United Nations
Educational, Scientific and
Cultural Organization

POLICY LEARNING FORUM (PLF) ON LEARNING OUTCOMES

25 June 2019

SAQA

Future of Qualifications

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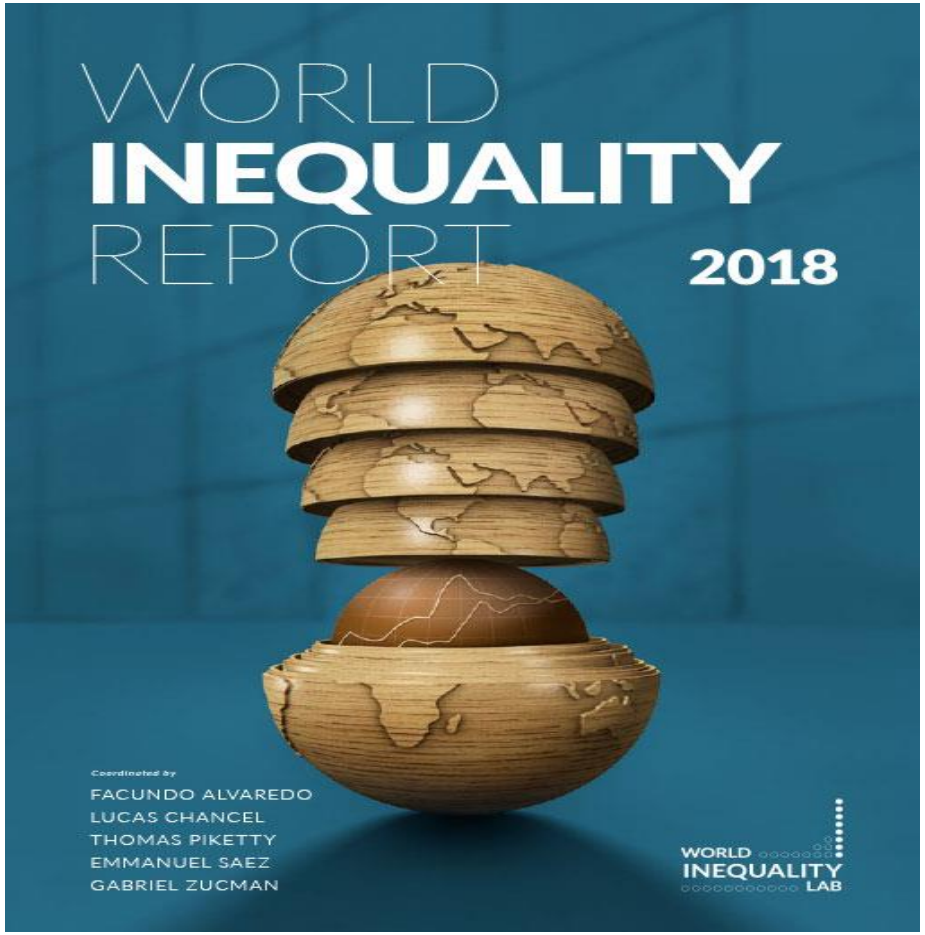
Education Sector, UNESCO

Education 2030

1. Global Trends: Factors driving demand for skills
2. Implications for Qualifications and Learning outcomes
3. Scenarios for the future

The richest 85 people have as much combined wealth as the poorest 3.6 billion



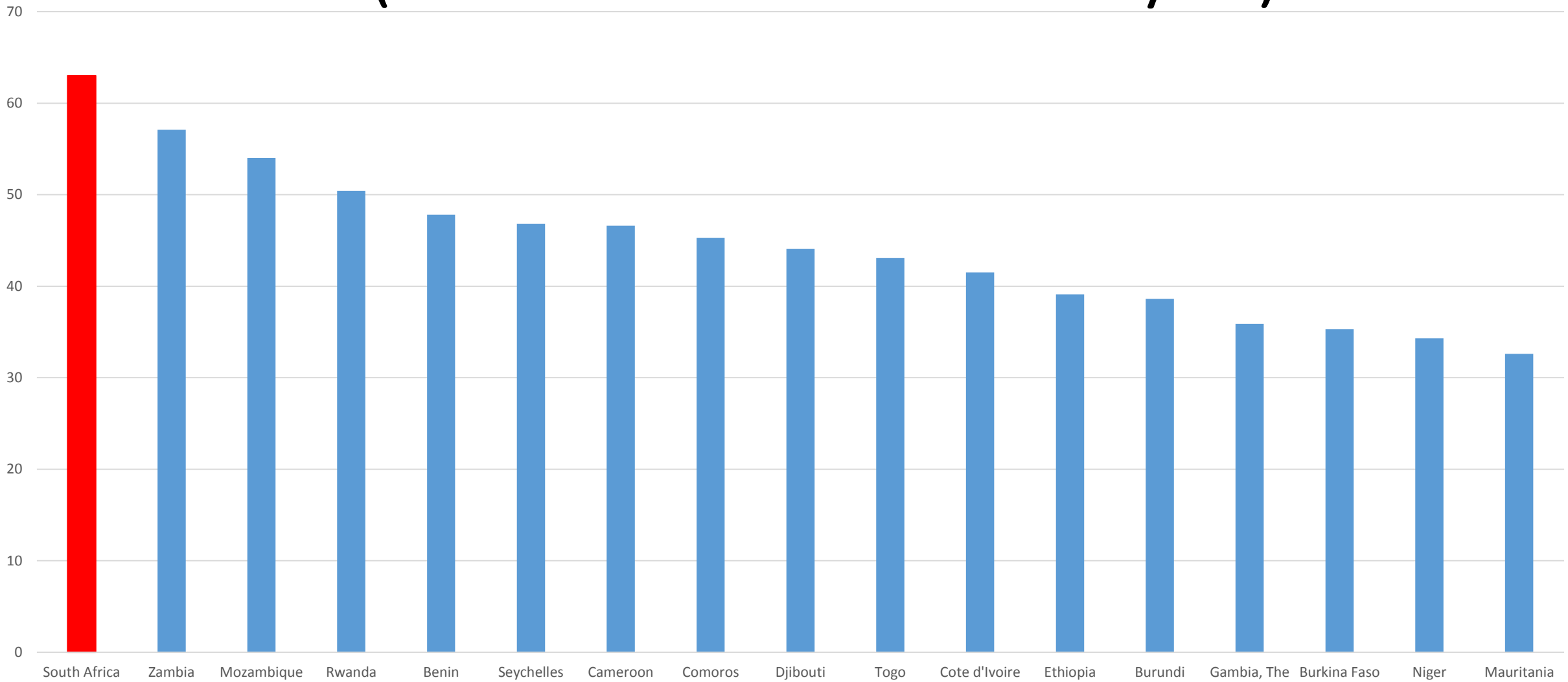
We project income and wealth inequality up to 2050 under different scenarios.

In a future in which “business as usual” continues, global inequality will further increase.

Alternatively, if in the coming decades all countries follow the moderate inequality trajectory of Europe over the past decades, global income inequality can be reduced—

In which case there can also be substantial progress in eradicating global poverty.

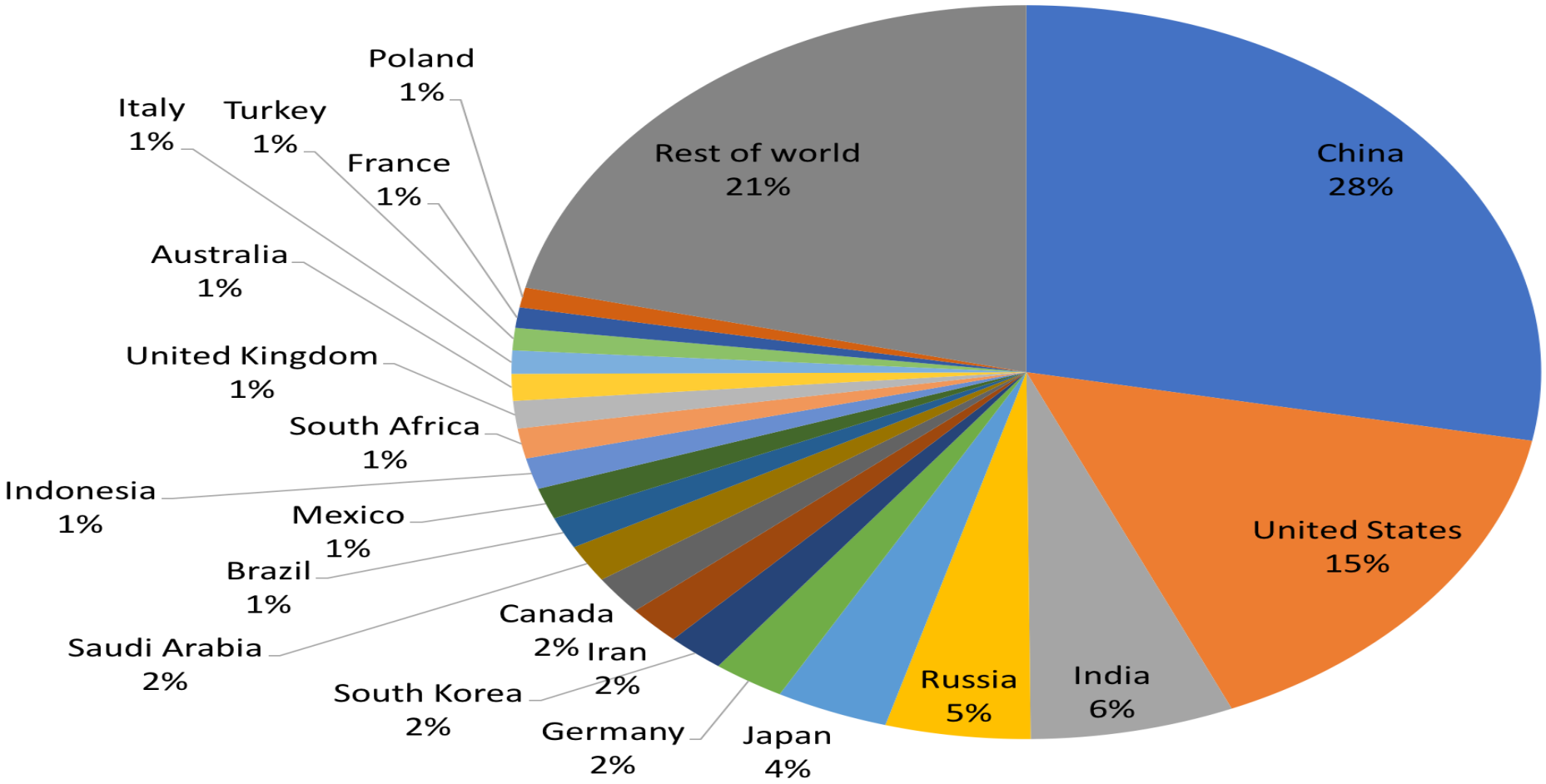
GINI Coefficient
(2015 or the latest available year)



