

DIGITAL DIVIDENDS

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OUTLINE

1. THE DIGITAL REVOLUTION

2. GLOBAL OUTLOOK

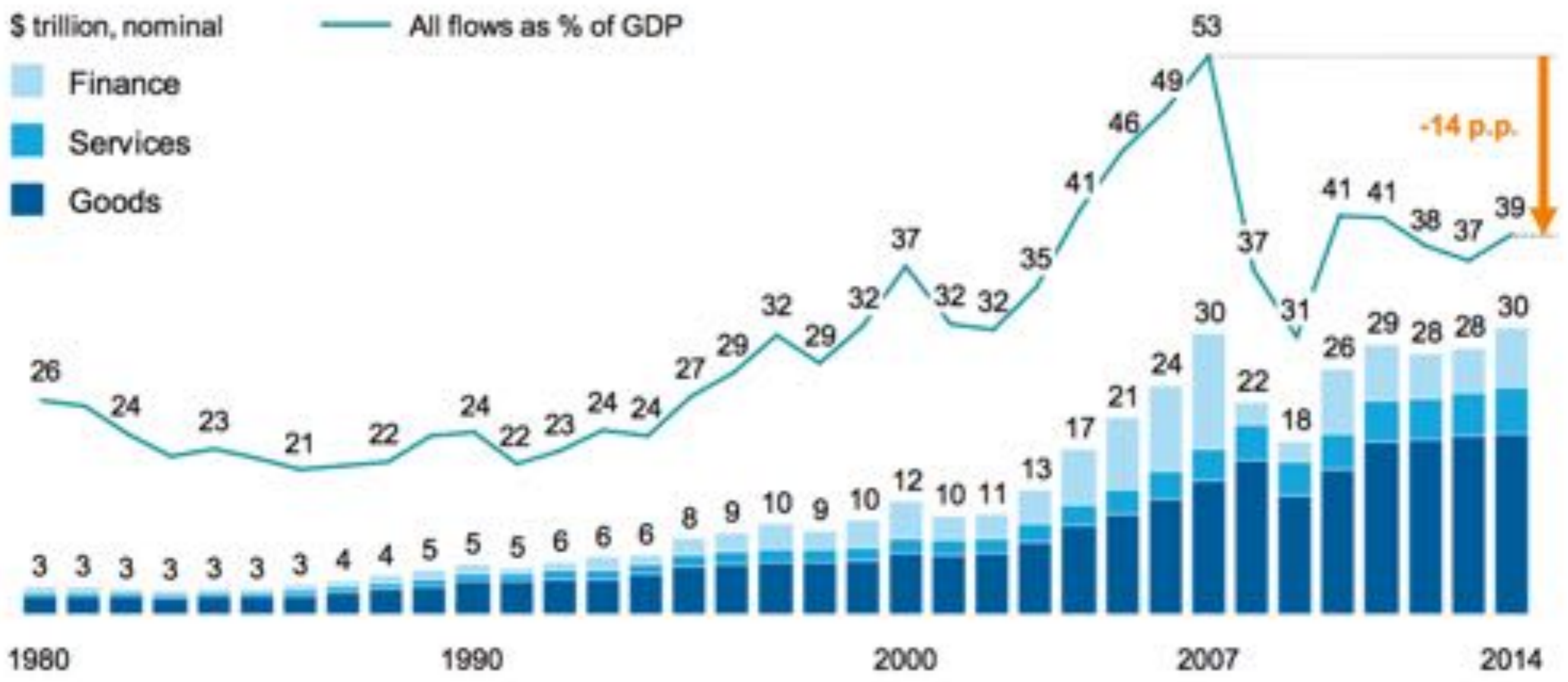
3. DIGITAL DIVIDENDS & WAY FORWARD

THE DIGITAL REVOLUTION

The background features a dark blue gradient with abstract, glowing digital elements. On the left, several colorful, translucent ribbons in shades of purple, blue, and green curve across the frame. On the right, a series of glowing binary digits (0s and 1s) are arranged in a perspective that suggests depth and movement, as if data is being processed or transmitted.

'TRADITIONAL' FLOWS ARE STAGNATING

Flows of goods, services, and finance, 1980–2014



Source: McKinsey 2016

DATA FLOWS ARE SKYROCKETING

Used cross-border bandwidth, global
Terabits per second

Actual Forecast



SOURCE: TeleGeography, Global Bandwidth Forecast Service; McKinsey Global Institute analysis

