

## Competitiveness of African Countries through Open Quintuple Helix Model

**Authors :** B. G. C. Ahodode, S. Fekkakloughail

**Abstract :** Following the triple helix theory, this study aims to evaluate the innovation system effect on African countries' competitiveness by taking into account external contributions; according to the extent that developing countries (especially African countries) are characterized by weak innovation systems whose synergy operates more at the foreign level than domestic and global. To do this, we used the correlation test, parsimonious regression techniques, and panel estimation between 2013 and 2016. Results show that the degree of innovation synergy has a significant effect on competitiveness in Africa. Specifically, while the opening system (OPESYS) and social system (SOCSYS) contribute respectively in importance order to 0.634 and 0.284 (at 1%) significant points of increase in the GCI, the political system (POLSYS) and educational system (EDUSYS) only increase it to 0.322 and 0.169 at 5% significance level while the effect of the economic system (ECOSYS) is not significant on Global Competitiveness Index.

**Keywords :** innovation system, innovation, competitiveness, Africa

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