

There are no translations available.

Publication date: Available online 7 October 2017

**Source:** Technological Forecasting and Social Change

Author(s): Simplice A. Asongu, Sara Le Roux, Nicholas Biekpe

This study examines how increasing ICT penetration in sub-Saharan Africa (SSA) can contribute towards environmental sustainability by decreasing CO<sub>2</sub> emissions. The empirical evidence is based the Generalised Method of Moments and forty-four countries for the period 2000–2012. ICT is measured with internet penetration and mobile phone penetration while CO<sub>2</sub> emissions per capita and CO<sub>2</sub> emissions from liquid fuel consumption are used as proxies for environmental degradation. The following findings are established: First, from the non-interactive regressions, ICT (i.e. mobile phones and the internet) does not significantly affect CO<sub>2</sub> emissions. Second, with interactive regressions, increasing ICT has a positive net effect on CO<sub>2</sub> emissions per capita while increasing mobile phone penetration alone has a net negative effect on CO<sub>2</sub> emissions from liquid fuel consumption. Policy thresholds at which ICT can change the net effects from positive to negative are computed and discussed. These policy thresholds are the minimum levels of ICT required, for the effect of ICT on CO<sub>2</sub> emissions to be negative. Other practical implications for policy and theory are discussed.

[Read Full Article](#)