Source: McKinsey 2016



Social networking users with
at least one foreign connection
914 million



International
travelers
429 million



Cross-border
e-commerce shoppers
361 million



People living outside
home country
244 million



Cross-border
online workers
44 million

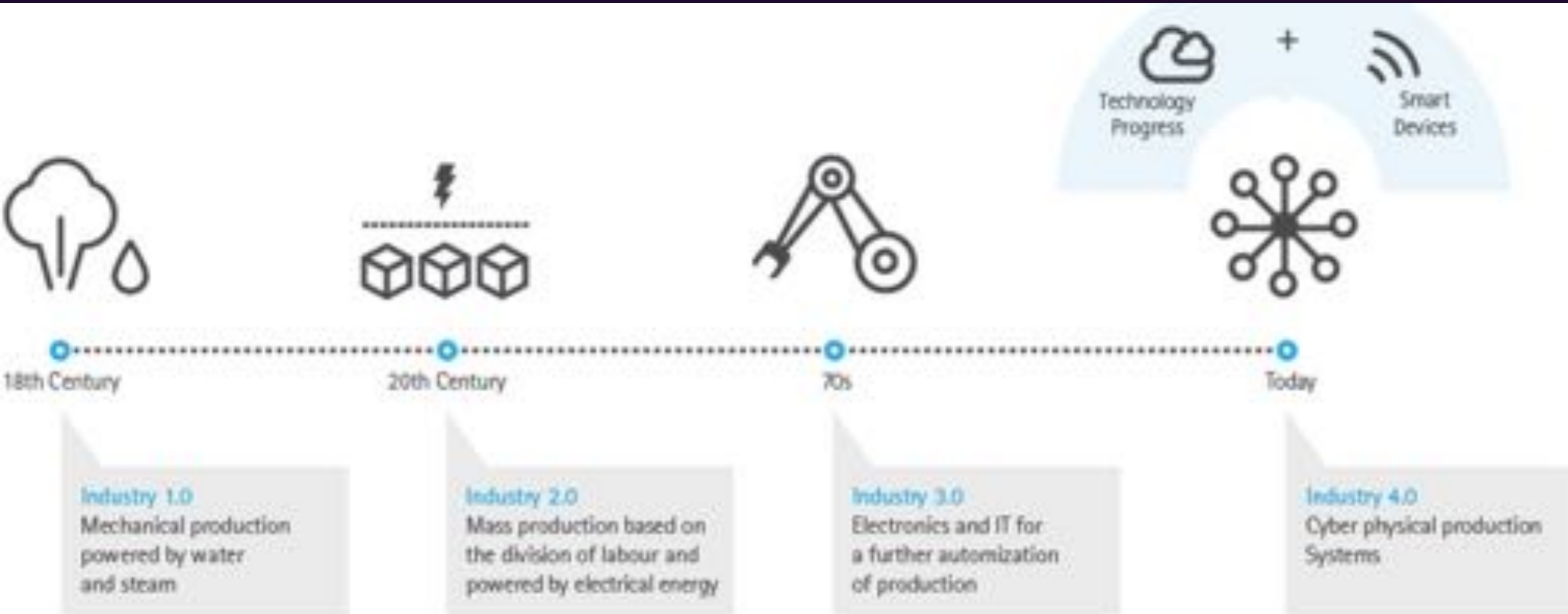


Cross-border
online students
13 million



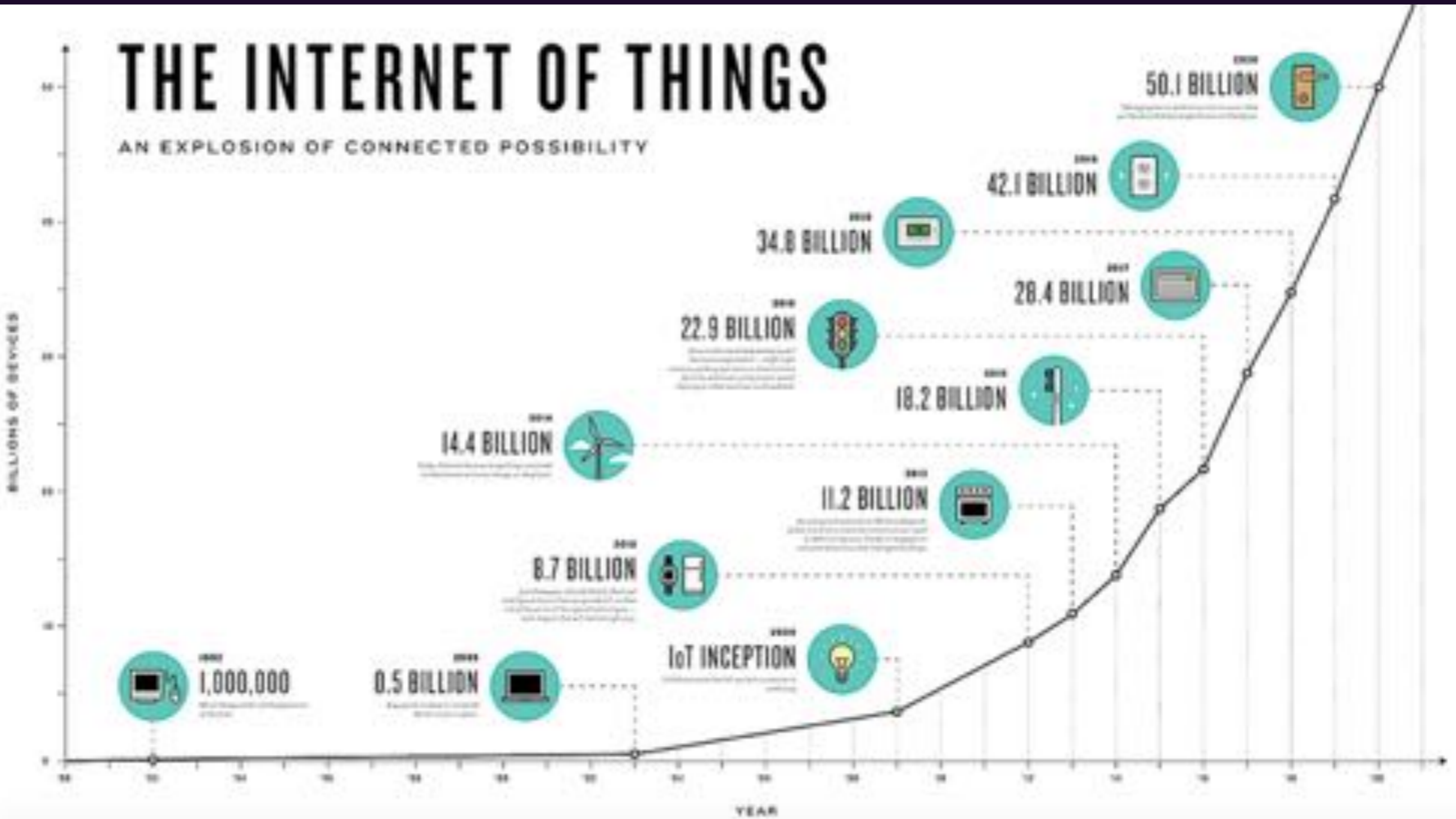
Students
studying abroad
5 million

INDUSTRY 4.0



THE INTERNET OF THINGS

AN EXPLOSION OF CONNECTED POSSIBILITY



Source: Goldman Sachs Website

INTERNET OF THINGS



Source: OMsignal website

3D PRINTING



Source: Extracted from <https://www.youtube.com/watch?v=sFpSxX0SzgY>



- NO ECONOMIES OF SCALE
- FAST AND LOW-COST ITERATION
- COMPLEXITY FOR FREE

INDUSTRY 4.1

PRODUCTION:

