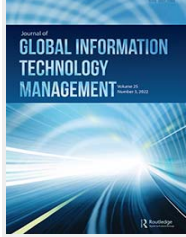


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# ICT Leapfrogging and Economic Growth Among SAARC Economies: Evidence From Method of Moments Quantile Regression

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## ABSTRACT

ICT “leapfrogging” is when developing economies adopt the use of technology to jump-start their development agenda. This study positions the 2030 United Nations Sustainable Development Goal 8 to test the leapfrogging hypothesis on eight SAARC economies (Afghanistan, Bhutan, Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka) from 2000 to 2020. We examine if the hypothesis holds using an unbalanced panel data on real per capita GDP and four ICT indicators (mobile phones, fixed telephones, fixed broadband, and Internet users). We deploy panel spatial correlation consistent (PSCC) and method of moments quantile regression (MM-QR) techniques. The MM-QR offers more reliable results than PSCC because it takes into account the conditional heterogeneity issues that are understated. The general consensus indicates that ICT (individual indicators and composite index) exerts a statistically significant positive effect on economic growth mostly at the 1% level. However, the MM-QR reveals that: (1) the leapfrogging hypothesis holds for mobile phones and composite index models; (2) the hypothesis holds only at the lower quantiles of fixed broadband model; and (3) mobile phones show the largest increasing leapfrogging effect of 0.034%, 0.052%, 0.082%, and 0.099%, respectively. Policy recommendations are discussed.

### KEYWORDS:

- [ICT](#)
- [economic growth](#)

- [leapfrog](#)
- [SAARC](#)

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## Disclosure Statement

No potential conflict of interest was reported by the author(s).

## Data Availability

The data that support the findings of this study are available from the corresponding author, [BNA], upon reasonable request.

## Notes

1. <https://www.upwardbroadband.com/is-fixed-wireless-Internet-good-the-pros-and-cons/>
2. [https://www.lightreading.com/partner-perspectives-\(sponsored-content\)/why-fixed-broadband-is-more-important-than-ever/a/d-id/754798](https://www.lightreading.com/partner-perspectives-(sponsored-content)/why-fixed-broadband-is-more-important-than-ever/a/d-id/754798)
3. [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP/CISP\(2013\)8/FINAL&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP/CISP(2013)8/FINAL&docLanguage=En)
4. We use the *xtscc* routine in Stata16.

## Additional information

### Funding

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