing countries, citing the specific case of the University of the Philippines. This article is essentially conceptual and should be able to provide a basis for future research including the analysis of information from flagship universities in other developing nations.

II. Defining Flagship

Literally, a flagship is a lead ship in a fleet of vessels, typically the first, the largest, the fastest, and the most heavily armed or best known. The term has been used liberally to refer to anything that is considered the finest or the most important in a series, network or chain (Merriam-Webster, 2015). In the context of higher institutions of learning, the College Board of America defines flagship universities as "the best known institutions in the state, noting that they are generally the first to be established and are frequently the largest and most selective, as well as the most research-intensive public universities." Because of this, a flagship university faces the challenge of meeting the expectations not only of the government that supports it, but more so by other educational institutions, particularly public institutions of higher learning, and even the private sector, which assumes that new knowledge generated by the university can be passed on to industry.

III. Responsibilities of Flagship Universities

In 1957, Richard Musgrave introduced the concept of "merit goods," defined as goods and services that are socially desirable, but which the government expects will be under-consumed and likely to be under-produced as well (Koch, 2008). Merit goods must therefore be subsidized or given out for free so that consumption would not be dependent on the public's ability to pay. Examples of such merit goods are health care, welfare services, public parks, and education.

Higher education is deemed to be a merit good because of its substantial contribution to human resource development and because of the part it plays in building the appropriate infrastructure, culture and norms for economic, social, and technological progress. It is for this reason that, generally, flagship universities receive heavy financial support from the government. Although there are indications of diminishing state funding for flagship public universities (Koch, 2008), the expectations from these higher education institutions remain. As a result, Koch argued that the decline in relative

support of public flagship universities has, in fact, provided the push for these universities to adopt more innovative strategies and business models that would enable them to fulfill their responsibilities.

1. Flagship Universities and World Rankings

In his article entitled "The Flagship University: A Response to the World Class University Paradigm," Dr. John Aubrey Douglass, senior research fellow at the University of California Berkley, expressed a provocative view. He said,

> "The relatively recent phenomenon of international rankings is fixated on a narrow band of data and prestige scores … 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 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 systems that have weak internal quality and accountability policies and practices … But it also induces gaming by university leaders and arguably is pushing institutional behavior towards a vague model of global competitiveness that is not in the best interests of the nations they serve …" (Douglass, 2014)

Douglass is promoting the concept of the flagship university as a "more relevant ideal." According to him, a flagship university should serve as a model for both public and private institutions of higher learning, possibly influencing their perceptions, behavior and goals, as well as those of relevant government instrumentalities as it strives to fulfill its role in society. However, Douglass quickly emphasizes, and I agree with him, that a flagship university should not ignore international standards of excellence. Nevertheless, it should broaden its focus beyond research and other indicators of ranking regimes. Although we recognize that flagship universities are research-intensive institutions or at least in the process of becoming such, they should be conscious that theirs are wider goals and larger responsibilities.

I am reminded of a Chinese proverb: "He who rides a tiger is afraid to dismount." This figure of speech describes a situation in which one is confronted with difficult choices. Riding on the back of a tiger, one can hang on for dear life or get off and risk being killed. Philip Hallinger (2014) uses

this same metaphor to explain the case of East Asian universities as they struggle to survive the world university rankings game, while also striving to fulfill the real needs of university development and social relevance. According to him, "pressure to perform on the world university rankings is carrying universities towards goals that may threaten long-term capacity development and societal contribution of many of the region's universities. Yet, the alternative – jumping off the back of the tiger and ignoring the rankings – is potentially even more dangerous."

Many have cited the pitfalls of obsession with university rankings. While international rankings cannot and should not be ignored, we have to be aware that they do not measure "all that is great about universities and their true worth to society" (Hallinger, 2014). It therefore becomes the responsibility of a country's lead universities to help shift the paradigm of institutional quality towards the ability to help in improving the nation's system of higher education and subsequently in advancing social transformation and addressing national problems.