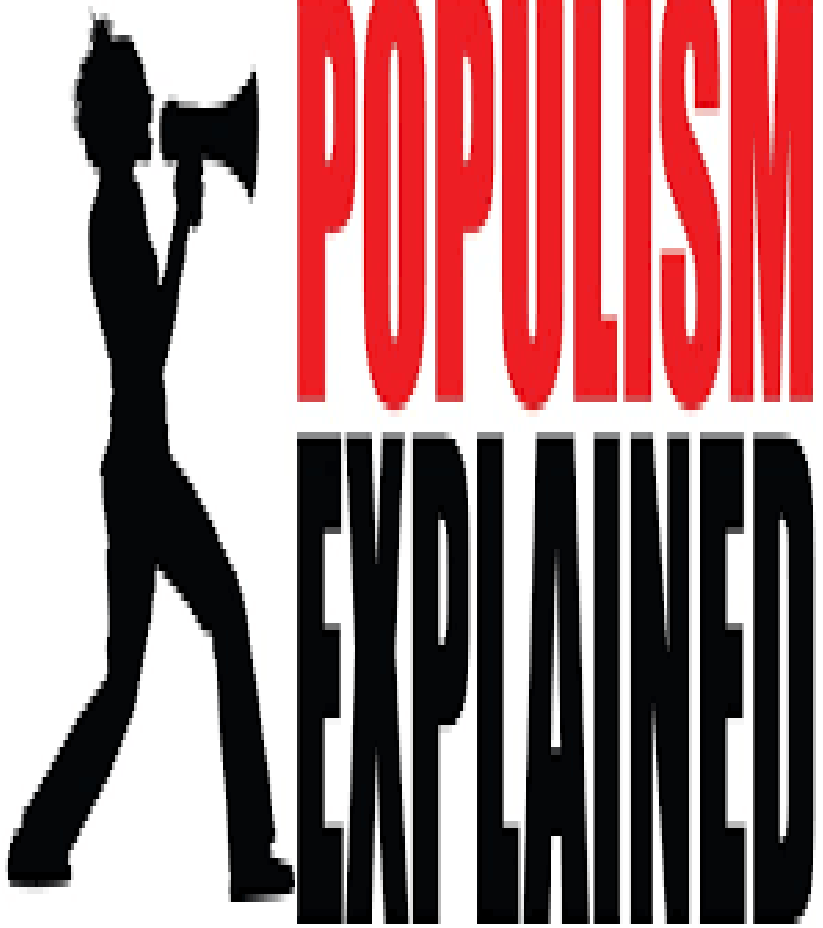
Source: The World Bank

EARTH OVERSHOOT DAY:
AUG. 1, 2018

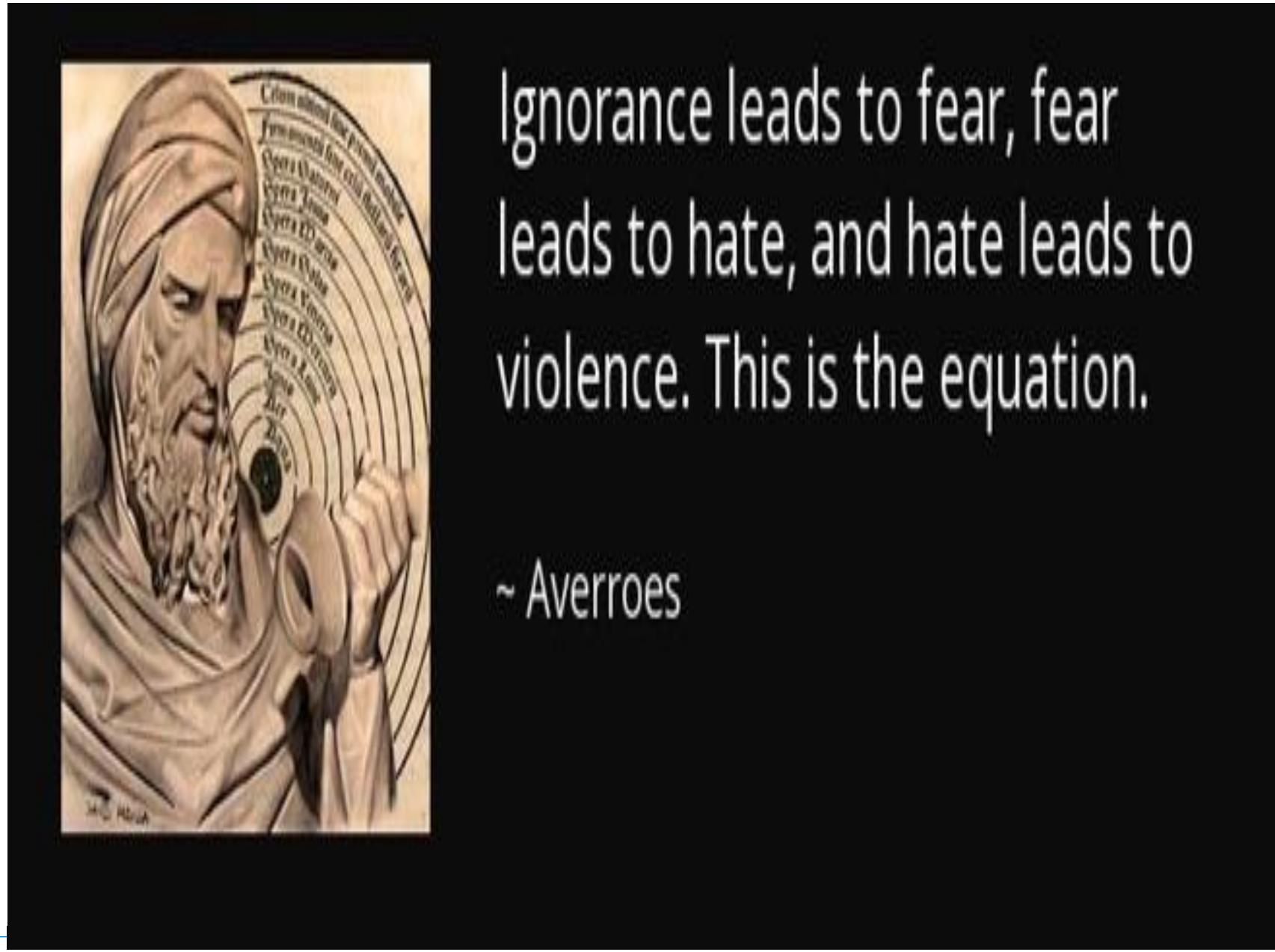
Share of global carbon dioxide emissions from fuel combustion (2015)



