IAA INNOVATION
AGENCIES IN AFRICA NETWORK

POLICY BRIEFING NOTE

INNOVATION PERFORMANCE IN SUB-SAHARAN AFRICA: POLICY INSIGHTS FROM THE GLOBAL INNOVATION INDEX 2025

Innovation Performance in Sub-Saharan Africa: Policy Insights from the Global Innovation Index 2025

Innovation is a cornerstone of Africa's pursuit of sustainable development, industrial competitiveness, and inclusive growth. The continent's ability to harness science, technology, and knowledge for transformation depends not only on national efforts but also on regional collaboration, shared learning, and policy harmonization.

The Innovation Agencies in Africa (IAA) Network was established as a pan-African platform to strengthen the capacity of national and regional innovation agencies. With funding from the International Development Research Centre (IDRC) and the National Research Foundation of South Africa (NRF), the Network drives initiatives in three thematic areas:

- **Green Innovation:** advancing renewable energy, sustainable agriculture, and circular economy solutions.
- **Digital Innovation:** building ICT infrastructure, e-governance, and digital entrepreneurship.
- **Inclusive Innovation:** ensuring that women, youth, and marginalized groups are integrated into innovation ecosystems.

The **Global Innovation Index (GII) 2025**, published by the World Intellectual Property Organization (WIPO), benchmarks 139 economies on seven pillars: institutions, human capital and research, infrastructure, market sophistication, business sophistication, knowledge and technology outputs, and creative outputs. The index offers an authoritative framework for assessing progress, identifying strengths, and addressing gaps in African innovation systems.

For the IAA Network, the GII provides an evidence base to guide action—helping its members benchmark against peers, identify priority areas, and align strategies with continental goals such as the African Union's Agenda 2063.

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Africa's Innovation Landscape

Regional Trends

- *Strong progress in rankings:* Ten of the 32 Sub-Saharan African (SSA) economies improved their positions in 2025. Namibia posted the largest gain (+11 places), signaling the impact of policy reform and investment.
- Regional leaders: Mauritius (53rd), South Africa (61st), Seychelles (75th), Botswana (87th), and Senegal (89th) lead the continent.
- *Overperformers:* SSA hosts the world's largest share of "innovation overperformers"—economies performing above expectations for their level of development. These include South Africa, Rwanda, Senegal, Malawi, and Madagascar.

Strengths Identified in GII 2025

- *Education investment:* Namibia ranked 1st globally for education expenditure.
- *University–industry linkages:* South Africa ranked 24th for university-industry collaboration; Makerere University (Uganda) was ranked among the top 70 institutions worldwide for international engagement.
- *Creative and brand value:* South Africa ranked 23rd globally for global brand value, highlighting strength in creative industries.
- *Entrepreneurship and startups:* Senegal and Nigeria ranked among the top globally for unicorn valuation, underscoring Africa's growing startup ecosystem.

Persistent Constraints

- *Low R&D intensity:* Most African economies invest less than 0.5% of GDP in R&D, compared to the global average of 2.7%.
- *Infrastructure deficits:* Broadband penetration and electricity reliability remain limiting factors.
- *Weak commercialization:* Patent filings, high-tech exports, and knowledge-intensive industries remain underdeveloped.
- *Uneven innovation geography:* Progress is concentrated in a few hubs, while many economies continue to face systemic barriers.

Overall insight: Africa demonstrates dual dynamics—some economies consistently outperform expectations, while others remain constrained by structural weaknesses. This divergence makes continental cooperation and the role of the IAA Network even more critical.

"While we see encouraging signs of recovery in areas such as innovation uptake and impact, the global innovation engine is not firing on all cylinders. Slower growth in R&D investments and declining VC activity reminds us that innovation requires sustained upstream and financial commitment."

WIPO Director General Daren Tang.

African Countries – GII 2025 Rankings

Country	GII Rank (2025)
Mauritius	53
South Africa	**61**
Seychelles	75
Tunisia	76
Botswana	**87**
Senegal	89
Namibia	**91**
Cabo Verde	**95**
Kenya	**102**
Rwanda	104
Nigeria	105
Cameroon	116
Benin	118
Tanzania	**121**
Uganda	**124**
Malawi	125
Burkina Faso	126
Burundi	127
Mozambique	128
Zimbabwe	129
Mauritania	131
Lesotho	132
Guinea	133
Ethiopia	**134**
Mali	135
Congo	137
Angola	138
Niger	139

Countries in blue are members of the IAA Network through representation by member agencies.