Returning to our tiger, I am a firm believer that with enough courage, confidence and skill, we may be able to steer the tiger towards a desired destination. Flagship universities, particularly in developing countries, should work together to try to influence the rules of the rankings game to reflect the realities and needs of university growth and social involvement.

2. Flagship Universities and Social Responsibility

Dr. Jose V. Abueva, 16th President of the University of the Philippines (1987-1993) proposed critical roles for the University in order to strengthen its outreach, influence and effectiveness (Abueva, 2008). Following his discourse, we may apply these same roles to flagship universities in developing countries.

A flagship university should serve as venue for high-level discussion and debate on major issues confronting the nation, as well as options for addressing these problems. For developing countries, these issues would most likely include: poverty and injustice, peace and order, increasing population, depletion of natural resources, destruction of the environment, tensions among social classes, inadequate social services, shortcomings of education, and underdevelopment of science and technology. Faculty and other scholars of the flagship university should be able to serve as informed critics on topics of national, regional and global significance, and should be able to offer fresh and innovative perspectives for resolving persistent issues.

A flagship university should be alert to emerging issues that could have relevance to national development, but are not yet in the consciousness of or

are not being taken seriously by policy makers. It should be able to stimulate discussion among institutions of higher learning by promoting alternative models, new concepts, new paradigms and methodologies to guide thought and action towards the appropriate reforms.

3. Flagship Universities as Research Universities

Flagship universities should be recognized as academic leaders, in both research and education. Specifically and as mentioned earlier, a flagship university is a research-intensive institution that can produce both basic and applied research, and can effectively transfer knowledge so that policy formulators and decision makers could use such knowledge for economic and social progress. For developing countries, research universities play an important role since they are often the only link to the international knowledge network (Altbach, 2007). And they can bring international scientific knowledge to bear upon local issues and help in developing various sectors of the local economy.

As research universities, flagship institutions should also serve as centers of culture and critique, having the highest concentration of relevant expertise (Altbach, 2007). And while the government and other political instrumentalities may not be too keen on being the subject of criticism, such is of great value for the development of civil society.

A significant part of any university's role in social transformation begins with human development. The Organization for Economic Cooperation and Development (OECD), for instance, noted that universities have a number of specific functions with respect to social and cultural systems (Nafukho, 1999). Nafukho's study of the role of universities in promoting collaboration between social and pure scientists showed that universities in Kenya can play a significant part in ensuring that national needs for human development are met, and that university research can actually help the country in assimilating itself into the global arena.

4. Flagship Universities and Internationalization

Flagship universities should be engines of internationalization. While national development and societal relevance are at the core of a flagship university's agenda, it should be cognizant of the fact that increasingly, research activities are being performed cooperatively at the global level. Internationalization of higher education and higher education institutions is now a strategic priority of prominent universities worldwide (Horta, 2009). Therefore, it is incumbent upon a country's flagship universities to take the

lead in promoting international exchanges of faculty, researchers and students, not only within their own institutions, but among other institutions of higher learning in the country and in the region, as well.

5. Flagship Universities, University-Industry-Government Linkages and the Innovation Process

Strengthening a nation's innovation system requires cooperation and commitment from three main players: the government, the private sector, and educational institutions. Technological upgrading is particularly critical in developing countries, so much so that cooperation among the key actors should not be limited to research collaboration, but should extend to include consulting, technical assistance, education/training, policy review and formulation, among others (Intarakumnerd and Schiller, 2009). In other words, flagship universities should endeavor to bring together important departments, units and personalities from government, industry and higher educations institutions, both public and private, in order to formulate a comprehensive program to build a national innovation system that fosters harmonized efforts among all sectors.

Innovativeness is deemed to be a significant factor in economic growth. The Triple Helix model introduced by Etzkowitz and Leydesdorff in the early 1990s (Gawel, 2013; Harryson, et al., 2008) assumes that innovation is the result of university-government-industry partnership and collaboration. In the knowledge economy, universities, particularly, have a distinct and substantial role to play in this relationship.