Data: IEA
Image: Union of Concerned Scientists



POPULISM EXPLAINED

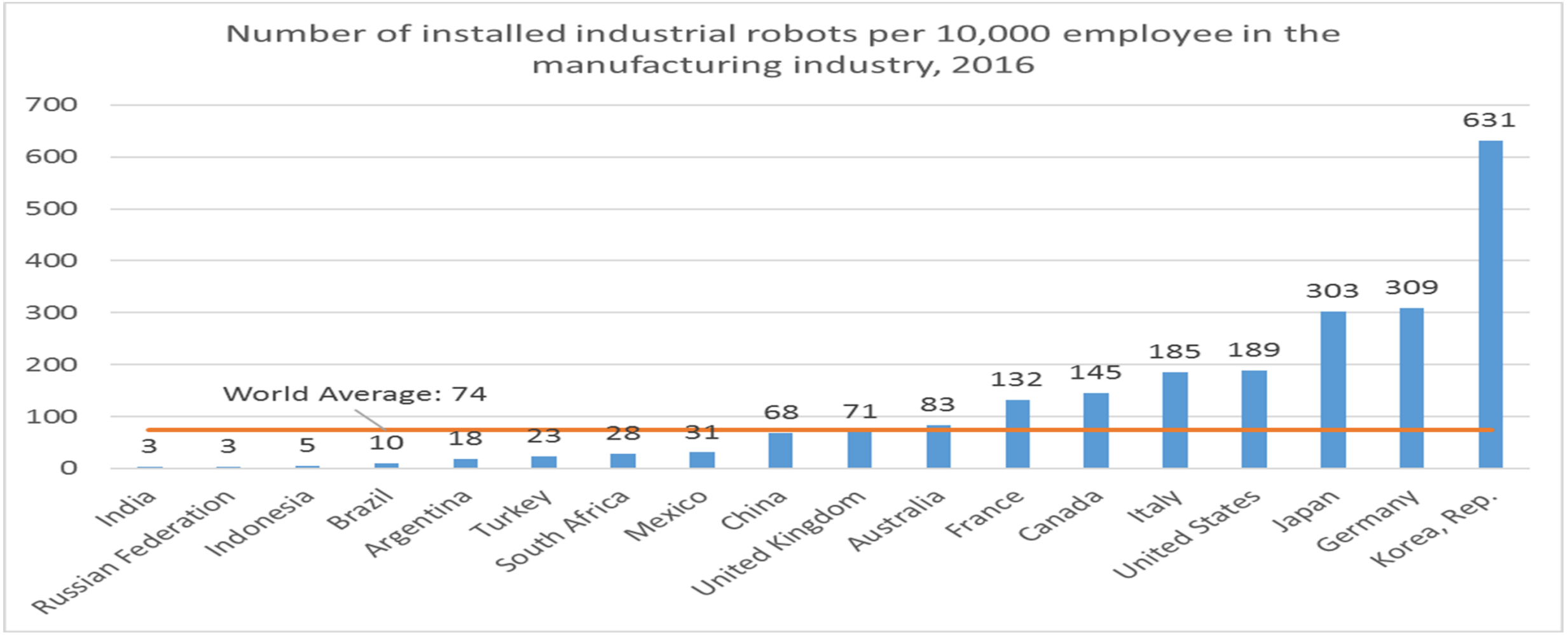


Robotisation

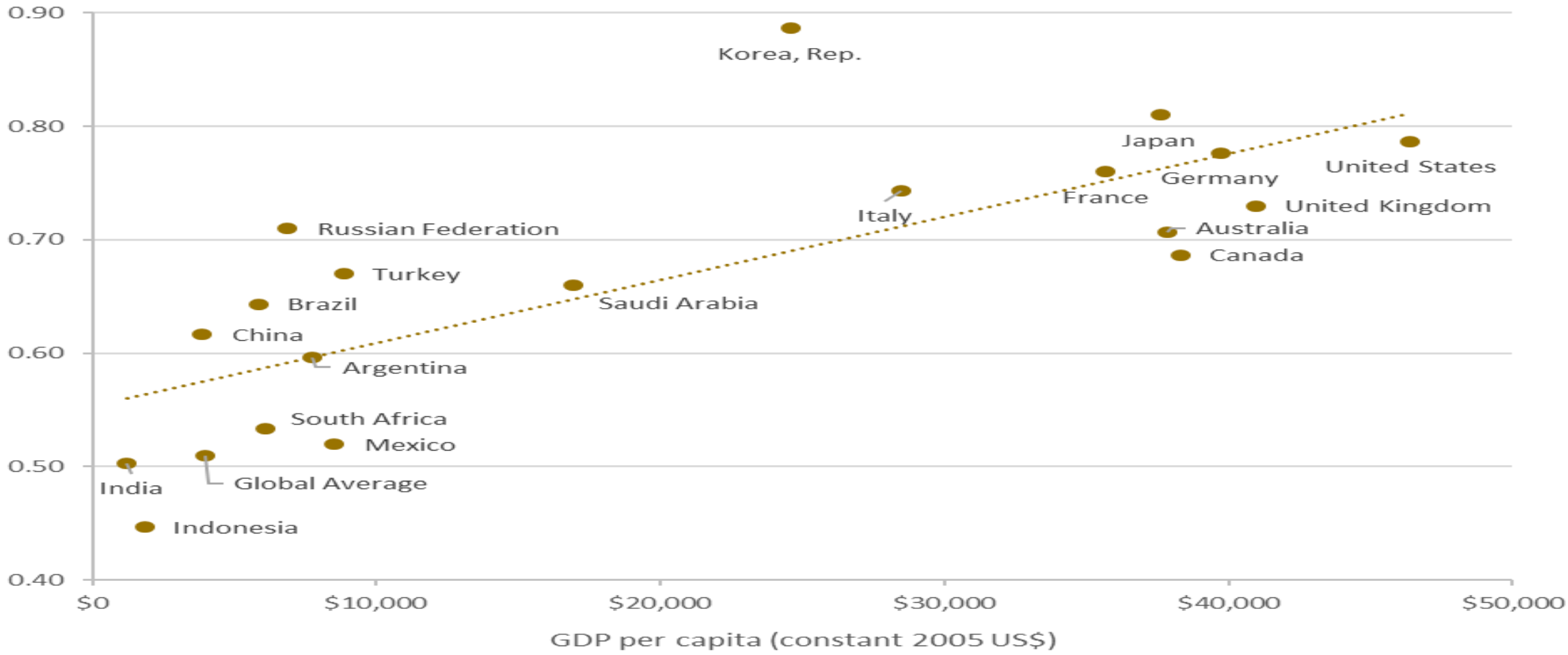
Polarisation of Labour Market

Informality

Level of Robotisation

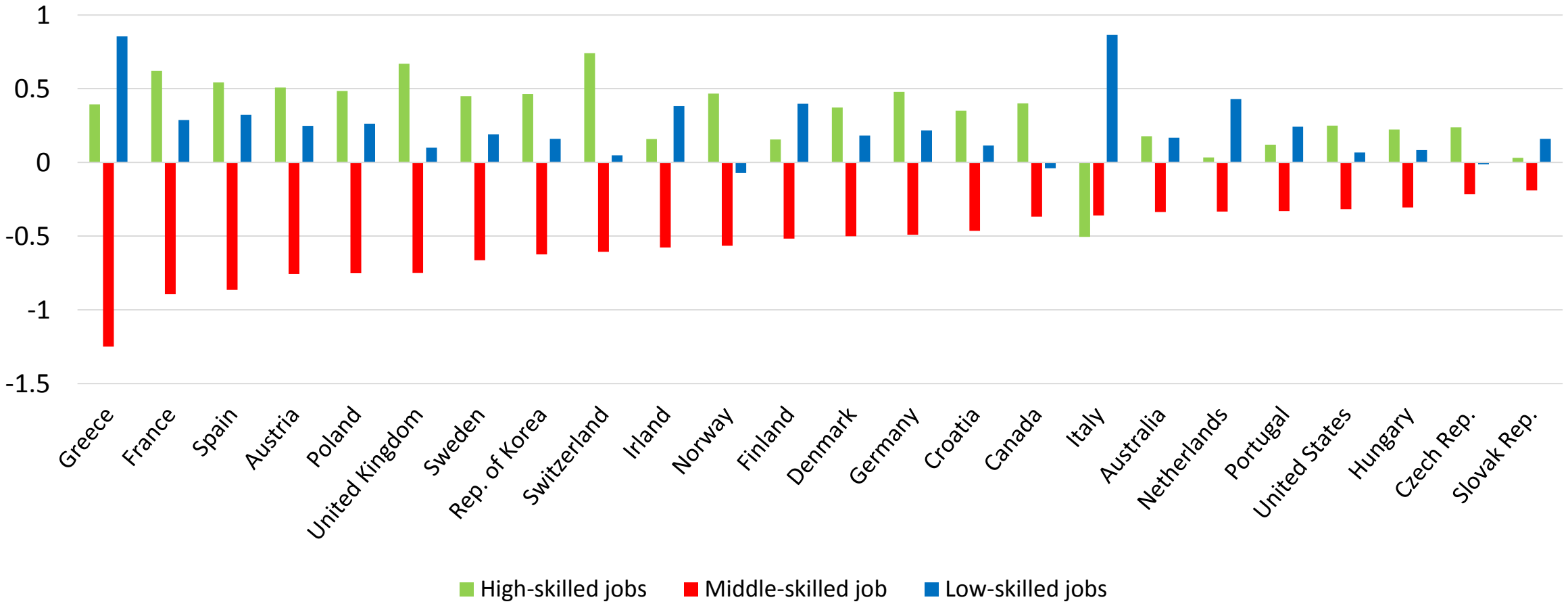


Digital Adoption Index 2016 in G20 countries

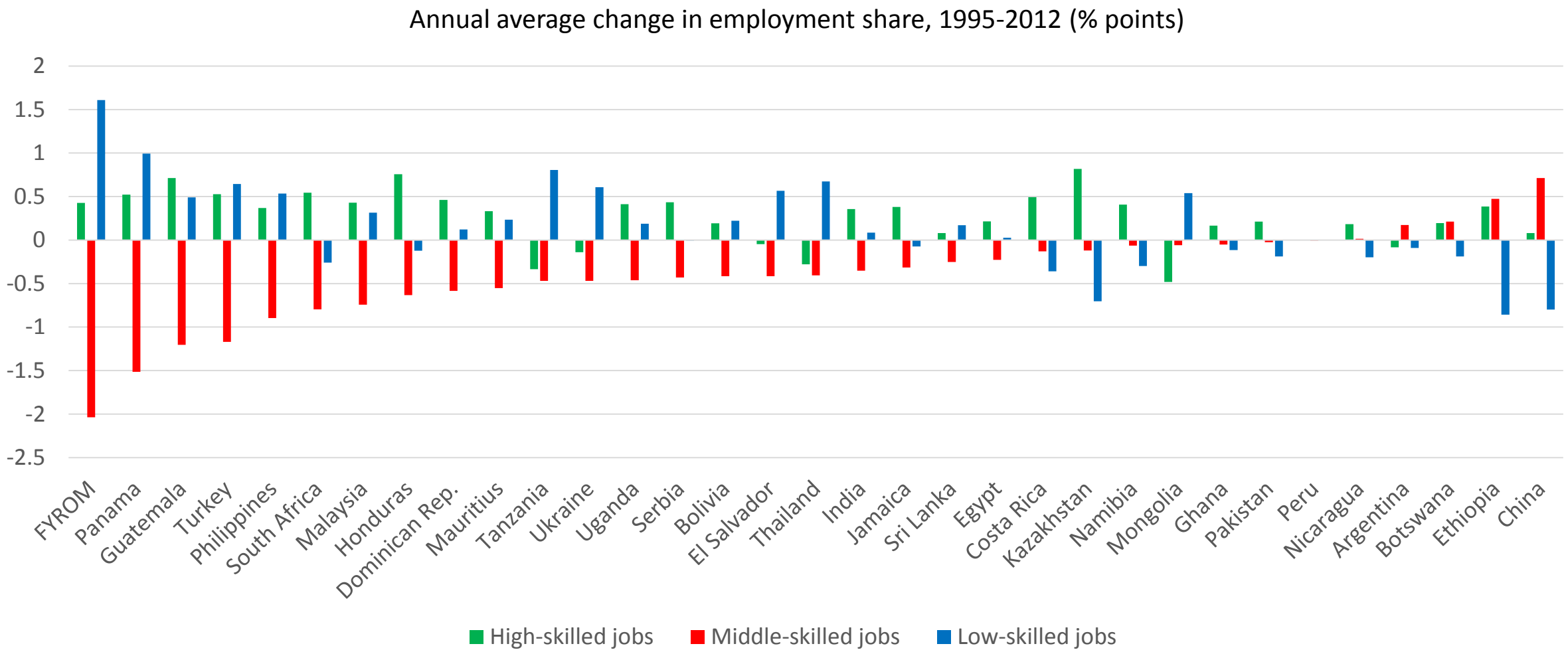


The labour market is becoming polarized in high income countries…

Annual average change in employment share, 1995-2012 (% points)