IAA Member Country Performance

South Africa (Rank 61, Upper-Middle Income)
South Africa advanced its ranking and reaffirmed its role as the continent's top innovation hub.
Strengths:
- Diversified innovation ecosystem with strong R&D intensity.
- Universities with high global standing, ranked 24th for international engagement.
- Largest venture capital market in Africa, including late-stage funding capacity.
- Strong creative outputs: 23rd globally in brand value.

Challenges:
- Broadband and electricity reliability remain systemic barriers.
- Innovation activity is uneven, concentrated in metropolitan centers.

Botswana (Rank 87, Upper-Middle Income)
Botswana holds steady among the region's top five performers.
Strengths:
- Strong institutional and governance frameworks.
- Solid performance in knowledge absorption and business sophistication.

Challenges:
- Limited ICT and research infrastructure.
- Dependence on extractives restricts innovation diversification.

Namibia (Rank 91, Upper-Middle Income)
Namibia made the largest leap in Sub-Saharan Africa (+11 places).
Strengths:
- Ranked 1st globally in education expenditure.
- Recognized for high innovation efficiency, generating outputs relative to inputs.
- Gains in business sophistication (49th) and international collaboration.

Challenges:
- Weak R&D spending.
- Limited access to venture capital and commercialization pathways.

Cabo Verde (Rank 95, Lower-Middle Income)
Cabo Verde's ranking remains stable, reflecting consistent but limited innovation growth.
Strengths:
- Political stability and long-term policy continuity.
- Investment in human capital and diaspora-driven linkages.

Challenges:
- Business sophistication indicators are low.
- Limited progress in knowledge-intensive exports.

IAA Member Country Performance

Kenya (Rank 102, Lower-Middle Income)
Kenya remains a key regional hub for digital innovation, though it underperforms against its potential.
Strengths:
- Strong in ICT services exports and fintech innovation.
- Vibrant entrepreneurial ecosystem and startup culture.

Challenges:
- Insufficient R&D spending and weak patent activity.
- Venture capital flows highly concentrated in fintech, limiting diversification.

Tanzania (Rank 121, Lower-Middle Income)
Tanzania continues to perform in line with its income group.
Strengths:
- Incremental improvements in education and entrepreneurship.
- Expanding SME base.

Challenges:
- Infrastructure bottlenecks in energy and ICT.
- Limited commercialization of research and weak integration of innovation into industry.

Uganda (Rank 124, Low Income)
Uganda is one of the top five low-income performers.
Strengths:
- Makerere University ranked 63rd globally for international collaboration.
- Expanding academic linkages with global partners.

Challenges:
- Minimal R&D expenditure.
- Weak commercialization and research-to-market pathways.
- Infrastructure gaps in energy and broadband.

Ethiopia (Rank 134, Low Income)
Ethiopia remains in the lower tier but shows improved innovation efficiency.
Strengths:
- Expanding higher education and research base.
- Improved outputs relative to limited inputs.

Challenges:
- Among the lowest R&D investors globally.
- Severe energy and digital infrastructure deficits.
- Weak private-sector involvement in innovation.

Policy Implications for Africa and the IAA Network

Green Innovation

- Prioritize renewable energy R&D, sustainable agriculture, and circular economy initiatives.
- Use regional platforms to coordinate demonstration projects across member countries.

Digital Innovation

- Accelerate broadband expansion and digital literacy programs.
- Harmonize data governance and fintech regulation to support cross-border innovation.

Inclusive Innovation

- Embed gender equality, youth empowerment, and rural innovation in national policies.
- Scale community-driven hubs and support innovation for underserved groups.

Institutional Development

- Strengthen innovation agencies as policy coordination and monitoring entities.
- Use the IAA Network to standardize metrics, share best practices, and jointly engage with multilateral funders.

Policy Area	Key Priorities	Mechanisms / Actions
Green Innovation	Renewable energy R&D, sustainable agriculture, circular economy	Coordinate demonstration projects via regional platforms
Digital Innovation	Broadband expansion, digital literacy, fintech regulation, data governance	Harmonize regulations and accelerate cross-border digital initiatives
Inclusive Innovation	Gender equality, youth empowerment, rural innovation	Scale community hubs, support underserved groups
Institutional Development	Strengthen innovation agencies, policy coordination, monitoring metrics	Standardize metrics, share best practices, jointly engage multilateral funders

Lessons from Global Leaders

The Global Innovation Index (GII) 2025 not only benchmarks performance but also illustrates how leading economies sustain innovation-driven growth. For Africa and IAA Network members, these examples provide valuable reference points for policy design, institutional development, and financing strategies.

