

STI Forum 2018

STI for sustainable consumption and production patterns (SDG 12)

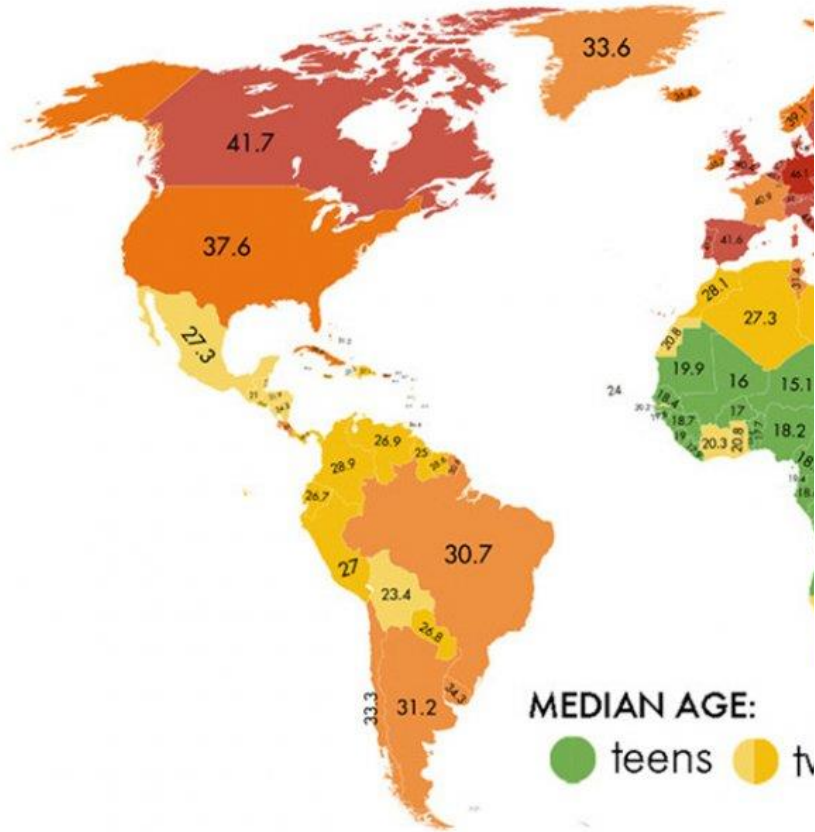
Erika Kraemer-Mbula, PhD.

University of Johannesburg, South Africa

DST-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy, South Africa



World Median Ages



YOUNGEST: 1. Niger (15.1) 2. Uganda (15.5) 3. Malawi (15.6)
OLDEST: 1. Germany & Japan (46.1) 2. Italy (44.2) 3. France (43.9)