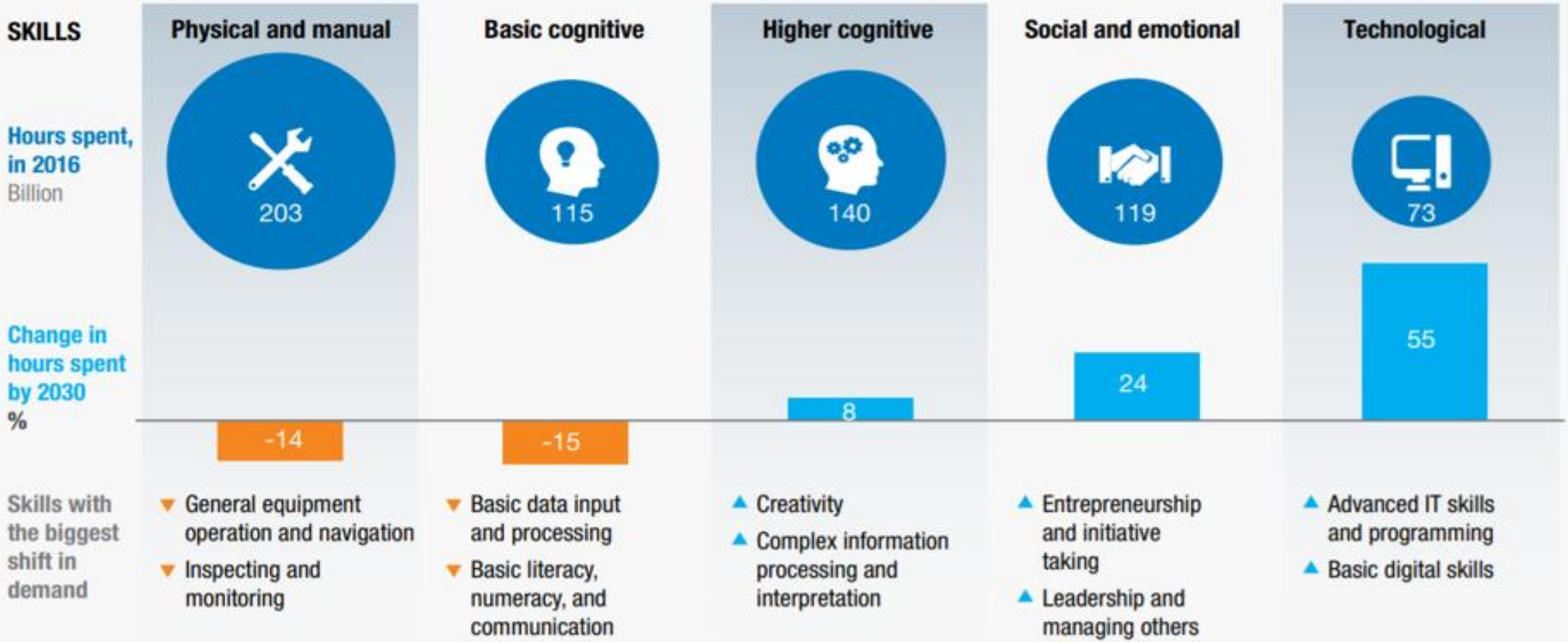


… and in low and middle income countries

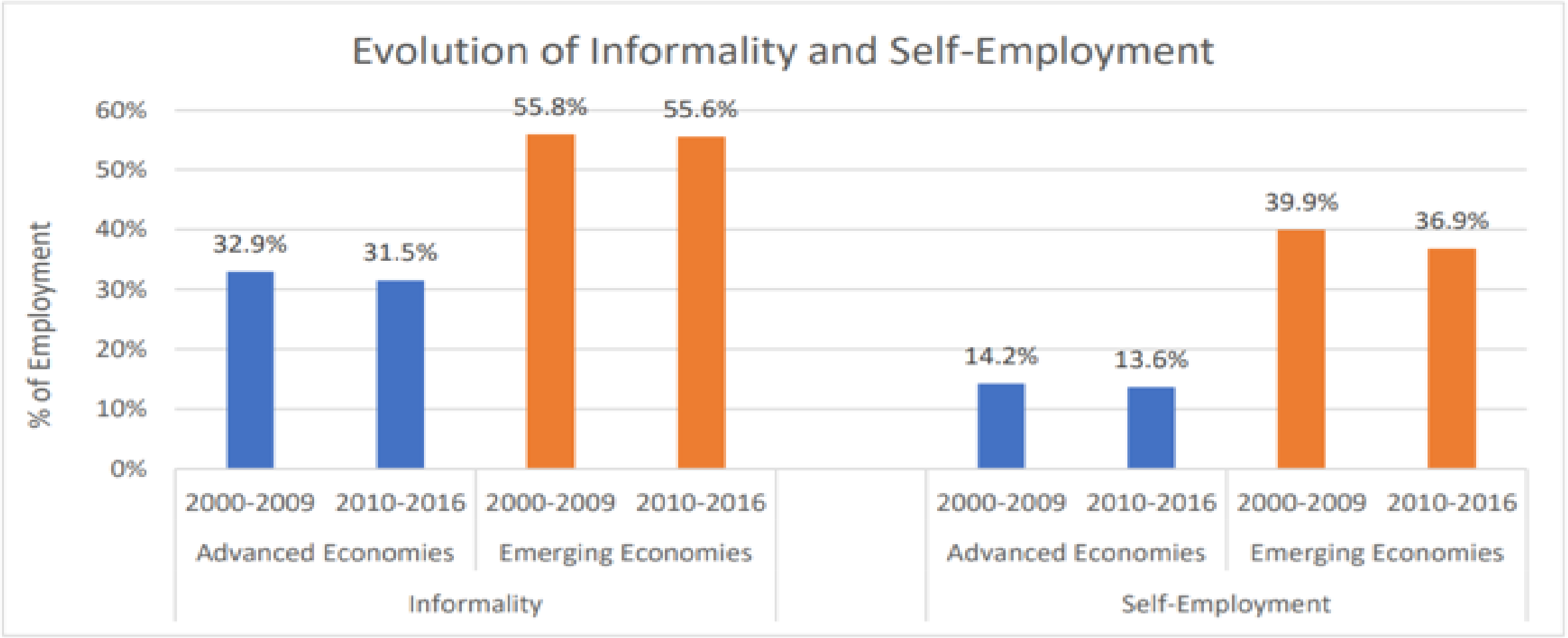


Automation and AI will change the skills needed in the workforce

Total is for United States and 14 Western European countries



Source: McKinsey&Company, 2018



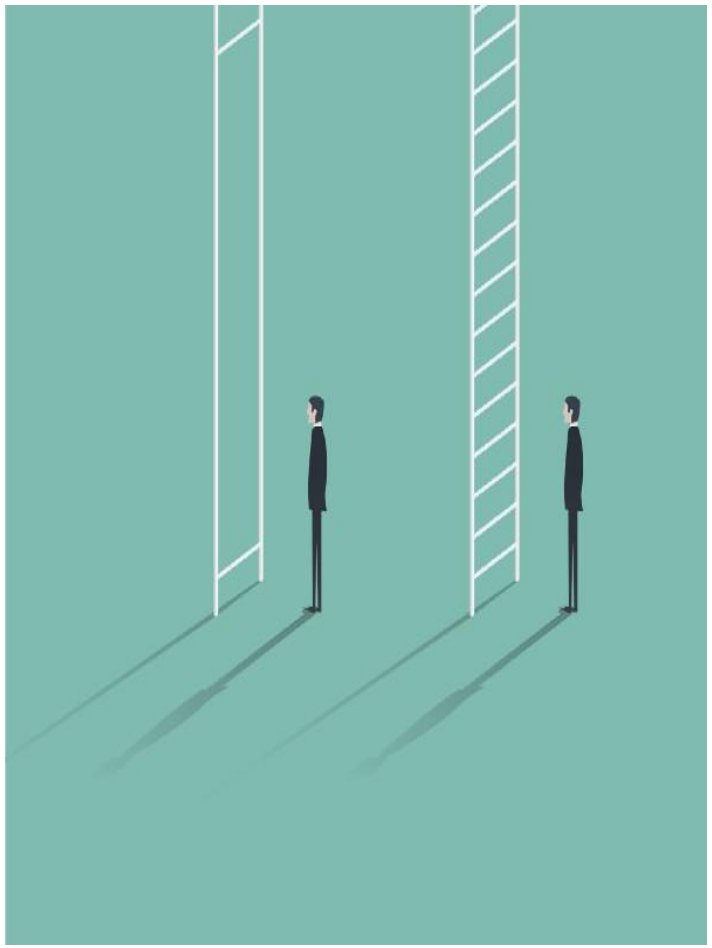
Source: The World Bank, 2019

Artificial Intelligence, which often requires human-annotated data to train new systems and measure our progress.