- ON-DEMAND
- CUSTOMIZED



DISPATCH OR PICK UP
LOCALLY

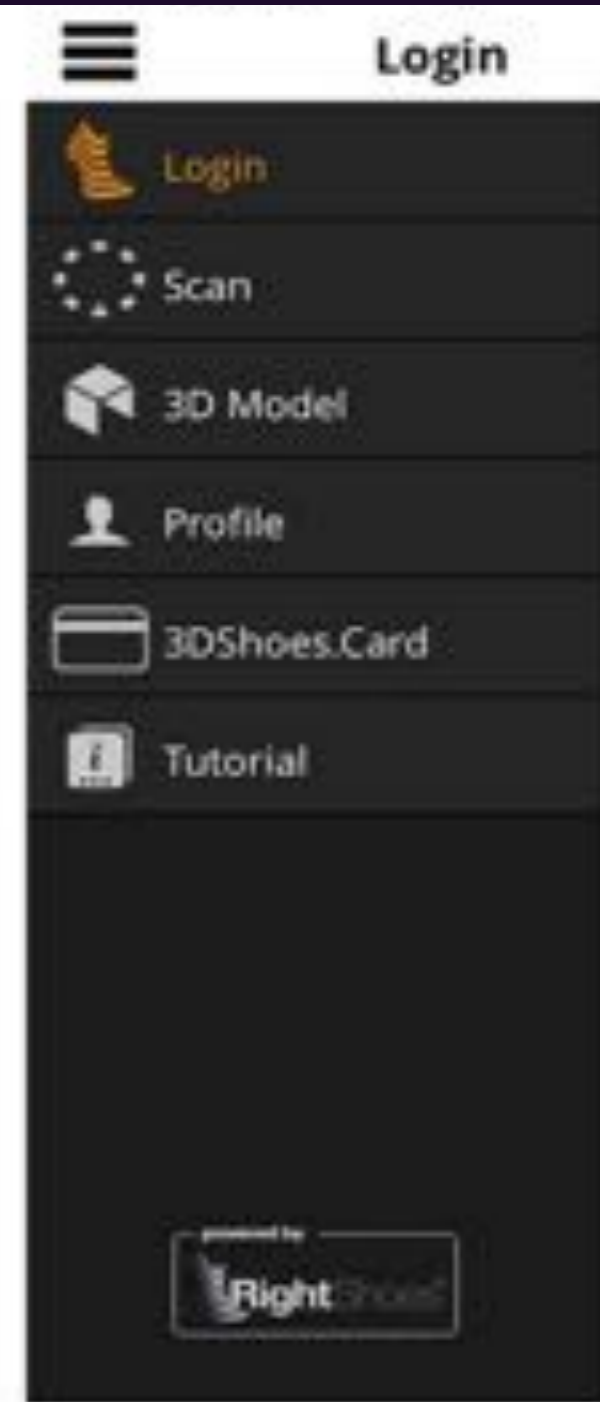
OBJECT
UPLOADED IN A
WEB PLATFORM



ONLINE
CUSTOMISATION
ACCORDING TO
PERSONAL TASTE
OR ANATOMY

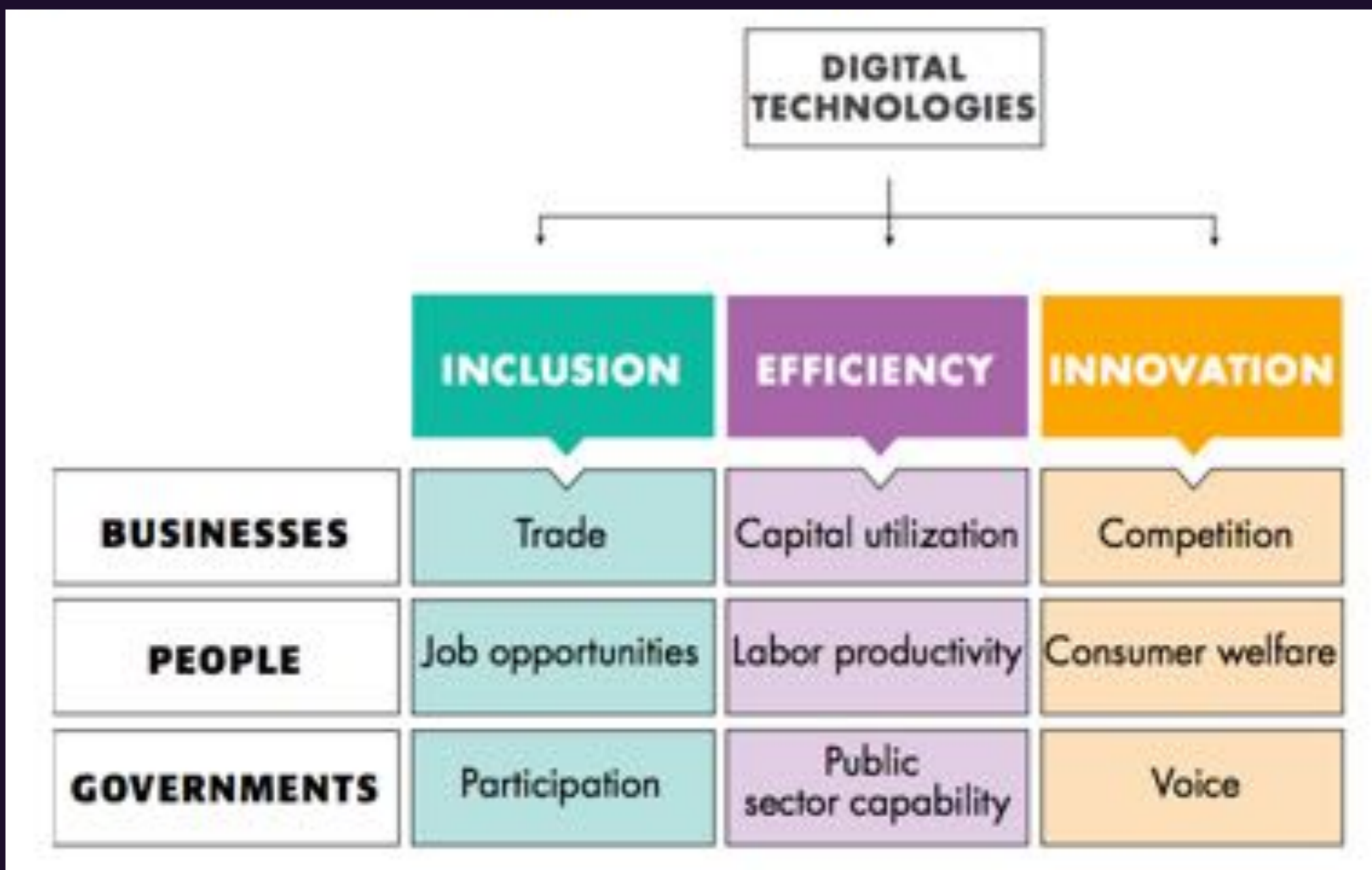
LOCAL DIGITAL
MANUFACTURING





Source: 3Dprint.com

GREAT POTENTIAL OF DIGITAL TECHNOLOGIES



Source: WDR 2016

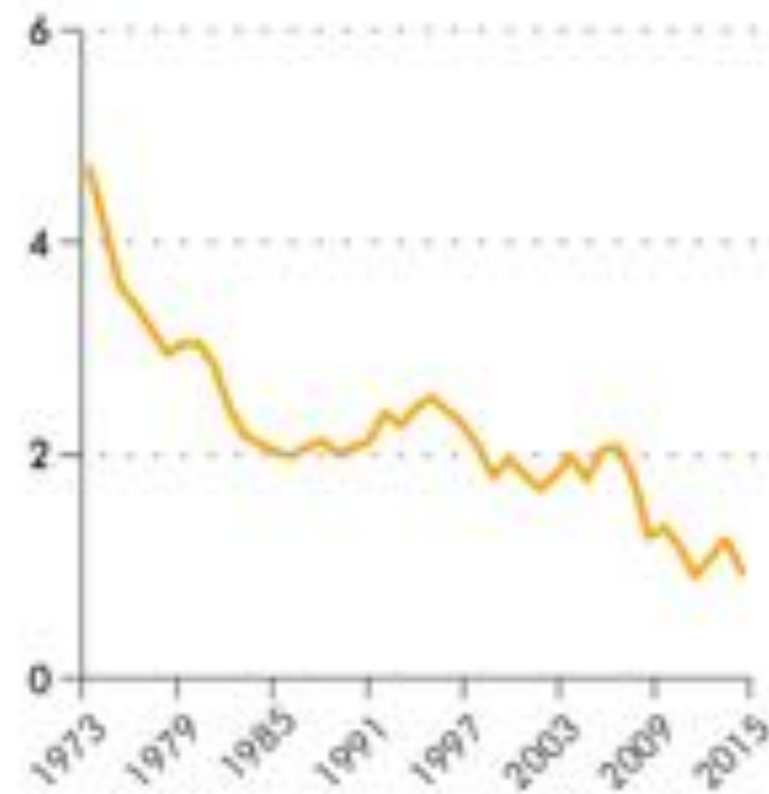


GLOBAL OUTLOOK

DESPITE DIGITAL TECHNOLOGIES, THE GLOBAL OUTLOOK IS NOT BRIGHT...

