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Research productivity in management schools of India during 1968-2015: A directional benefit-of-doubt model analysis ☆

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ABSTRACT

Given the growing emphasis on research productivity in management schools of India over the years, the present authors developed a composite indicator (CI) of research productivity, using the directional-benefit-of-doubt (directional-BOD) model. Specifically, we examined overall research productivity of the schools and their respective faculty members during the 1968-69–2014-15 and 2004-05–2014-15 periods. There are four key findings. First, the relative weights of the journal tier, total citations, author *h*-index, number of papers, impact factor, and journal *h*-index varied from high to low in order for estimating the CI of a faculty member. Second, both public and private schools were seemingly similar in research productivity. However, faculty members at the Indian Institutes of Technology (IITs) outperformed those at the Indian Institutes of Management (IIMs). Third, faculty members who had their doctoral degrees from foreign schools were more productive than those who had similar degrees from Indian schools. Among those trained in India, however, alumni of IITs were more productive than those of IIMs. Finally, IIMs at Ahmedabad and Bangalore and the Indian School of Business, Hyderabad have more names than other schools among the list of top 5% researchers during 2004-05–2014-15. These findings indicate a shift in the priority from mere training of managers to generating impactful knowledge by at least two of the three established public schools, and call further attention to improving the quality of doctoral training in India in general and IIMs in particular. Five suggestions for improving research productivity are offered.

1. Introduction

The productivity research reported in this article was motivated by the following two observations on institutions of higher learning in India:

> "*Indian institutions produce best and hardworking students who can compete anywhere in the world, but the very same institutions are not able to build a culture that can provide a world-class research environment and produce best of researchers. Why is this so*?" (Mishra [1], p. 1787)
>
> "*… our educational institutions have to explore and extend new frontiers of knowledge domain. They have to give priority to build a culture where the basic human instinct of 'questioning' is given primacy, where there is ample space for [re]creation of knowledge with changing time.*" (Mishra [1], p. 1788)

In recent years, India has indeed been aiming at becoming a hub of knowledge. Stressing on the importance of science, technology, and innovation in transforming the nation, India's Prime Minister Narendra Modi also announced at the 102nd session of the Indian Science Congress that the Government of India (GOI) would provide the scientific communities and universities in India with an atmosphere conducive to pursue world-class research [2]. Further, the GOI has been developing a strong culture of collaboration between institutions and across disciplines in India to leverage the cross-functional advantage of expertize, development, and innovation [3,4]. Put simply, the GOI is favorably inclined toward encouraging institutions of higher learning including business management schools in India to conduct world class research. International schools have also been recently entering into research collaboration with Indian institutions. The All India Council of Technical Education (AICTE), for example, has now come up with guidelines on how a foreign university can

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collaborate with the Indian academia in research [5]. Global higher education brands have already opened research centers in India to tap the research opportunities that India offers [6]. For example, the Harvard Business School has a research center in Mumbai, and the University of Chicago and Deakin University have such research centers in New Delhi. To us, these developments highlight the growing national realization of research including business research as a priority in India and global recognition of India as an exciting avenue for undertaking such business research endeavors.

Despite the foregoing increased foci on developing research and research climate in India, management schools in India, just like other premier educational institutions in India, have not yet met world standards in research [1]. For instance, the Indian Institutes of Management (IIMs), the Indian Institutes of Technology (IITs), and the Central Universities (CUs) – the premier institutions established by GOI – did not make to the list of top 100 productive schools across three successive rankings [7–9]. Such poor research performance of premier Indian institutions at an international level is a matter of vexing concern for academics [1] and policy-makers in India [10]. The Ministry of the Human Resource Development (MHRD) of GOI thus sponsored the PanIIM Conferences at Goa in 2013 and at Kozhikode in 2014 to discuss how to improve research productivity in India [11].

Given the recent interest in improving research productivity of management scholars in India, we undertook the current task of developing a composite index of research productivity based on data available in the public domain. Such an objective measure seemed promising from at least five vantage points. First, it would be the first of its kind to objectively measure quality of research of faculty members of management schools in India. Second, it can facilitate credible comparisons within and across institutions in India. Third, it can guide the Indian and international management scholars in choosing a suitable research collaborator as well as the doctoral students in choosing a suitable dissertation supervisor. No less important, the research funding bodies in India (see, e.g., Indian Council of Social Science Research, Indian Council of Agricultural Research, Council of Scientific and Industrial Research, etc.) may benefit in identifying subject matter experts for evaluations of the research grant applications submitted and/or for supporting research projects of those who are established researchers. Fourth, it can serve as a benchmark for setting higher productivity goals in research by faculty members. Finally, it can facilitate formulations and/or revisions of research policies by institutions and by the GOI as Mishra [1] noted.