By the nature of academic institutions, they have the greatest potential in contributing to the technological development of their respective nations. Universities engage in education and knowledge production, and facilitate knowledge flow. This is even more significant if we consider the impact that flagship universities in developing countries can have on enhancing the innovation process. Petruska (2002) recommends that the influence of flagship universities could be strengthened through the following: (1) improving information flow so as to channel knowledge generated by R&D projects to the private sector, (2) establishment of a cooperative network among universities and private companies to facilitate joint projects, (3) adoption of a strategic development approach, with clearly identified targets, and (4) adoption of a "customer orientation" to facilitate communication with the private sector and ensure responsiveness to "industrial" problems.

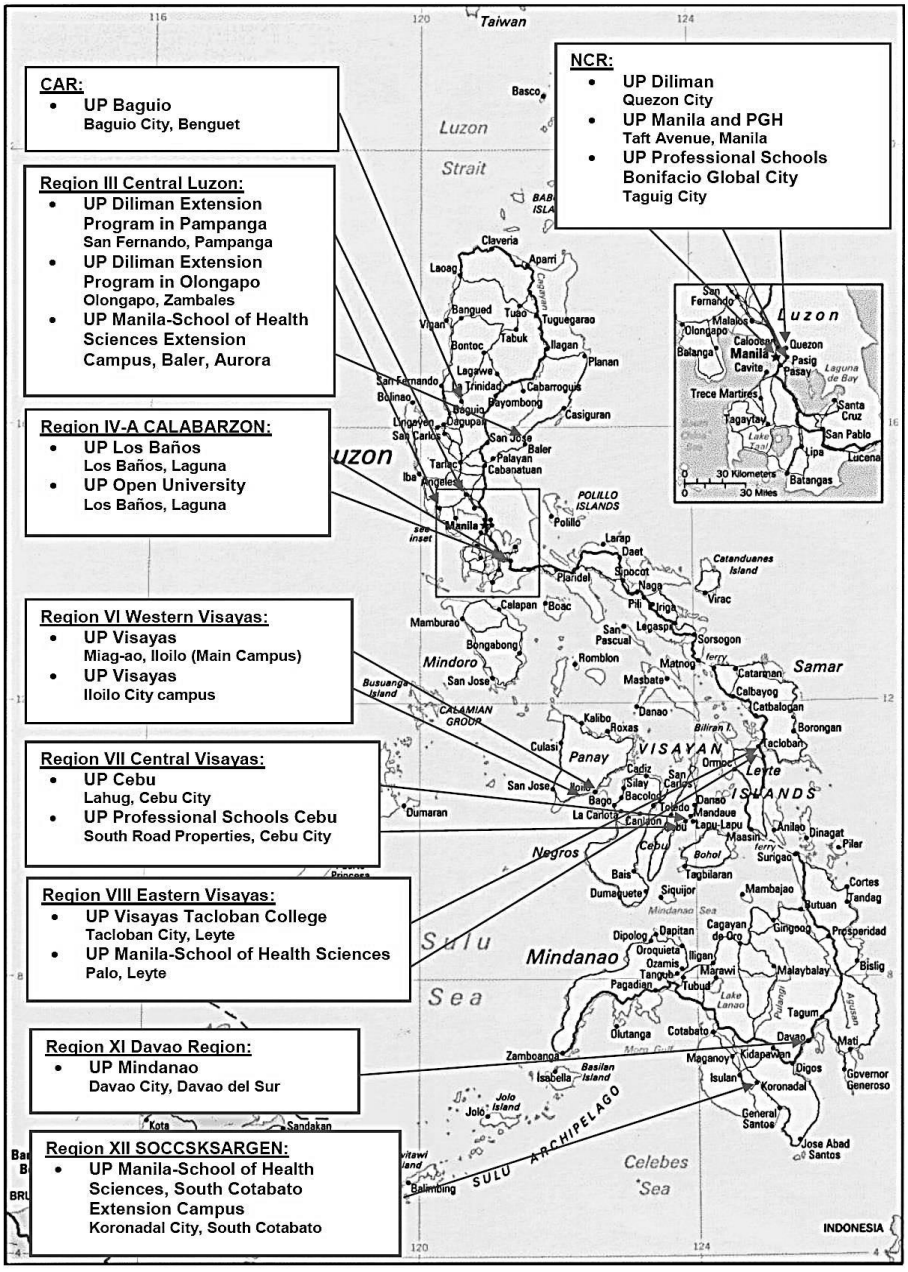
IV. The Challenges Confronting Flagship Universities