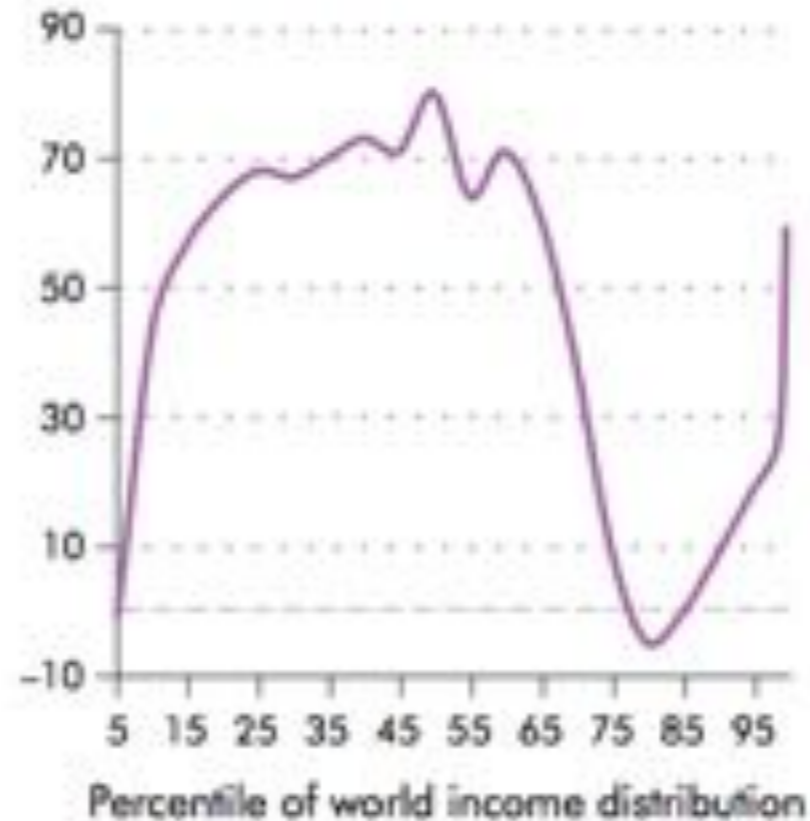
a. Global productivity

Five-year moving average of median growth of labor productivity per hour worked, in percent, in 87 countries



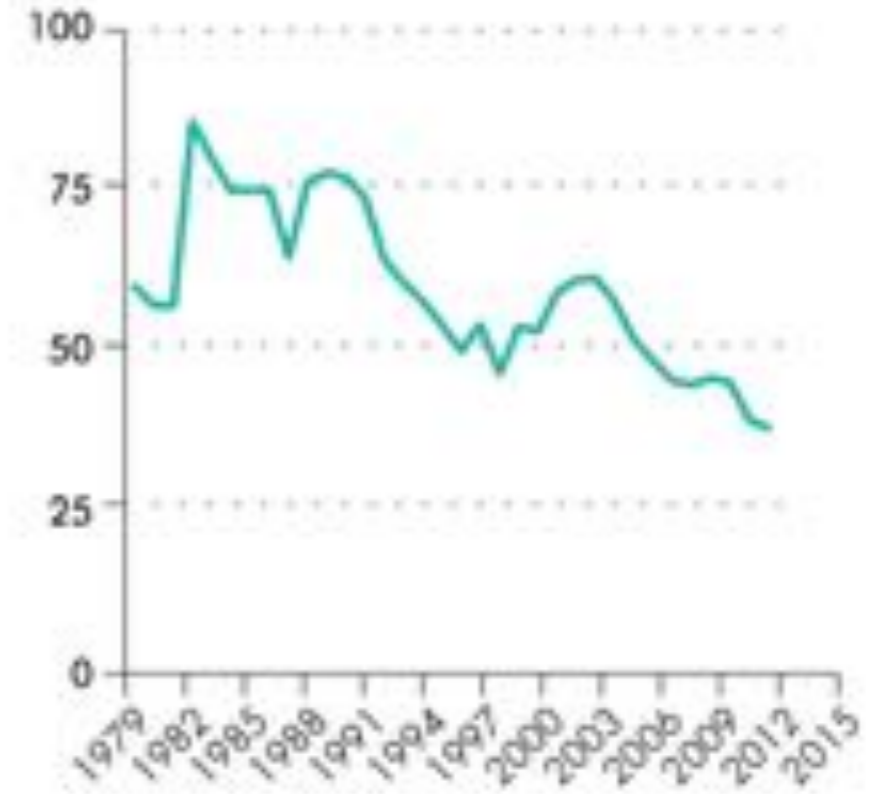
b. Global inequality

Percentage change in real income between 1998 and 2008 at different levels of world income distribution in 2003 prices

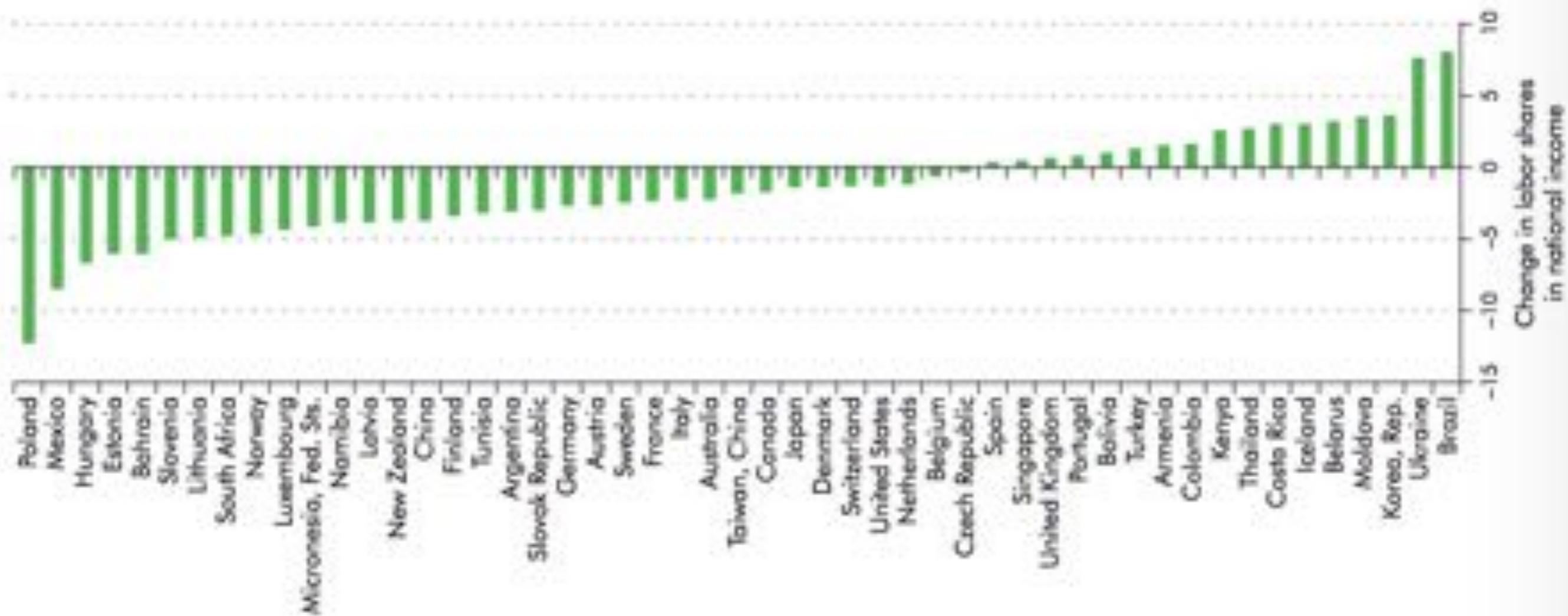


c. Global governance

Share of elections that are free and fair (%)