1.1. Research in business management schools in India: current debates

In 2011, the then Environment Minister of India kicked up a controversy by commenting that faculty members at the premier universities, including the IIMs and IITs, were neither world-class nor worthwhile with respects to creativity and research [10]. Countering this comment, however, the then Human Resource Development Minister attributed the poor research productivity in IITs and IIMs more to limited resources, low priority to research, and limited research support than to poor quality of faculty members themselves [12].

Using the ISI Web of Science database, Kumar [13] found only 132 author counts (108 unique articles) by scholars affiliated with Indian management schools during 1990–2009. To provide a perspective on how low this Indian productivity might be, he contrasted the productivity of around 5 articles per year for the entire India with the productivity of the business school at the Hong Kong University of Science and Technology (HKUST), China, whose 100 plus faculty members had produced over 30 articles annually and of the Wharton Business School, University of Pennsylvania, Philadelphia, USA, whose 200 plus faculty members had produced about twice as many number of articles annually as HKUST. A follow up editorial on 'Publish or Perish' in the *Economic Times* [14] also reiterated such a need for producing high quality research from business schools (B-Schools) in India.

One response to the foregoing suggestions has been seemingly defensive: Indian scholars should study Indian problems, using indigenous methods, and publish in Indian journals. Pressure to publish in world class journals can unfortunately result in imitation instead of generation of original thoughts and methods. As Khatri et al. [15] argued, publishing in international journals would require writing for their audiences and contexts using their theories and methods, which may not augur well the Indian management research. Another equally defensive response is that international journals are disinterested in publishing Indian data. However, Singh [16] refuted this possibility, arguing that sloppy research (i.e., issues selected, techniques employed, unclear writing) by Indian faculty might be a key factor in the low record of international publications at B-Schools in India.

Of the suggestions offered to improve quality of management research in India, two are notable. One is shift in emphasis from teaching to research. That is, B-Schools should make research mandatory, enhance research capabilities, hire more research-trained faculty, and provide those faculty members who publish in international journals with financial incentives [17]. Another is a culture of collaboration in research wherein management schools in India should initiate research collaboration with foreign schools of repute and allocate adequate funds for bringing in research faculty from abroad along the lines of Scandinavian B-Schools [17]. Consistent with these suggestions, B-Schools in India have already made several interventions to improve their current research productivity. For example, the premier B-Schools in India have started emphasizing quality research to improve their respective rankings among their global counterparts [18]. Importantly, the tenure and promotion of faculty members nowadays depend on research productivity as well [19,20].

1.2. Measuring research productivity of a business school

A well-known indicator of one's research productivity is the number of publications in peer-reviewed journals. In fact, academic institutions are also adjudged by the number of publications in reputed journals, and there has recently been an increasing proliferation of the rankings, listings, and productivity indicators of schools and universities based on such publications in journals. These rankings have drawn attention of not only the associations such as the Association of Business Schools (ABS) and the Association to Advance Collegiate Schools of Business (AACSB), for example, but also the dominant industry players such as Thomson Reuters' *Web of Science*, Elsevier's *Scopus*, and Google's *Scholar*.

Most areas of management[1] analyze research productivity in terms of either the reputation of an author or the quality of the journal in which the article was published. The former is indicated by an author's total number of published papers [21–23], *h*-index[2] [21,23–25], and the number of citations of that author's publications [21]. The latter is indicated by the journal's *h*-index[3] [25],

[1] Such discipline-based studies have been conducted in the past in areas such accounting, business, finance, management, marketing, management information systems, operations research /management science [21].

[2] A scholar has index *h* if *h* of his/her *n* papers have at least *h* citations each and the remaining (*n*–*h*) papers have at most *h* citations each. This index measures the scientific productivity and impact of a scholar's research.

[3] The *h*-index of a journal expresses the number of its articles (*h*) that have received at least *h* citations. It quantifies the journal's scientific productivity and scientific impact.

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