In particular, we use crowdsourcing platforms such as Amazon Mechanical Turk to build datasets that help our models learn common sense knowledge, which is often necessary to answer basic questions that are easy for humans but still quite hard for machines.

Amazon Mechanical Turk provides a flexible platform that enables us to harness human knowledge to advance machine learning research.

Current trends suggest career advancement is harder for some than for others.



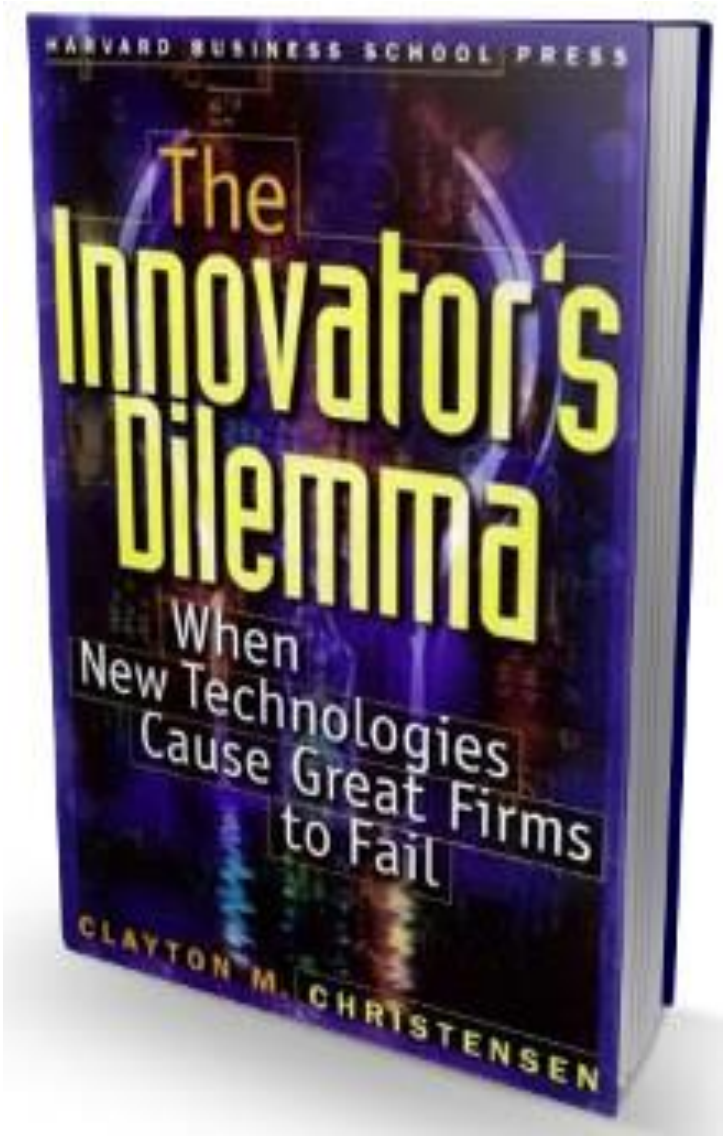
Agency
Decent work
Ability to leverage technology

Low skills
Low literacy
Cannot leverage technology

Credit:shutterstock

The global learning crisis

What happen if schools and colleges fails to learn the change.



The “innovator’s dilemma” is that “doing the right thing is the wrong thing.”

17 Sustainable Development Goals (SDGs)

SDG 4 : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

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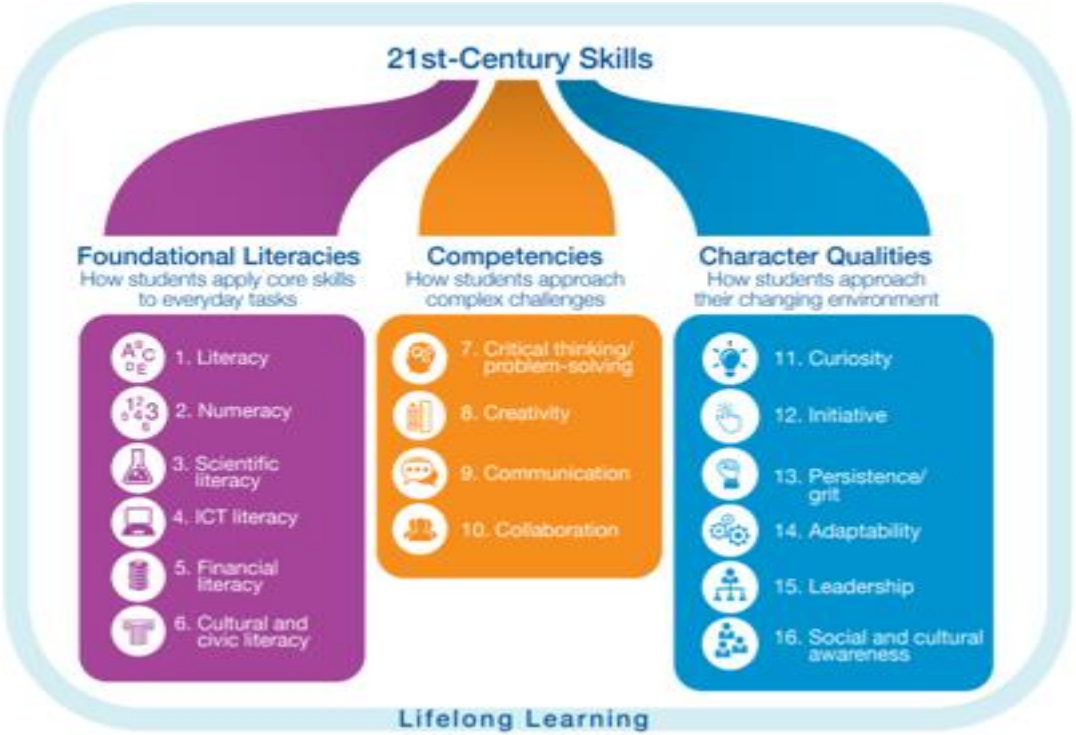
- Target 4.3. / "Participation": By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- Target 4.4. / "Skills acquisition": By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

- *Target 4.5.: / "Equity": By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.*

CHANGING ROLE: THREE ANALYTICAL LENSES

Source: Adapted from Marope, M., Chakroun,B. & Holmes,K (2015)

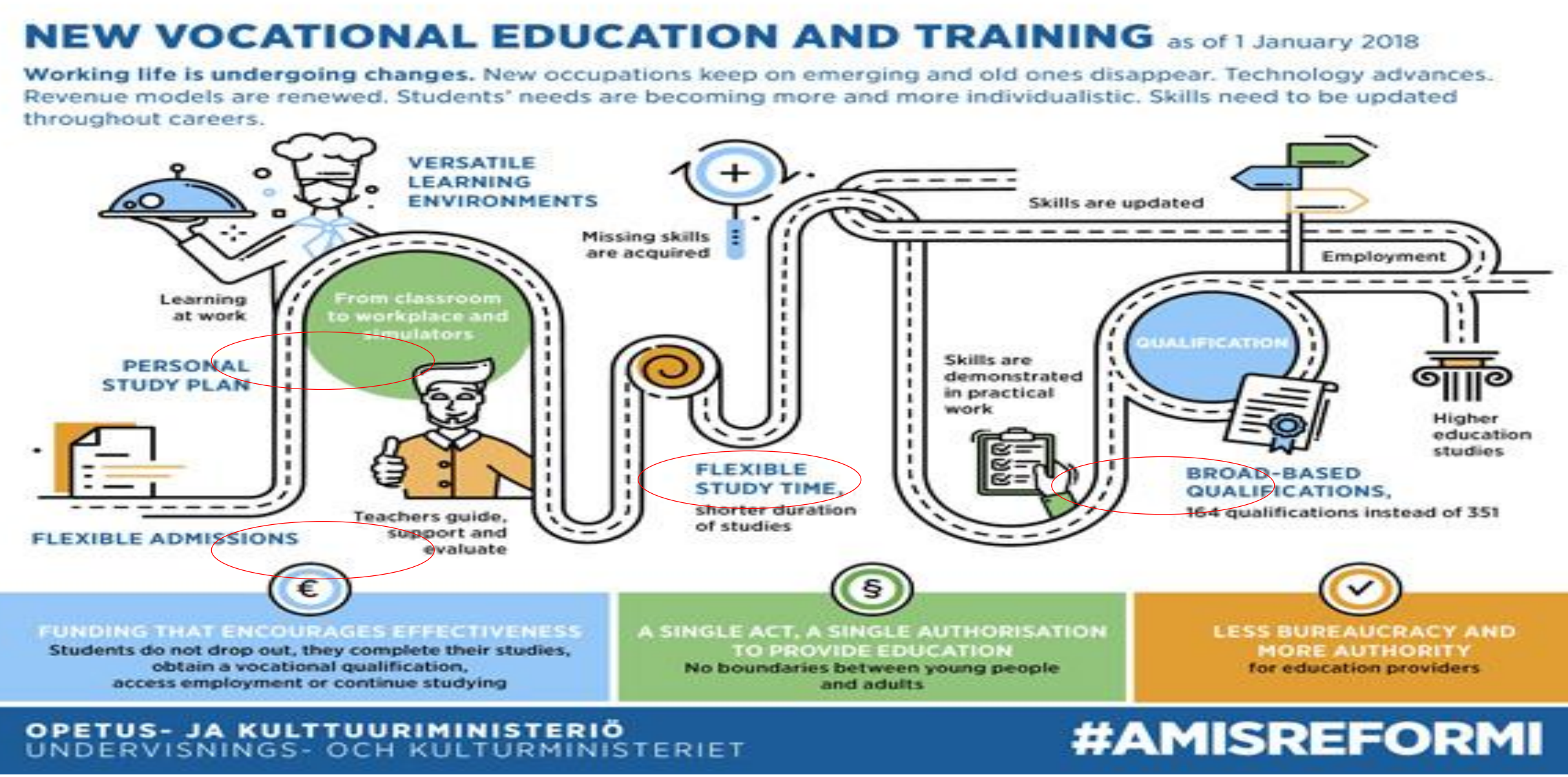

21st-Century Skills
Foundational Literacies
How students apply core skills to everyday tasks
1. Literacy
2. Numeracy
3. Scientific literacy
4. ICT literacy
5. Financial literacy
6. Cultural and civic literacy
Competencies
How students approach complex challenges
7. Critical thinking/ problem-solving
8. Creativity
9. Communication
10. Collaboration
Character Qualities
How students approach their changing environment
11. Curiosity
12. Initiative
13. Persistence/ grit
14. Adaptability
15. Leadership
16. Social and cultural awareness
Lifelong Learning