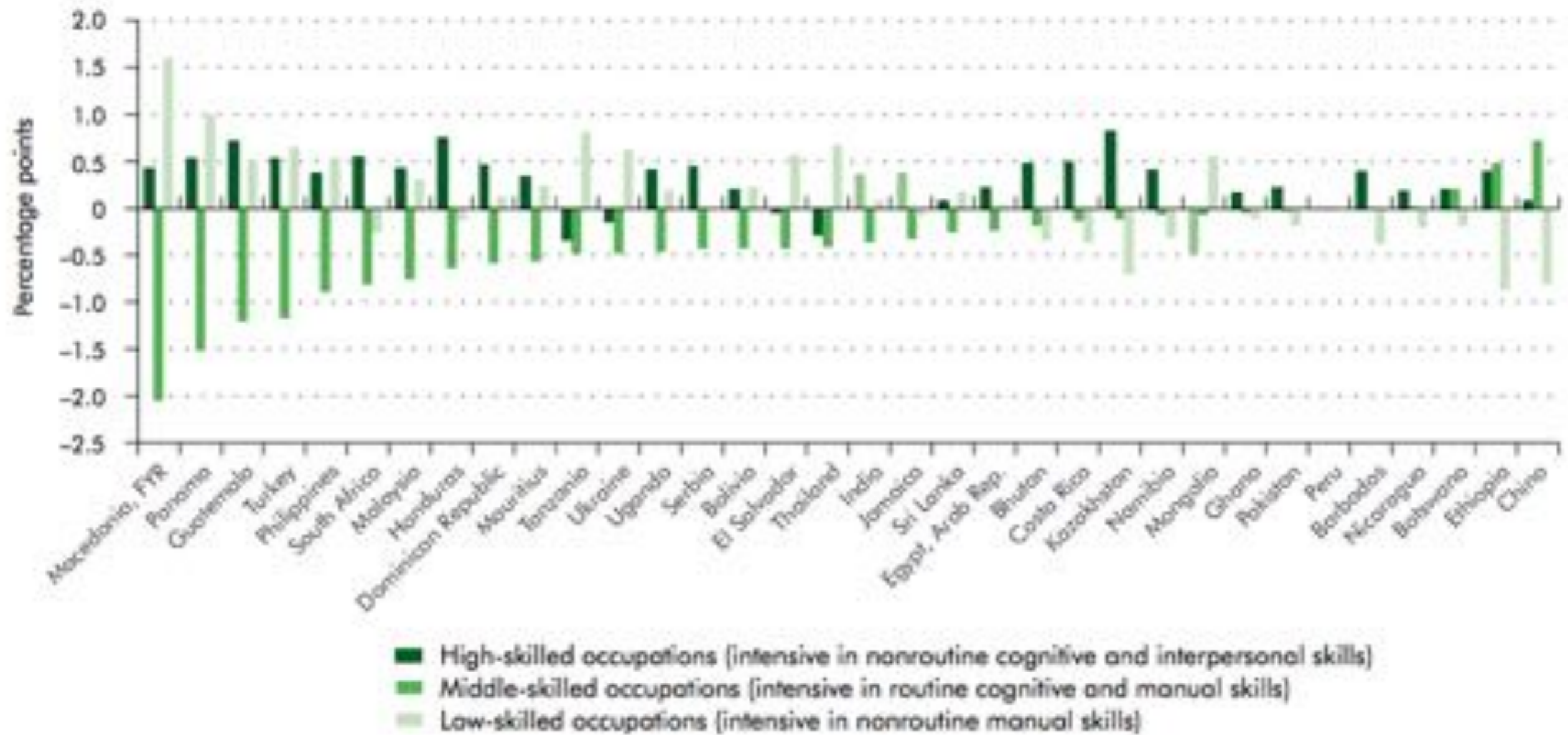
SHARE OF LABOUR IN NATIONAL INCOME IS FALLING



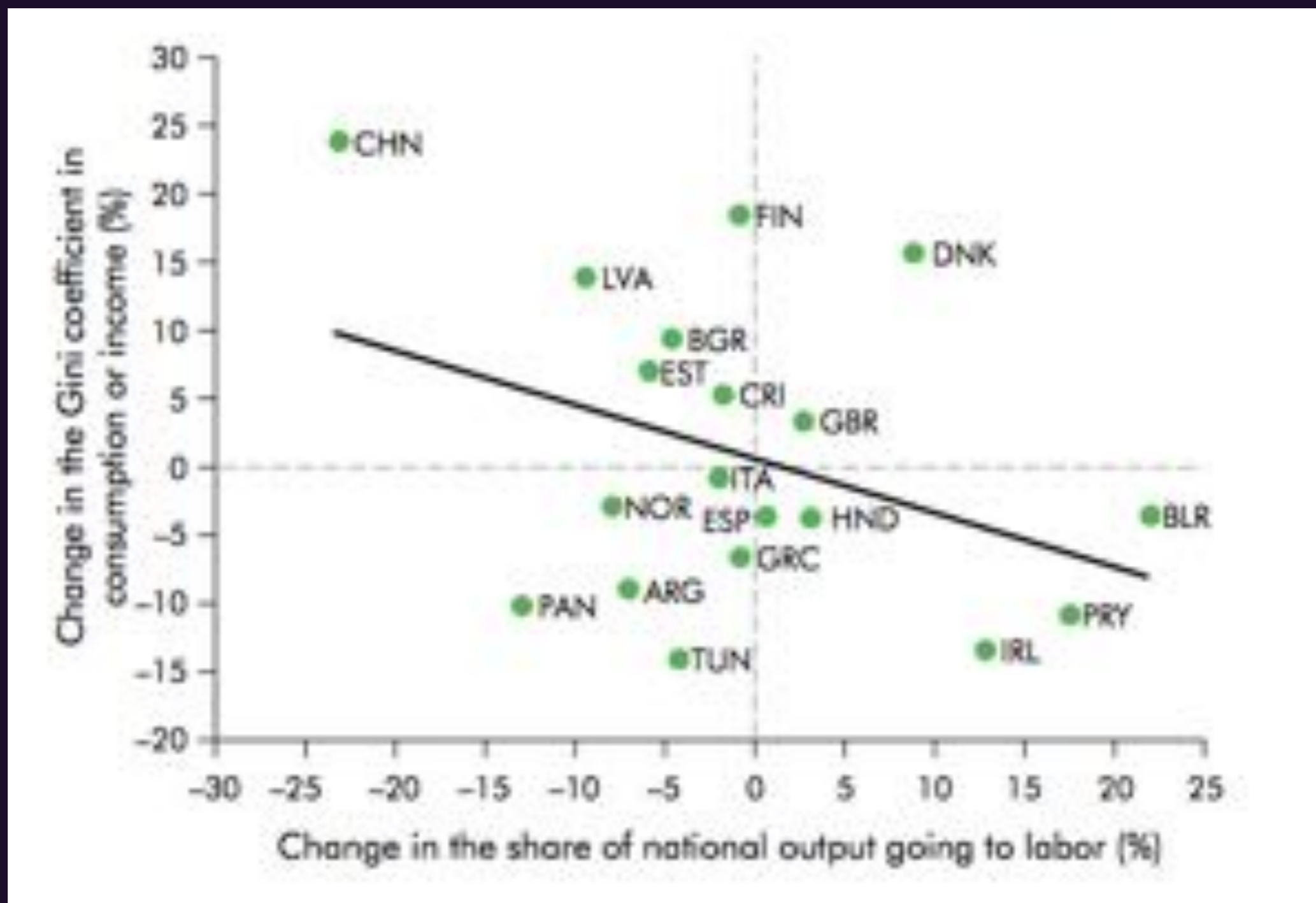
Source: WDR 2016

THE SQUEEZED-MIDDLE

Annual average change in employment share, circa 1995–circa 2012



FALLING LABOUR SHARES ASSOCIATED WITH RISING INEQUALITY

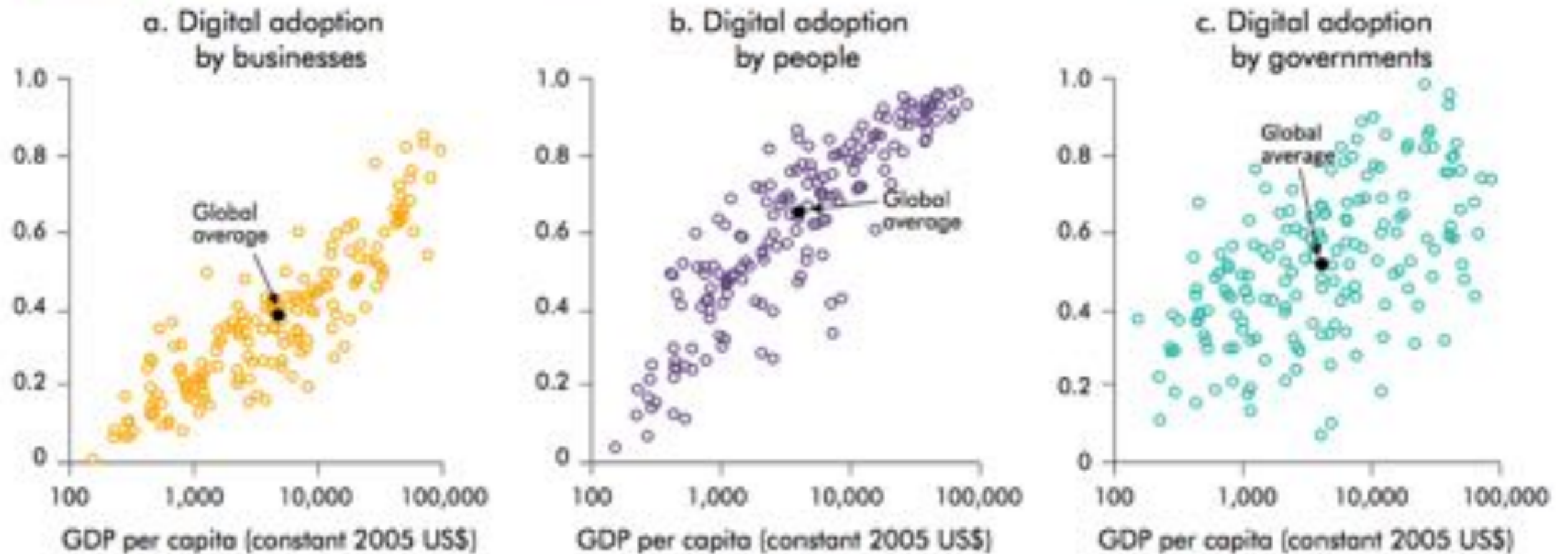


Source: WDR 2016

The background features a dark, moody image of fiber optic cables and a circuit board. The cables are bundled and curve across the frame, with some showing a grid-like pattern. The circuit board is visible in the lower right, showing intricate patterns of light and dark lines.

DIGITAL DIVIDENDS & WAY FORWARD