Below are just a few of the most important challenges and concerns that flagship universities must face, particularly in developing countries.

- The need for extensive commitment and support from the national government in terms not only of funding, but also of an enabling regulatory and policy environment that would facilitate the flow and release of resources to lead universities in order to ensure that they are able to carry out their mandates effectively and efficiently.
- The need to re-orient the mindset of university constituents and acknowledge that flagship universities should not be competing with other higher education institutions in their countries, but instead should serve as a model and resource, with the aim in view of uplifting the higher education system within the country.
- The difficulty of universities in developing countries "to enter an existing market already occupied by well-developed education systems and universities" (Lee, 2013). While, flagship universities are lead institutions in their respective countries, it is often the case that they are not recognized as "world class." It is crucial that these universities build and maintain a top-quality academic community that could generate knowledge and produce scientific and/or technological innovations that are both relevant to national development and recognized as outstanding internationally.
- The need to work on an optimal allocation of energies between improving international reputation and assuming a more significant role in nation building, social transformation and economic development, while ensuring its own growth as an institution of higher learning.

V. The University of the Philippines

The University of the Philippines (UP) is the country's national university. There is no doubt that it is one of the most influential institutions in the Philippines. Established in 1908, it is known to produce scientific and artistic outputs, which have both national and international recognition. From a small campus in old Manila with only seven colleges, it has expanded into seven constituent universities (CUs) and one autonomous college located in 17 campuses throughout the Philippine archipelago (Figure 1).



Source: UP Statistics 2014, UP System Budget Office

Figure 1 University of the Philippines system: location map

Academic Year 2013-2014 recorded 60,897 students, of which 44,358 and 16,539 were undergraduate and graduate, respectively. As of 2014, UP had 233 undergraduate programs, 212 masters programs, and 81 doctoral programs, for a total of 526 academic degree programs. The same period registered 5,405 regular and non-regular faculty members; 1,194 research/professional staff; and 8,760 administrative personnel. (Figure 2)

Under the UP Charter of 2008 (Republic Act 9500), the University is mandated to: (1) perform its unique and distinctive leadership in higher education and development; (2) lead in setting academic standards and initiating innovations in teaching, research, and faculty development; (3) provide opportunities for training and learning in leadership; (4) serve as a graduate university, providing advanced studies; (5) serve as a research university; (6) lead as a public service university for the government, the private sector and civil society; and (7) serve as a regional and global university in the Asia Pacific region and around the world.

NO. OF STUDENTS AY 2013-2014	SEVEN (7) CONSTITUENT UNIVERSITIES	
Undergraduate **44,358**	**UP DILIMAN**	**3 campuses**
Graduate **16,539**	**UP LOS BAÑOS**	**1 campus**
FACULTY (regular & non-regular) **5,405**	**UP MANILA**	**4 campuses**
RESEARCH STAFF **1,194**	**UP VISAYAS**	**3 campuses**
ADMIN STAFF **8,760**	**UP OPEN UNIVERSITY**	**1 campus** *10 learning centers* *15 testing centers*
ACADEMIC PROGRAMS 526	**UP MINDANAO**	**1 campus**
	UP BAGUIO	**1 campus**
	ONE (1) AUTONOMOUS COLLEGE	
	UP Cebu	**2 campuses**
	ONE (1) CAMPUS UNDER UP SYSTEM	
	UP BONIFACIO GLOBAL CITY	**1 campus**