DigComp
Digital Competence Framework for citizens

Global Citizenship Education

TASK PERFORMANCE
EMOTIONAL REGULATION
COLLABORATION
OPEN-MINDEDNESS
ENGAGING WITH OTHERS
COMPOUND SKILLS
THE 'BIG FIVE' DOMAINS

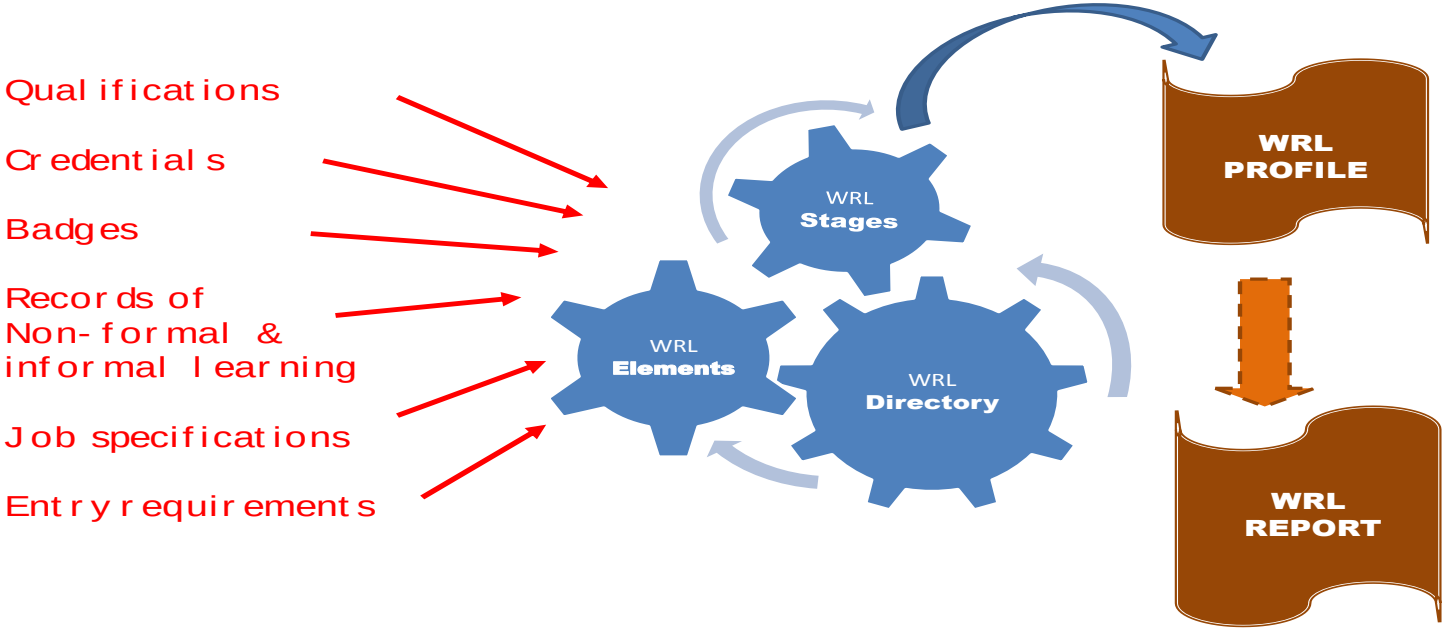
Finland TVET Reform: Flexible learning pathways



Looking Further Ahead

To translate any outcomes-based qualification, credential, entry requirements, job specification or framework level into an internationally recognised form of description which can be used in deciding on comparing qualifications or negotiating recognition or progression arrangements

WRL TOOL


Qualifications
Credentials
Badges
Records of Non-formal & informal learning
Job specifications
Entry requirements
WRL Stages
WRL Elements
WRL Directory
WRL PROFILE
WRL REPORT

Education Sector

Digital Credentialing

Implications for the recognition of learning across borders

- Focus on wider set of skills (job-specific; transversal skills; digital skills; Citizenship and sustainability skills)

- Organised by wide range of stakeholders including private sector, Edtech, etc.;

- Digital credentialing, credentials jungle, new generations of NQFs, Quality Assurance issues;

BadgetheWorld

- Individual pathways, supported by Artificial Intelligence;

- Digital Learners' records

- Privacy and security, the ownership of learners' records, inclusivity;

SKILLOGS
AI-POWERED LEARNING

Lifelong Learning Account System
The National Institute for Lifelong Education (NILE)

Friday, September 22, 2017, 11:50 by Ivan Martin

Malta becomes first country to explore blockchain education certificates

Learner no longer needs permission of issuing institution to share certificate

The government has launched a pilot project to explore the possibility of issuing educational certificates on the blockchain.

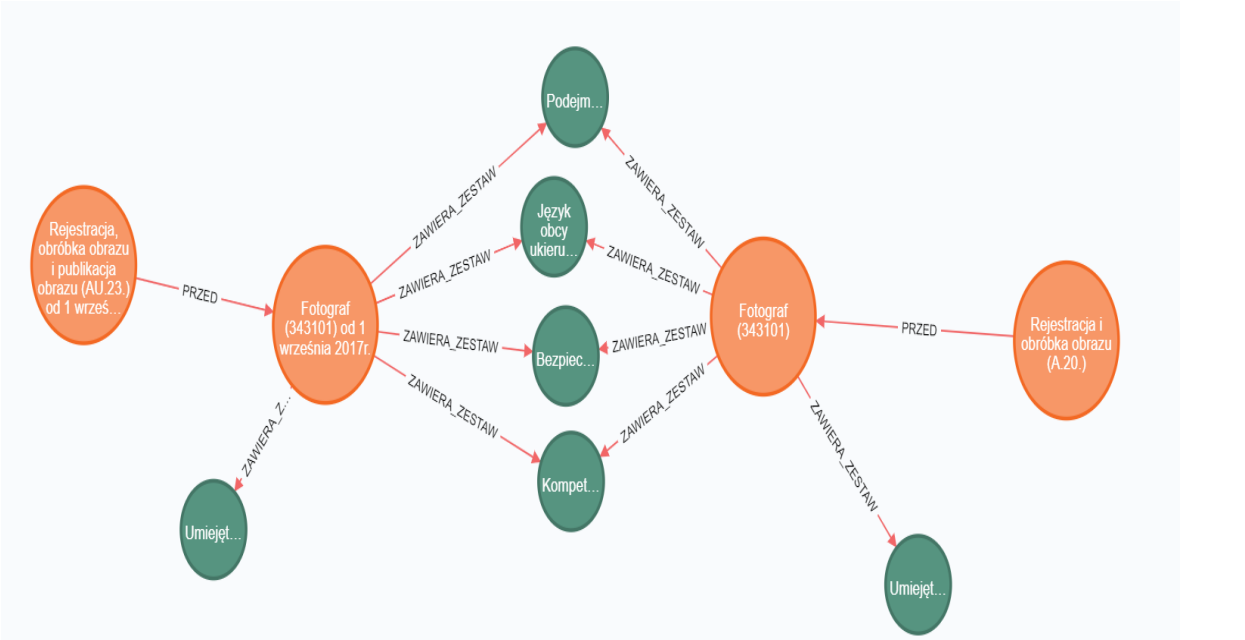
The project will see diplomas at MCAST, training certificates at ITS, and equivalence statements, accreditation and licensure from the NCFHE, all issued on the emerging technology this year.