DIGITAL ADOPTION ASSOCIATED WITH LEVEL OF ECONOMIC DEVELOPMENT



Source: WDR 2016

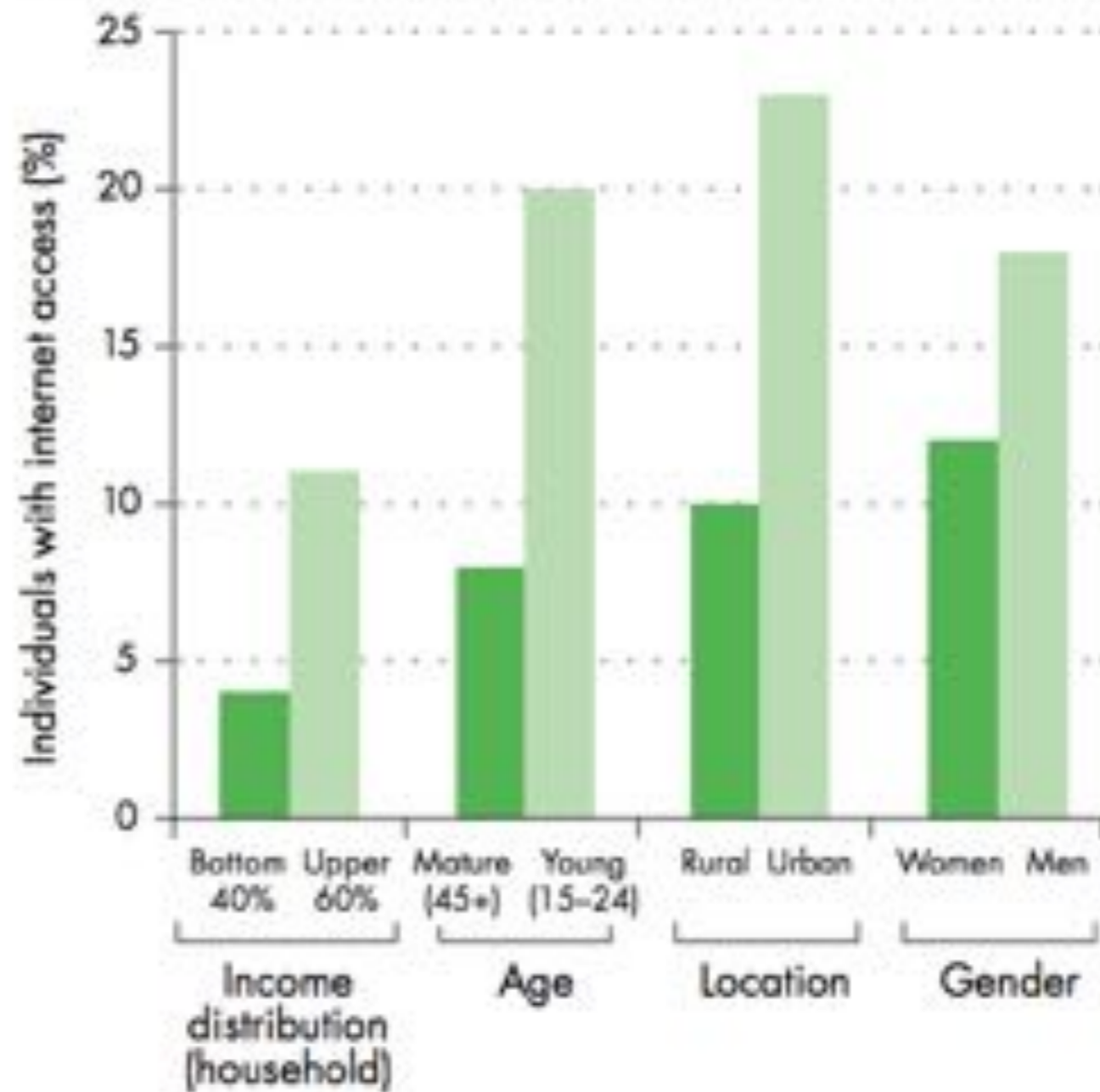
CONNECTIVITY IS A CRUCIAL ANALOG COMPLEMENT

LESS THAN
HALF OF
GLOBAL
POPULATION
USES THE
INTERNET

	Households with a computer	Internet use
	%	Individuals using the Internet
	2014	% of population 2014
World	44.2	40.7
East Asia & Pacific	45.9	46.9
Europe & Central Asia	74.4	69.2
Latin America & Caribbean	44.4	50.2
Middle East & North Africa	47.8	38.3
North America	82.1	87.3
South Asia	12.5	16.6
Sub-Saharan Africa	9.4	19.2
Low income	4.5	6.5
Lower middle income	17.1	22.6
Upper middle income	47.9	49.1
High income	82.4	83.0