Source: CIA Factbook

African Youth

Home to the youngest population in the world

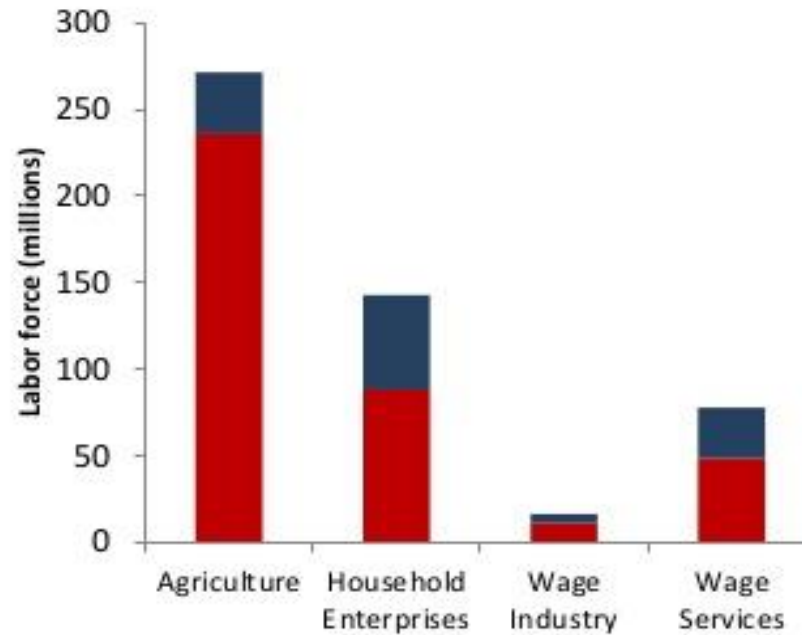
600 million

72%

11 million

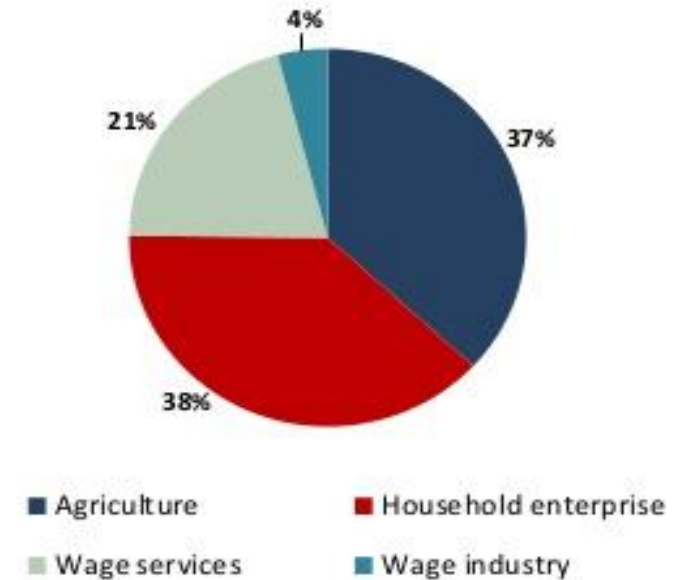
Where will the new jobs come from?

Projected net new jobs in 2020 compared to 2010



2010 New Jobs in 2020

Gross job flows between 2010 and 2020 (percent of new entrant individuals)



Informal economy: especial relevance for Africa

Employment in the informal economy as a percentage of non-agricultural employment

Regions	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-10
Northern Africa	39.6		34.1		47.5	47.3	53.0
Sub-Saharan Africa		67.3	72.5	76.0	86.9	63.3	70.0
Western Africa				83.0			75.6
Central Africa							80.5
Eastern Africa							65.4
Southern Africa							62.7
Latin America				52.5	54.2	55.9	57.7
Southern and South Eastern Asia			52.9	65.2	69.9		69.7
Western Asia						43.2	
Transition countries						20.7	22.6

Source: Charmes (2012), updated with new countries.



African context: “*informal is normal*”

- Over **two thirds** of non-agricultural employment (2005-2010)
- Over **one third** of the continent’s GDP (2005-2010)
- Generated 90% of **new jobs** in the last decade in Kenya, and 83% in Nigeria (2016)
- The majority of **microenterprises** are informal (60% in South Africa)
- Informal sector is **on the rise** in all countries – along with economic growth, modernisation and new technologies





Photo: B. Hazeltine



Photo: C. Bull



Examples of solutions emerging from African start-ups

- **Start-ups blending technological knowledge and a deep understanding of local needs to provide solutions**
 - Improving access to basic healthcare services such as second medical opinions in rural and remote regions
 - Introduction of tablet-style devices that provide access to digital educational materials even in remote and intermittently connected schools
 - Provision of lights in residential areas based in motion-detection technologies
 - Training services for organic farming and technology-enhanced food processing practices to underprivileged girls
- **Possibilities to scale-up reliant on successful partnerships with a broad set of stakeholders**



Reflections and recommendations

- **Sustainable innovative solutions = youth**
- **Sustainable innovative solutions = build on existing African productive systems**
 - Making the invisible, visible
 - Building capabilities of innovative micro-enterprises and start-ups
 - Innovative businesses that involve and benefit low-income, marginalised and vulnerable people
 - Scaling up through partnerships with government, NGOs, financial organisations, research orgs, international partners, etc
 - Beyond education: learning systems
 - Blending different types of knowledge - promotion of not only STI but also DUI

-