Figure 2 UP statistics

In support of this mandate and the President's vision of "a great university, taking a leadership role in the development of a globally competitive Philippines," UP Strategic Plan 2011-2017 was formulated shortly after Alfredo E. Pascual, 20th President of the University, assumed office in February 2011 (Figure 3). This plan is guided by the principle One University, One UP, highlighting the need to harmonize and unify initiatives to counter the complexities faced by a geographically challenged institution.

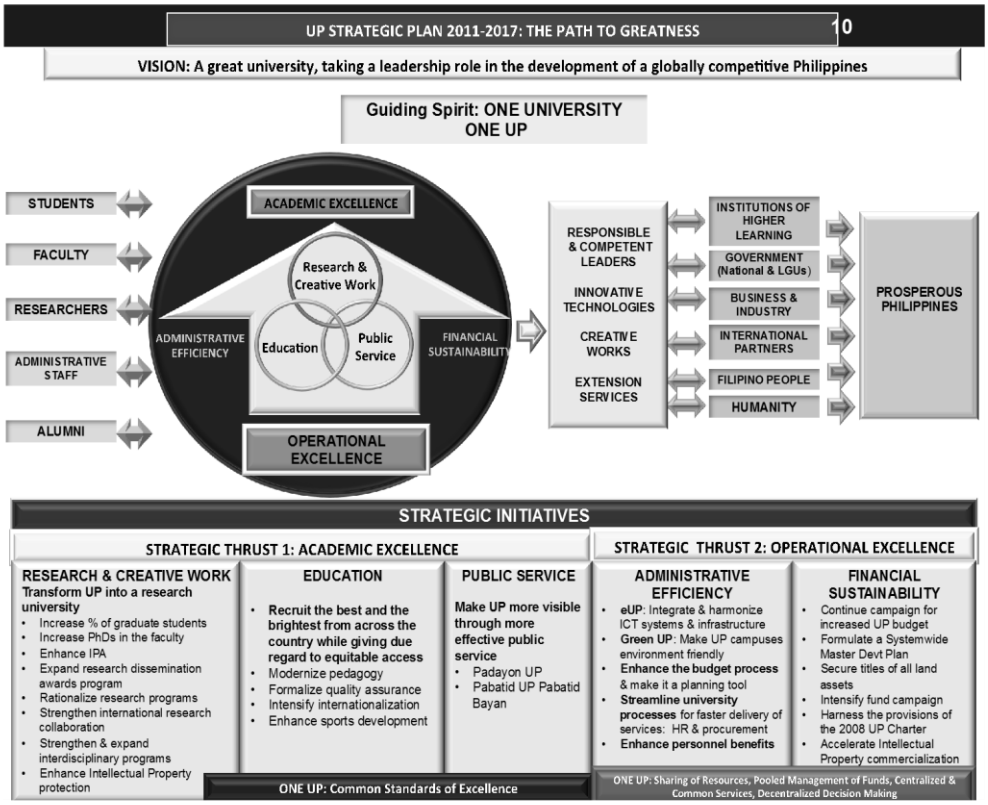


Figure 3 UP strategic plan 2011-2017

The prominence of *academic excellence* is evident in the strategic plan, as is *operational excellence*; these two being UP's core thrusts. Academic excellence is achieved through the University's three primary functions: education, research and creative work, and public service. Operational excellence, on the other hand is anchored on administrative efficiency and financial sustainability.

1. UP and World Rankings

The present UP Administration has given world rankings significant attention, and continues to exert considerable effort to meet the information requirements of ranking institutions. The University's key performance indicators (KPIs) are aligned with international rankings: research

quality/excellence, research productivity, research influence, research income, research translation, international outlook, and campus diversity. The corresponding metrics have likewise been formulated to facilitate compliance with world quality rankings.