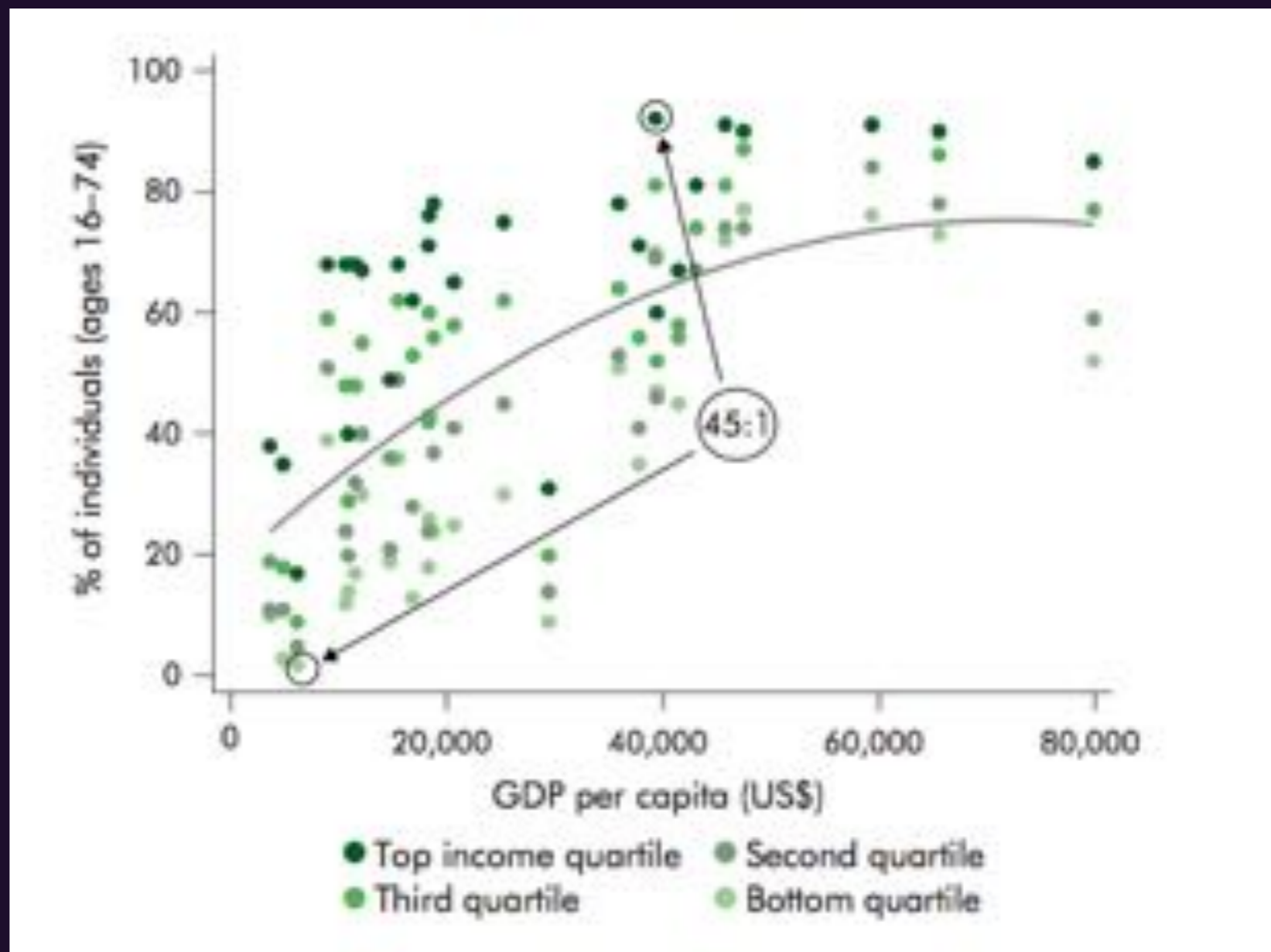
Source: World Development Indicators - World Bank website

