

# Will the Fourth Industrial Revolution Bring Good Jobs to Africa?

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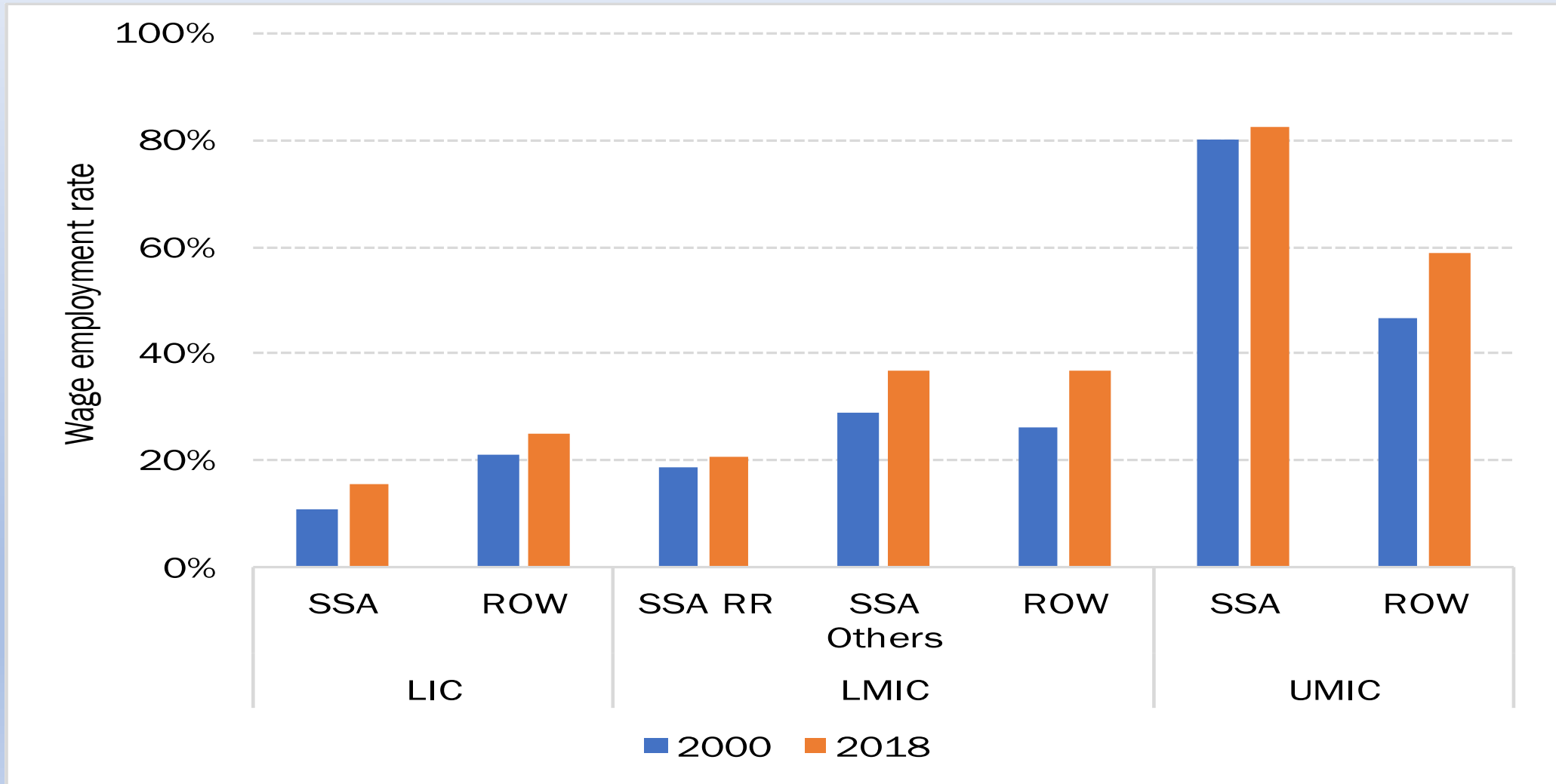
The Brookings Institution

<https://www.brookings.edu/research/youth-employment-in-sub-saharan-africa-progress-and-prospects/>

# WHAT IS 4IR? WHAT WILL IT MEAN FOR ECONOMIC TRANSFORMATION IN AFRICA?

- Collection of recently developed interdependent new technologies
  - Robotics, 3D printing, AI, big data, cloud computing, drones, high speed internet, internet of things (IOT), nano technology, advanced material science
- 4IR technologies coming on stream fast – will change production and consumption
- Africa will want to adopt these technologies and will have to in some cases to be competitive in global economy
- Can 4IR encourage new firm entry, growth, creating more formal wage jobs?
- What about the remaining jobs in the informal sector?

# Economic transformation necessary to improve employment opportunities



# LOOKING THROUGH THE CRYSTAL BALL

- Our approach – no bean counting
  - Every IR created, destroyed jobs
- Outcomes depend on public policy
- Our Questions:
  - Starting with the production side, where do we see potential for expansion of wage employment through new firm creation?
  - Potential for increased earnings in informal sector?
  - Downside risks?
  - What policies are needed to support and inclusive transformation?
- Africa has a young workforce. Under what circumstances will youth benefit?

# OUR PREDICTIONS

- With the right policies and investments, 4IR technologies can improve job opportunities
  - Skill bias means youth could benefit the most
- Sectoral analysis:
  - Services - could gain formal jobs - tourism, e-commerce and logistics, BPO could increase the share of formal wage employment
  - Agriculture – potentially an income effect
  - Manufacturing – might hold its share of employment
- But – informal will remain normal.
  - Factors driving informality already in place; we don't see big shifts in the share of employment that is informal

# CHALLENGES TO 4IR TECHNOLOGY ADOPTION

- Skills – SSA already has learning crisis in primary and secondary
  - How to develop high level STEM skills without neglecting the needs of most of the future labor force (who will not have post-secondary education)?
- Regulation – Africa already has challenging business environment
  - How to become nimble regulators? How to develop expertise in public sector?
- Infrastructure – in LICs and LMICs of SSA, internet is expensive, barely used. Major digital divides by gender, space, and income level. Electricity expensive and unreliable
  - How can poor Africa, already in debt, with weak DRM, afford the needed infrastructure? Are there possible solutions?
- Financing – public and private

# WHAT CAN BE DONE?

- Governments – can develop an integrated strategy
- Donors with grant financing – can aid in strategy development, provide TA on regulation, help upgrade education systems, aid in PPPs
- IFIs can lead financing of infrastructure, helping to bring in private investment as much as possible
- Experimentation with new models, approaches needed
- Africa and its stakeholders cannot stand still