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Abstract

A huge increase in engineering graduates from the BRIC countries in recent decades potentially threatens the competitiveness of developed countries in producing high value-added products and services, while also holding great promise for substantially increasing the level of global basic and applied innovation. The key question is whether the quality of these new BRIC engineers will be high enough to actualize this potential. The objective of our study is to assess the evolving capacity of BRIC higher education systems to produce qualified engineering graduates. To meet this objective, we compare developments in the quality of undergraduate engineering programs across elite and non-elite higher education tiers within and across each BRIC country. To assess and compare the quality of engineering education across the BRIC countries, we use multiple sources of primary and secondary data gathered from each BRIC country from 2008 to 2011. In combination with this, we

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utilize a production function approach that focuses on key input-, process- and outcome-based indicators associated with the quality of education programs. Our analysis suggests that in all four countries, a minority of engineering students receives high quality training in elite institutions while the majority of students receive low quality training in non-elite institutions. Our analysis also shows how the BRIC countries vary in their capacity to improve the quality of engineering education. (HRK / Abstract übernommen) Loyalka, Prashant, E-Mail: loyalka@stanford.edu