1. Strategic and Sustained R&D Investment

- South Korea and Israel allocate over 4% of GDP to R&D, integrating research into industrial strategies such as semiconductors, cybersecurity, and defense.
- China expanded its R&D spending consistently for two decades, building national labs and sectoral institutes aligned with industrial priorities.
- *Lesson for Africa:* Even modest increases in R&D budgets—if strategically directed toward high-potential sectors such as **renewable energy, agriculture, health technology, and digital services**—can deliver disproportionate results. Aligning R&D with industrial policy and ensuring steady funding streams is key.

2. University–Industry Collaboration and Technology Transfer

- United States and Germany have world-leading frameworks for university–industry collaboration, with incentives for joint patents, contract research, and applied projects.
- Switzerland (1st globally in GII 2025) links higher education institutions directly to SMEs and global supply chains.
- *Lesson for Africa:* Expand **technology transfer offices**, establish innovation vouchers for SMEs to collaborate with universities, and incentivize faculty to engage in commercialization. Makerere University's global ranking in collaboration demonstrates the potential for scaling such linkages continent-wide.

3. Innovation Finance and Startup Ecosystems

- United States remains dominant in venture capital (VC), but China has rapidly built a comparable startup ecosystem by fostering state-backed VC funds and angel investor networks.
- India (40th in GII 2025) scaled its startup ecosystem by integrating digital payments, supportive regulation, and public procurement for startups.
- *Lesson for Africa:* Establish **blended finance models** combining public funds, development finance, and private investors. Promote **regulatory sandboxes** to allow fintech and digital startups to scale safely. Nigeria and Senegal's unicorns show this is possible with supportive frameworks.

4. Digital Governance and Public Sector Innovation

- Estonia pioneered e-governance platforms that now serve as global models for digital identity, public service delivery, and citizen trust.

- Singapore created a Smart Nation strategy linking ICT, transport, and e-government into one integrated digital agenda.
- *Lesson for Africa:* Digital governance frameworks—already pioneered by Rwanda—can be scaled across member states. Investments in digital IDs, interoperable platforms, and cyber-security are critical for regional integration and trust in digital systems.

5. Creative Economy and Brand Value

- United Kingdom, South Korea, and Japan leverage cultural exports (film, gaming, design, and media) as innovation assets.
- South Africa, ranked 23rd globally in brand value, demonstrates this potential in Africa.
- *Lesson for Africa:* Recognize and support **creative industries** as part of national innovation strategies. Incentivize IP protection, digital platforms for creative exports, and cross-border branding initiatives to boost Africa's global presence.

6. Policy Coherence and Institutional Coordination

- Singapore integrates innovation policy with trade, education, and industrial planning, coordinated through a central innovation council.
- Sweden and Finland ensure cross-ministerial alignment in innovation policy, linking energy, education, and industrial competitiveness.
- *Lesson for Africa:* National innovation agencies must act as **policy integrators**, ensuring innovation strategies are not siloed but embedded in national development frameworks. Rwanda and Botswana already demonstrate the power of institutional stability in achieving consistent overperformance.

7. Long-Term Innovation Vision and Metrics

- Switzerland sustains global leadership by maintaining policy continuity and long-term investment cycles.
- China measures progress through five-year plans and innovation targets tied to global competitiveness.
- *Lesson for Africa:* Adopt **long-term national innovation strategies** with measurable targets, aligned with the Agenda 2063 vision. The IAA Network can play a role in harmonizing indicators and ensuring data-driven policy evaluation.

The Global Innovation Index 2025 confirms that Africa is advancing its innovation frontier. Economies such as South Africa, Botswana, Namibia, and Rwanda are achieving above-expected performance, while others face systemic barriers that require urgent intervention.

"The GII 2025 maps the contours of innovation across the world, showing us that the fastest-advancing economies in the GII are those that view innovation as a fundamental engine of resilience, growth and competitiveness. This year's GII reveals both encouraging progress as well as challenges that still need to be addressed for countries to fully harness their innovation potential. It is a reminder that innovation ecosystems require support and nurturing through thoughtful policies, meaningful investments and cross-sector collaboration."

WIPO Director General Daren Tang.

For the IAA Network, the message is clear: education investment, institutional stability, digital entrepreneurship, and international collaboration are proven levers for climbing the rankings. Scaling these successes across member countries requires regional cooperation, shared financing mechanisms, and policy harmonization.

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