Unfortunately, the University has not assumed a more critical view of how rankings are made and has chosen to submit to current rules. Not to defend the University's position, but this may be the case as we are practically new to this game, considering that previous UP administrations have chosen to take a more passive role with respect to rankings.

I remain of the opinion that sooner than later, the University will take a more thoughtful stand on the matter of rankings, as we focus greater attention on issues of national and regional significance. Eventually, I see UP taking the lead in evolving and promoting indicators that are truly relevant and in the best interest of developing countries.

2. UP and Social Responsibility

As the national university, UP is mandated to serve as a public service university for the government, the private sector, and civil society. In line with this mission, UP's Strategic Plan includes two initiatives, namely: (1) Padayon UP (onward UP) and (2) Pabatid UP-Pabatid Bayan (Inform UP-Inform the Public).

Padayon UP is an integrated approach to public service, meant to provide strategically coordinated and system-directed public service. To carry this out, the University created the UP Padayon Public Service Office, tasked to serve as the overall coordinating mechanism for UP's public service initiatives. Procedures have also been developed for channeling public services in response to the demands of various stakeholders.

Pabatid UP-Pabatid Bayan, on the other hand, is a comprehensive media and communication program, aimed at providing an outward-looking and inclusive information system that, through modern technology, would allow UP to reach out beyond geographical boundaries. A comprehensive communication and media plan has been formulated that would update the local and international communities about UP's public service programs and activities.

Still, Padayon UP and Pabatid UP are just mechanisms and enablers to ensure that we are able to reach our target publics. The more substantive elements of public service remain with the individuals and teams (faculty, researchers, students, and other scholars) who will formulate propositions and possible solutions to nagging problems of the country, based on scientific investigation.

3. UP as a Research University[1]

The goal is to transform UP into a research-intensive university, build and grow a critical mass of research output and creative work responsive to the needs of the University's stakeholders. In order to accomplish this, several initiatives have been implemented, namely: (1) faculty and REPS (research, extension, and professional staff) development program which provides fellowships to pursue PhD and MS programs as well as the recruitment of foreign-trained PhD faculty, (2) scientific productivity system which encourages and rewards scientific productivity, (3) arts productivity system which is aimed at encouraging and rewarding productivity in the creative arts, (4) international publication awards which reward publications in higher quality journals, (5) Visiting Professor Program which attracts prominent academics to teach and collaborate with UP faculty in research, (6) research dissemination grants which provide financial support for faculty and REPS attending and/or presenting papers at international conferences, and (7) short-term training and post-doctoral fellowships for faculty and REPS in foreign universities.

As a research university, UP gives opportunities to its undergraduate students to interact with and collaborate on research projects with graduate students; it likewise offers a wide range of majors, 233 undergraduate programs, and 293 graduate programs, just in case they want to pursue graduate studies later.

A research university "should give higher weight to knowledge synthesis, repackaging for use, and dissemination of new knowledge." (Brooks, 1996, pages 36-37). The researches at UP conducted under its various academic units and research centers are generated and disseminated consistent with the above mission of a research university.

4. UP and Internationalization

Among the major strategic initiatives of UP is the intensification of internationalization and the strengthening of international research collaboration. The Office of International Linkages (OIL) under the Office of the Vice President for Academic Affairs is taking the lead in this effort.

[1] The UP Charter mandates that UP shall "serve as a research university in various fields of expertise and specialization by conducting basic and applied research and development, promoting research in various colleges and universities, and contributing to the dissemination and application of knowledge."

