

UNESCO SCIENCE REPORT

The government tends to be the main source of R&D spending but the business enterprise sector contributes more than 10% of GERD in Gabon and Uganda (Table 19.5). Foreign sources contribute a sizeable share of GERD in Burundi (40%), Kenya (47%), Tanzania (42%) and Uganda (57%).

Although two R&D surveys have been published⁴ since 2011 within Africa’s Science, Technology and Innovation Indicators Initiative, there is a paucity of data on researchers in most of East and Central Africa. According to available data, Gabon and Kenya have the highest density of researchers by head count (Figure 19.7).

Distinct progress for the six most prolific countries

Four countries dominate scientific publishing (Cameroon, Ethiopia, Kenya and Uganda) but productivity is also rising in Gabon, the Republic of Congo and Rwanda, albeit from low levels (Figure 19.8). Gabon, Cameroon and Kenya count the most articles per million inhabitants but it is Ethiopia which has shown the most rapid progress, more than doubling its production since 2005 to take second place behind Kenya

in terms of volume; Ethiopia’s output remains modest, however, at just nine publications per million inhabitants.

The lion’s share of articles focus on life sciences but research is growing in geosciences in Cameroon, Ethiopia, Kenya and Uganda. Of note is that Cameroon has a diverse research portfolio, leading the region for the number of Web of Science articles in chemistry, engineering, mathematics and physics in 2014. Overall, the growth in scientific publications in most countries reflects greater political support for S&T.

Very few patents since 2010

Only two ECA countries have obtained patents from the United States Patent and Trademark Office in the past five years. Cameroon registered four utility patents (for new inventions) in 2010, followed by three in 2012 and four in 2013. This is a dramatic improvement on the two patents generated by Cameroon in the period 2005–2009. The other country is Kenya; it registered seven utility patents between 2010 and 2013, which is nevertheless a marked decline from the 25 patents it received in the previous five-year period. No other types of patent (design, plant or reissue) have been granted since 2010, indicating that ECA countries continue to struggle to generate and register new inventions.

4. The first surveys were published in the *African Innovation Outlook* in 2011 and 2014. Funds have been secured from Sweden to 2017 for the third edition of the *Outlook*.

