Impact analysis of domestic and international research collaborations: a Malaysian case study

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Abstract This paper presents a comparative impact analysis on collaborative research in Malaysia. All analyses were conducted using ISI-indexed journal articles published in the 10-year period spanning the years 2000–2009. The publication growth and distribution of domestic versus international Malaysian-addressed collaborative articles was examined. Then, a three-pronged approach was used to compare the research performance between international and domestic research for the top ten high-productivity subject categories. Firstly, the potentiality of collaborative research impact is determined using the Mann–Whitney–Wilcoxon and Bootstrap Kolmogorov–Smirnov tests. Then, the Hirsch and Egghé indices were computed for each subject category to estimate the distance needed to bridge the gap between international and domestic research. Lastly, the composition of researchers was measured using the internationality index. We discuss how the findings of our methodology help advise collaborative research strategies that will contribute to better research performance in the leading scientific categories.

Keywords Research collaboration · Malaysia · Citation analysis · Scientific output

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