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Abstract: Abstract

This paper proposes the Cyber Resilience Preparedness Index for monitoring and comparing the cyber resilience of Africa's top-12 emerging economies. The index covers five critical areas that incorporate a total of 24 indicators derived or adapted from the International Telecommunication Union's 2014 Cyber Wellness Profiles, a Depository Trust and Clearing Corporation white paper on global cyber risk and the well-known Cyber Readiness Index. The final Cyber Resilience Preparedness Index is a simple average of the five area (sub-index) scores; the score for each sub-index is also the simple average of the scores of the composing indicators. This computation assumes that all the sub-indices contribute equally to national cyber resilience preparedness.

The results indicate that six countries, namely Sudan, Ghana, Libya, Zimbabwe, Algeria and Angola, are at risk to compromises of their critical systems. In contrast, Egypt tops the chart of six countries, Egypt, Kenya, Nigeria, Tunisia, Morocco and South Africa, that demonstrate preparedness against compromises to their critical systems, industries and classified documents, as well as against industrial espionage. This study also argues that assessments of the progress of Africa's fastest-growing economies should be conducted periodically using evolving evaluation criteria.

Keywords: Emerging Economies; Africa; Cyber Resilience Preparedness; Cyber Resilience Preparedness Index.