Formerly the Office of Institutional Linkages, OIL has been actively pursuing partnerships with foreign universities such as those in Japan, Korea, China, Taiwan, Brunei, Indonesia, Australia, USA, Austria, France, Germany, Italy, Netherlands, Russia, Spain, Liberia, Switzerland, Norway, Iran, Denmark, Belgium, Canada, Vietnam, Singapore, Malaysia, Laos, India, Thailand, and Cambodia. To date, the University has active agreements with over 200 foreign universities. UP is also a member of several academic consortia, to include the ASEAN-European University Network (ASEA-UNINET), Association of Pacific Rim Universities, and the ASEAN University Network-ASEAN Credit Transfer System (AUN-ACTS).

The University recently launched two international scholarship programs for students, namely: (1) University of the Philippines Mobility for Vigor and Excellence (MOVE UP) and (2) Continuous Operational and Outcomes-based Partnership for Excellence in Research and Academic Training Enhancement (COOPERATE). MOVE UP is a program that grants full or partial support for junior and senior undergraduate students with high scholastic average for one semester enrollment in a foreign university as exchange students. COOPERATE, on the other hand, provides support to graduate students at early thesis or dissertation proposal stage, needing to undertake research/creative work at a foreign university. Under this program, UP research advisers may also be granted fellowships to allow them to undertake short-term visits to foreign universities for continuing research/creative work collaboration and publication.

In addition, UP provides funding for presentation of research/creative work in international conferences; hosting of international conferences, meetings and workshops in line with the University's mission and vision; as well as world experts lecture series.

5. UP, University-Industry-Government Linkages and the Innovation Process

In 2011, the UP Board of Regents approved the Revised UP Intellectual Property Rights Policy, paving the way for a more informed academic community with respect to technology transfer and intellectual property rights. This is consistent with the University's efforts to accelerate commercialization of technologies and innovations generated by its various campuses and strengthen its relationship with both the government and the private sector. This is also in support of the University's goal of promoting entrepreneurship throughout the UP System.

Among UP's strongest partners in government in connection with innovative work are the Department of Science and Technology (DOST),

which provides substantial funding for R&D projects, the Department of Health (DOH), the Commission on Higher Education (CHED), and the Department of Agriculture (DA). Industry partners, on the other hand, come mostly from the ICT, pharmaceutical, and electronics industries. Vea (2014) has described the UP experience in university-industry linkage activities.

VI. Remaining Challenges

A survey of 1,000 U.S. faculty members showed that a majority of the respondents supported university-industry-government linkages. However, a majority of the respondents likewise refused to support the involvement of their universities in close business partnership with private industry such as start-up assistance or equity investment (Lee, 1996). There is a debate on the role of the university in promoting the productivity and international competitiveness of domestic industries. Universities can provide theoretical and empirical findings of their academic research, well-trained students, and new types of instrumentation that will be useful in the development of new products and processes, but they are not likely to play a direct role in the development of new products and processes because they do not have the expertise or the intimate knowledge of particular industries and markets, and they do not have the ability to recognize and evaluate commercial and technical risks (Mansfield, 1996).

Policy questions that will pose as a challenge to UP administrators is to resolve the question of how the university can retain academic freedom - the freedom to pursue long-term, disinterested, fundamental research - if they become more closely involved with proprietary research for private (domestic or foreign) companies? On the benefit side, university-industry-government linkages provide the university new source of funds, gives students opportunities to tackle real world research problems and allows them to observe how industry operates in practice, allows the faculty to work on socially challenging research problems, and enables the university to avail of government funds that support university-industry-government applied research collaboration. On the other hand, these linkages provide the industry access to trained manpower, faculty expertise, results of basic and applied research, solutions of specific problems, university facilities, training assistance, and continuing education services. On the cost side, university involvement in industrial research diverts academic attention from students and knowledge generation for the general public (Lee, 1996; Branscomb, Kodama and Florida, 1999).

A balancing act between these two conflicting concerns is sought. The recommended solution is for the university to adopt the "20% rule." This rule requires university faculty and staff to devote at most 20% of their time per week to university-industry-government collaborative projects. The other recommendation is to promote transparency and access to university research.

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