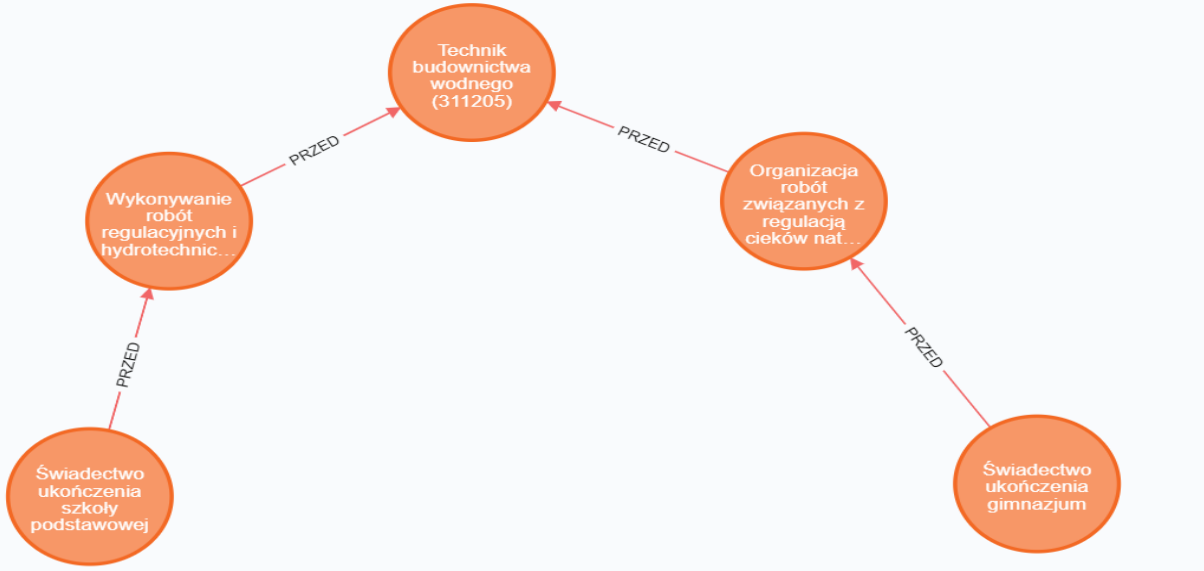
Impact on credentials value chain: creation, issuing, viewing, and verification of the certificate

- **Self-sovereignty**, i.e. for users to identify themselves while at the same time maintaining direct control over the storage and management of their personal data;
- **Trust**, i.e. for a technical infrastructure that gives people enough confidence in its operations to carry through with transactions such as payments or the issue of certificates;
- **Transparency & Provenance**, i.e. for users to conduct transactions in knowledge that each party has the capacity to enter into that transaction;
- **Immutability,** i.e. for records to be written and stored permanently, without the possibility of modification;
- **Disintermediation**, i.e. the removal of the need for a central controlling authority to manage transactions or keep records;
- **Collaboration**, i.e. the ability of parties to transact directly with each other without the needs for third parties.

Poland Case: Modernization of the Integrated Qualifications Register in Poland

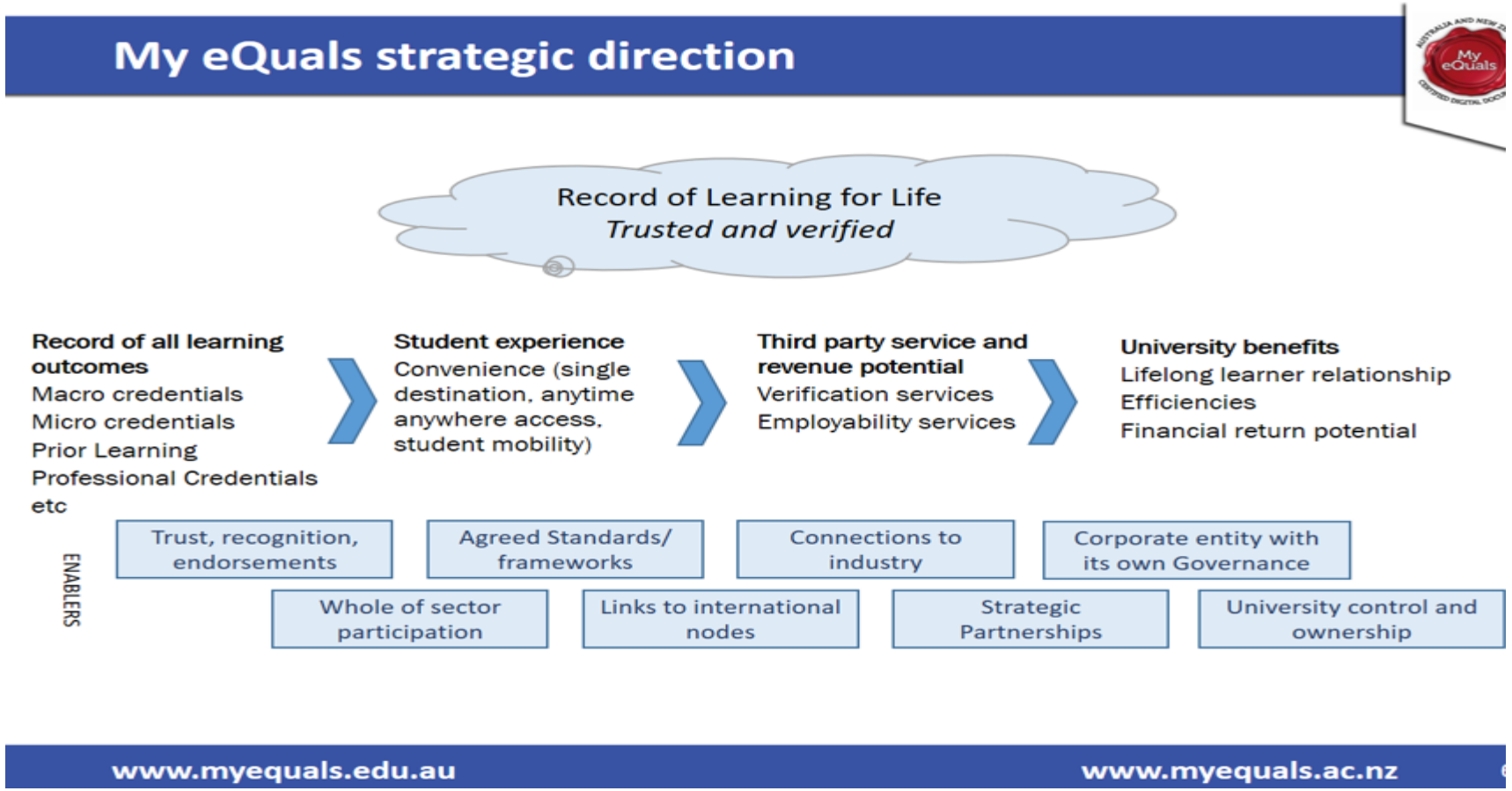
- **Single qualification representation**
- **’Atomization’ of learning outcomes**
- **Using ’skills objects’ for comparisons**
- **Qualifications paths representation**
- **Visual comparison of qualifications**
- **Developing and calculating similarity indexes**
- **Qualifications similarity matrix**

