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EDITORIAL

Measuring the Performance of our Higher Education Institutions - Part II

The one thousand nine hundred and forty three public (1.78%) and private (98.22%) higher education institutions (HEIs) accredited by the Commission on Higher Education (CHED) form the backbone of the Philippine scientific enterprise system. Included among the public HEIs are the one hundred and twelve state universities and colleges (SUCs) that are the main recipients of R&D grants in science, technology, engineering and mathematics (STEM) from the Department of Science and Technology (DOST), CHED and other concerned government agencies. Led by the University of the Philippines (UP) – the national university of the country, the SUCs also train most of the government scholars who are pursuing PhD and MS degrees in STEM.

To contribute distinctly to national development the scientific enterprise system relies critically on the rate that the HEIs particularly the SUCs are able to generate new scientific knowledge and to train the next generation of Filipino scientists and researchers. It is therefore essential that a scientific method is developed for assessing accurately and regularly the performance of the SUCs particularly those that are mandated to function as research and graduate universities, and to utilize the findings in fine-tuning existing policies and programs. Prudent use of performance metrics would help to ensure that SUCs are properly managed and rightly enabled to accomplish their stated purpose even if only in an incremental fashion.

A performance measure for HEIs is sensible if it is developed in context. It is not a mere bean-counting instrument but one that would relate the output of an HEI in relation to the resources that are inputted into it. For research and graduate SUCs the relevant inputs are the number of STEM PhD faculty items, faculty research load credits, budget allocations for operations and R&D related activities, and number of STEM PhD scholars. The corresponding outputs are the number of peer-reviewed scientific publications and the STEM PhD graduates produced each year. A big budget and a large graduate school enrollment become wasted opportunities if they do not result in a proportional increase in the productivity of the SUC beneficiary. A research HEI needs productive STEM graduate programs to thrive while a graduate HEI requires a fertile research environment to produce since a PhD degree is a research degree. One could not last without the steady contribution of the other.

The palpable robustness of the Philippine economy in recent years has resulted in having more public funds earmarked for human capital generation and R&D activities. Between 2002 and 2016 the nominal GDP (in Philippine pesos) grew at an average rate of 16.72% per annum. The national budgets for 2016 and 2017 are equivalent to 22.6% (PhP 3.002T) and 22.8% (PhP 3.35T) of the 2015 and 2016 GDP figures, respectively. In 2017 the respective allocations for the DOST and the SUCs are 6.46 and 2.15 times larger than they were in 2006. The UP Budget has grown 1.52 times in the said period - on average, it accounts for 27% of the entire yearly SUC appropriation.

The number of SCOPUS-indexed publications by Philippine-based authors grew at a rate of 136 ± 66.43 per year with UP contributing 35.57% of the total number produced between 2009 and 2015. On the other hand, together the HEIs output only about a hundred STEM PhD graduates per year due to the lack of capable PhD faculty who are willing to serve as dissertation supervisors. The Philippines has the lowest SCOPUS publication per capita and the fewest number of researchers per million of population among the six largest ASEAN economies.

The underperformance of our research and graduate SUCs may be traced to several factors. Many of their PhD faculty members are not ready to pursue independent research due to insufficient technical preparation or lack of belief in their own abilities. To engage in a research endeavor many still need the reassuring comfort of senior collaborators much like graduate students and young postdoctoral researchers. It is hard for them to muster enough courage to commit and mentor their own PhD students.

There is not enough pressure for faculty members to supervise the dissertation research of PhD students because successful mentoring does not make a significant difference in their professional advancement. They could still get promoted in faculty rank, awarded tenure, and receive additional incentives by co-authoring papers, performing regular teaching duties and accepting administrative assignments.

Even though UP accounts for about 80% of the national yearly STEM PhD production it still performs below par given the resources that are at its disposal. The College of Science of UP Diliman has about 150 PhD faculty members at any given time yet it produces less than fourteen PhD graduates a year from 1990 to 2015 while the College of Engineering with a PhD faculty complement of 70, contributes only about four. An analysis of the 835 graduates from 59 doctoral programs of UP Diliman in the last eleven years ending AY 2014-2015 has revealed that they spent an average of 7.9 years to finish their academic requirements. Those from the College of Engineering (with 85 graduates) and the College of Science (with 167) spent 5.51 years and 6.925 years, respectively. A PhD degree program is designed for completion within three years for a new student enrollee with the requisite MS degree.

The typical SUC bureaucracy is big and likely to keep expanding due to increasing government budget allocation and to the hysteretic nature of bureaucratic growth. New institutes, academic programs and administrative offices are being established without revitalizing or phasing out the existing ones that are not delivering. In UP Diliman the number of PhD graduates per year (64.12 ± 16.2 per year in the last 25 years ending AY 2014-2015) is comparable to the number of doctoral programs being offered (currently at 68) indicating the failure of several offerings. For example, no PhD Geology graduate has been produced since AY 1999-2000 - a nontrivial strategic concern given the geology and geographic location of the country.

Filling-up with PhDs the executive positions in the SUCs, the DOST and even CHED introduces the unintended consequence of depleting the faculty roster of the affected institute or department and reducing its capability to run its graduate programs properly to the detriment of their students. Administrative work is difficult. It drains and weakens the faculty-administrators of the precious energy and state of mindfulness needed to direct and guide PhD advisees.

Because of its privileged status in the Philippine higher education system UP must lead by example and show to its stakeholders especially the Filipino taxpayers whether or not it is on the right track in accomplishing its institutional purpose as the national university a decade after the UP Charter was enacted as Republic Act 9500 on 29 April 2008. The aforementioned task requires the use of a performance measure that correctly identifies and relates the pertinent deliverables of UP from the human and material resources that are earnestly invested into it. Assuming that such measure is (finally) developed its findings will also be only as reliable and useful as the accuracy and range of the available data that it is applied to. Data mining expertise is an essential aspect in the endeavor.

The urgent development and consistent application of a performance measure is an existential challenge that needs to be done since it will help research and graduate HEIs accomplish their institutional purpose.

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