THE DIVIDE
WITHIN
COUNTRIES
IS
SUBSTANTIAL



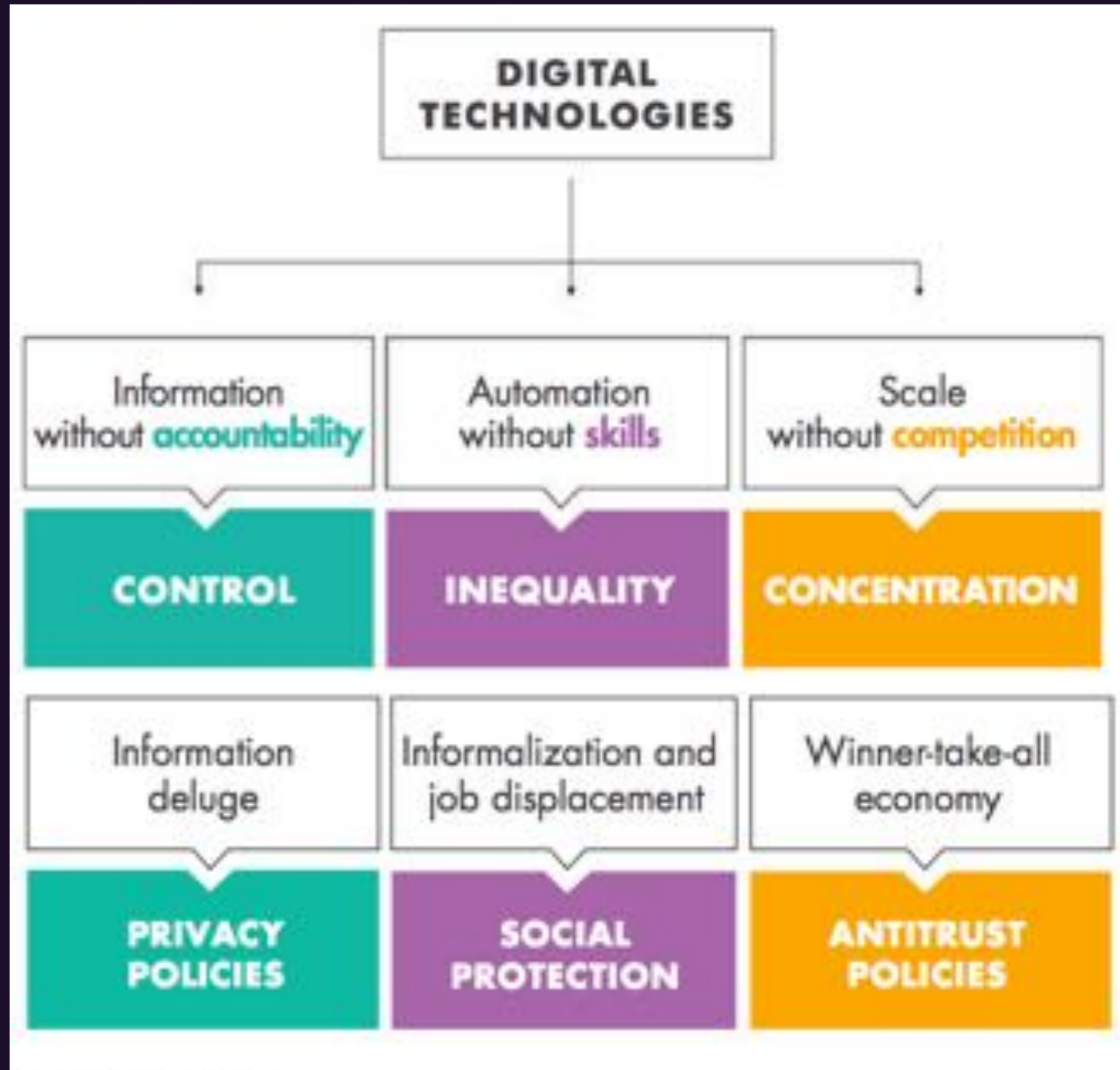
Source: WDR 2016

POOR
HOUSEHOLDS
USE E-
GOVERNMENT
LESS THAN
RICH
HOUSEHOLDS

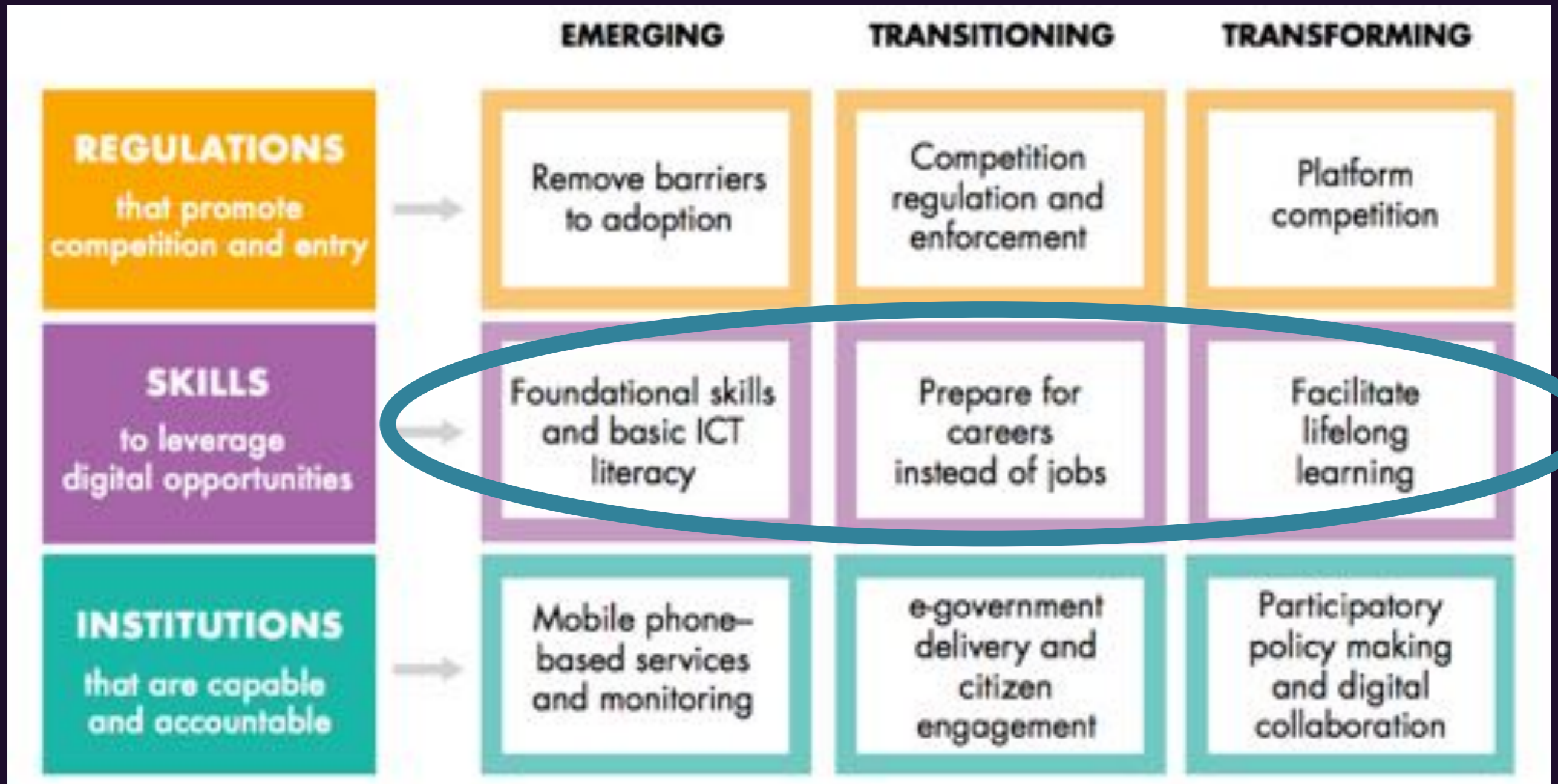


Source: WDR 2016

OTHER
ANALOG
COMPLEMENTS
ARE CRUCIAL
TO MAKE THE
MOST OF THE
DIGITAL
REVOLUTION



POLICY PRIORITIES IN DIFFERENT ECONOMIES



Source: WDR 2016

THE SKILLS NEEDED TO MAKE THE MOST OF THE DIGITAL REVOLUTION

Cognitive

Literacy, numeracy, and higher-order cognitive skills (for example, reasoning and creative thinking)

Raw problem-solving ability versus knowledge to solve problems

Verbal ability, numeracy, problem solving, memory, and mental speed

Social and behavioral

Socioemotional skills and personality traits

Openness to experience, conscientiousness, extraversion, agreeability, and emotional stability

Self-regulation, grit, mind-set, decision making, and interpersonal skills

Technical

Manual dexterity and the use of methods, materials, tools, and instruments

Technical skills developed through postsecondary schooling or training or acquired on the job

Skills related to specific occupations (for example, engineer, economist, IT specialist)

STARTING FROM SCHOOLS...





Source: https://www.ted.com/talks/neil_gershenfeld_on_fab_labs?language=en

“INSPIRE PEOPLE TO **TURN THEIR IDEAS INTO NEW PRODUCTS** AND PROTOTYPES BY GIVING THEM ACCESS TO A RANGE OF ADVANCED DIGITAL MANUFACTURING TECHNOLOGY”

- ENVIRONMENT
- SKILLS
- MATERIALS
- TECHNOLOGY



REFERENCES

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Neil Gershenfeld at TED: https://www.ted.com/talks/neil_gershenfeld_on_fab_labs?language=en

How to Make Almost Anything: <https://www.foreignaffairs.com/articles/2012-09-27/how-make-almost-anything>

THANK YOU!

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