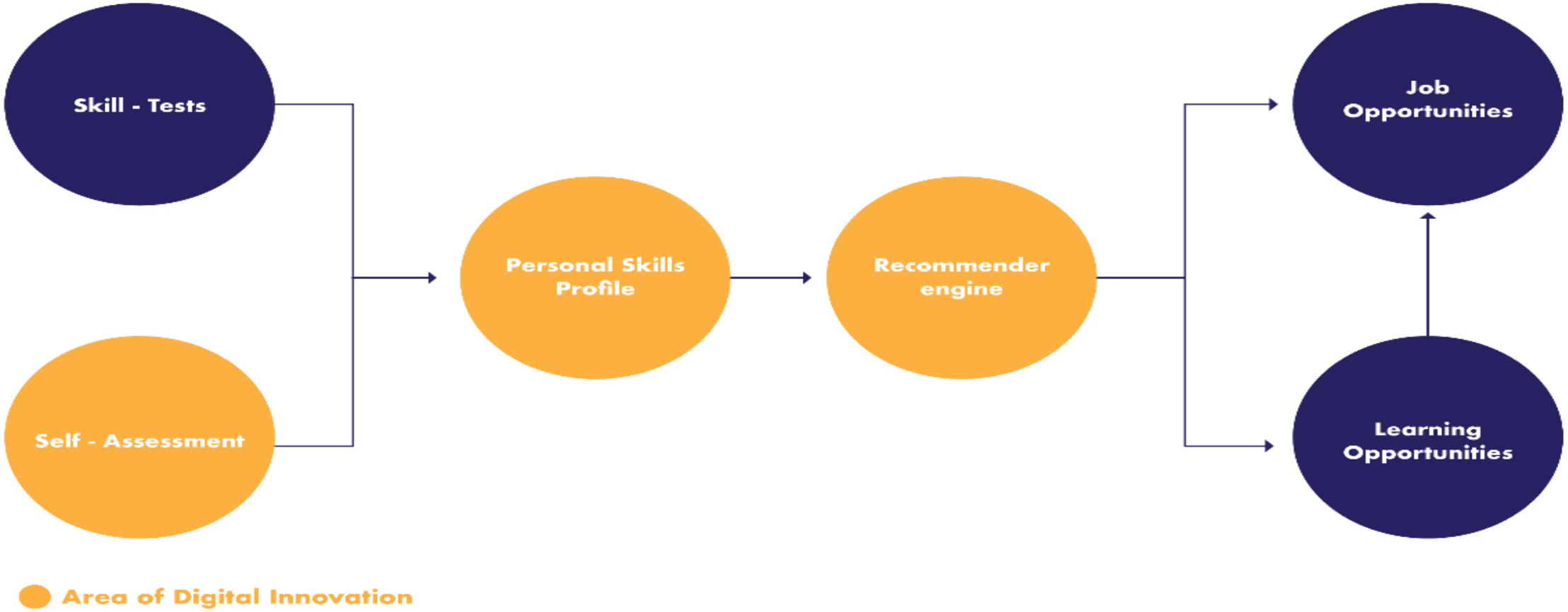




Source: **Marcin Będkowski**
Wojciech Stęchły, 2019

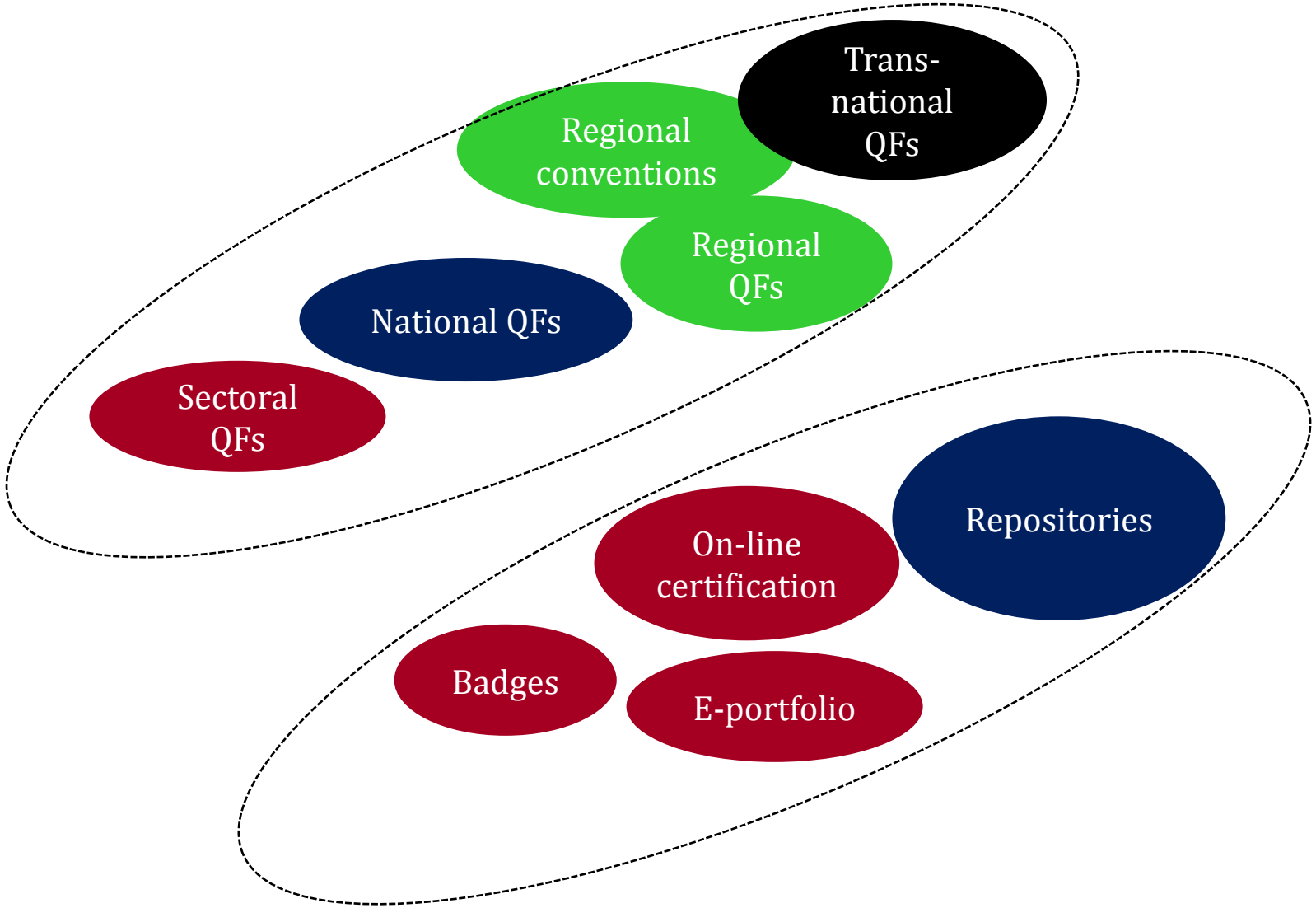
- **Creating a constantly evolving profile of a person's lifelong learning to support transitions in work and life**



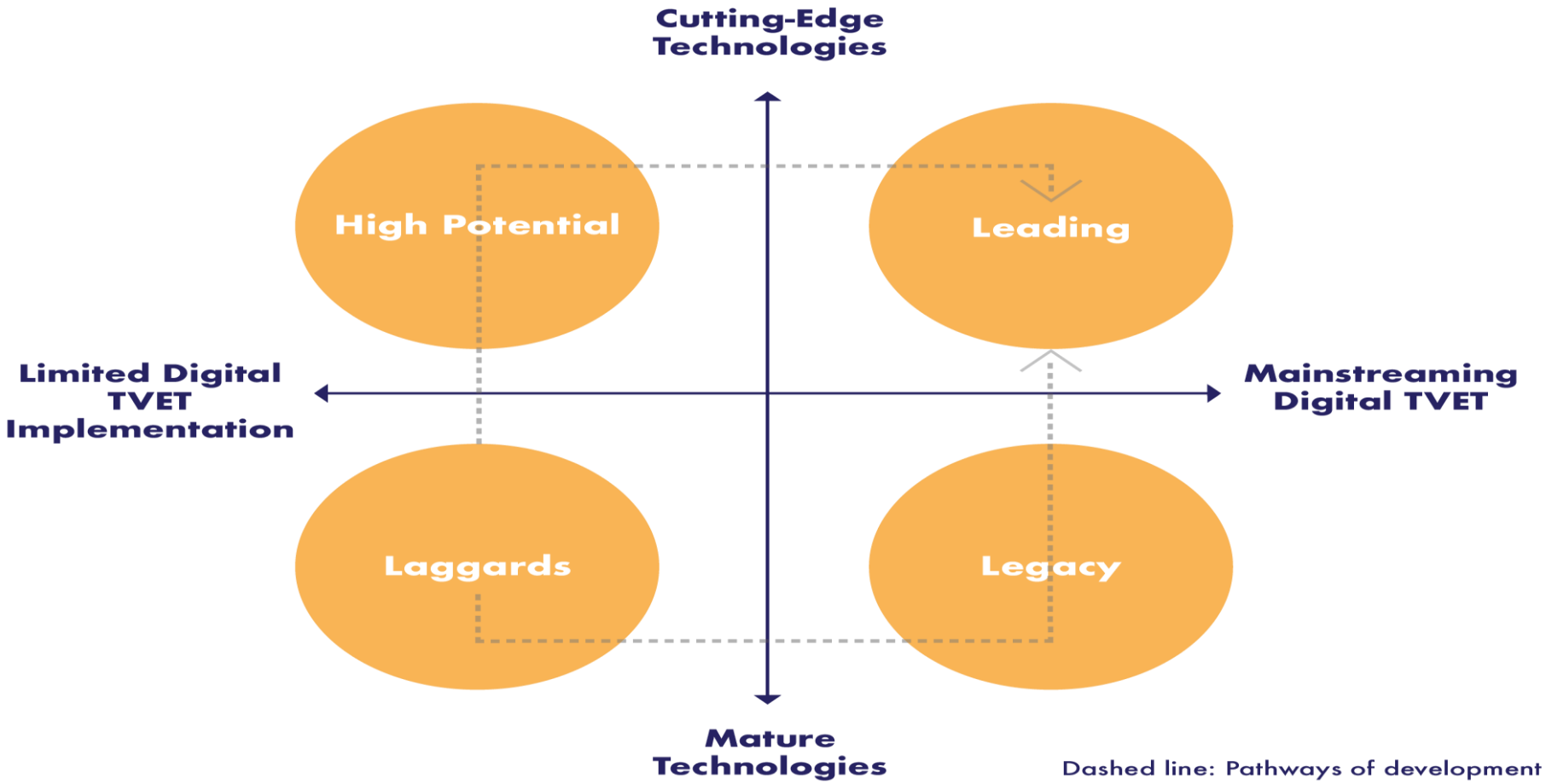


Source: UNESCO-ILO, forthcoming

Skills and qualification recognition landscape



Countries Typology with respect to Digitization in Education and Training

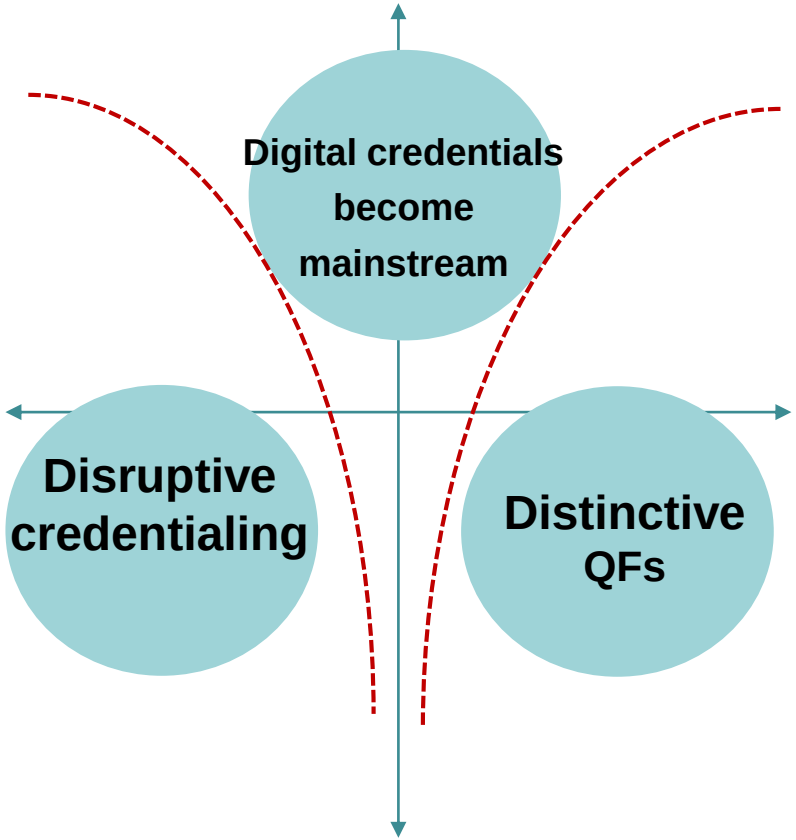


Source: UNESCO-ILO, forthcoming

Possible Scenarios

Pluralistic/integrated credentialing /Public-Private Partnership

Strong role of Tech-Industry/ new generation of quality assurance modalities



Regulated Qualification Systems / Quality assurance/Strong role of governments/institutions

Source: Borhene Chakroun

Thank you

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