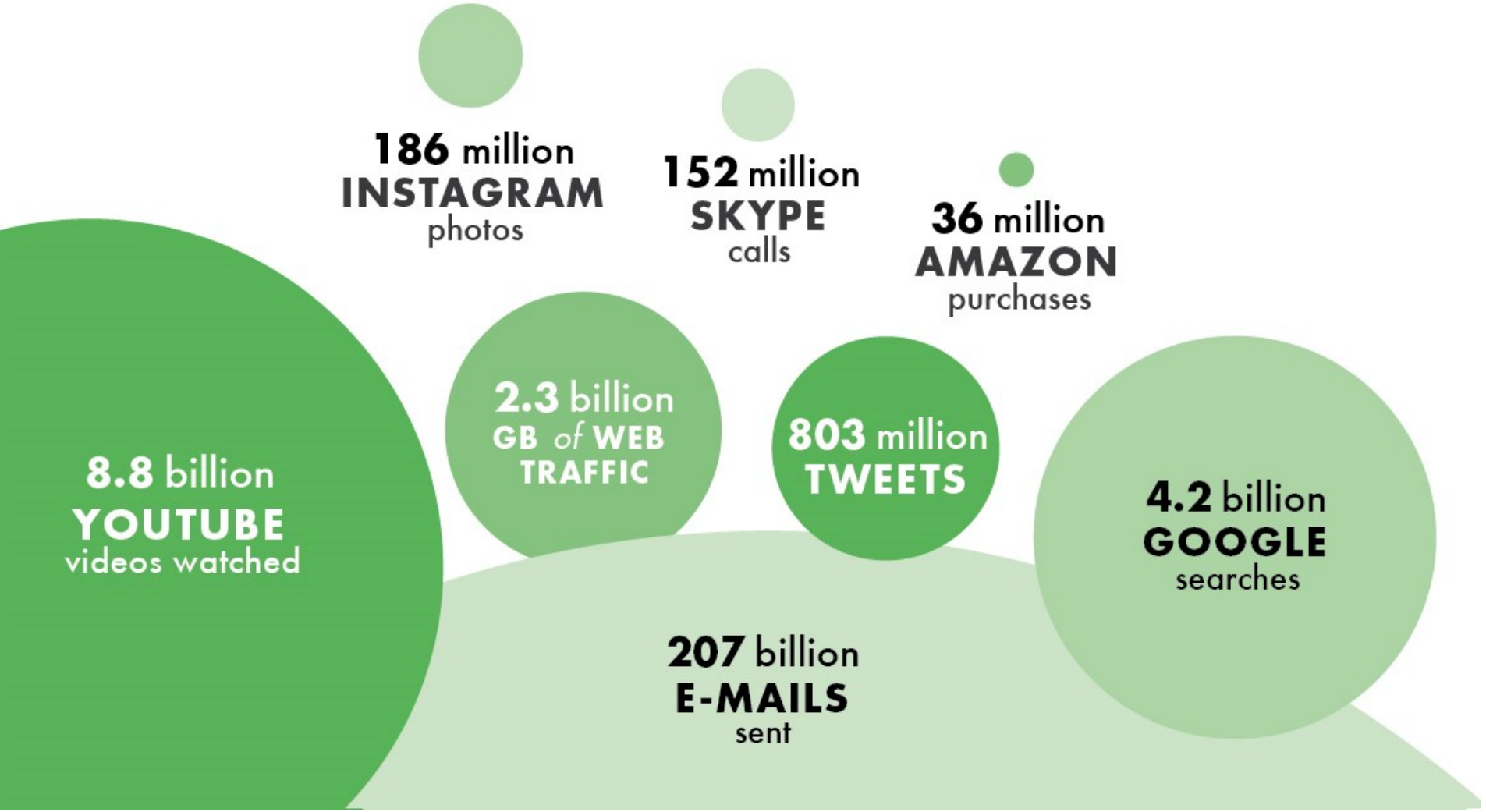

world development report 2016
DIGITAL DIVIDENDS
#wdr2016

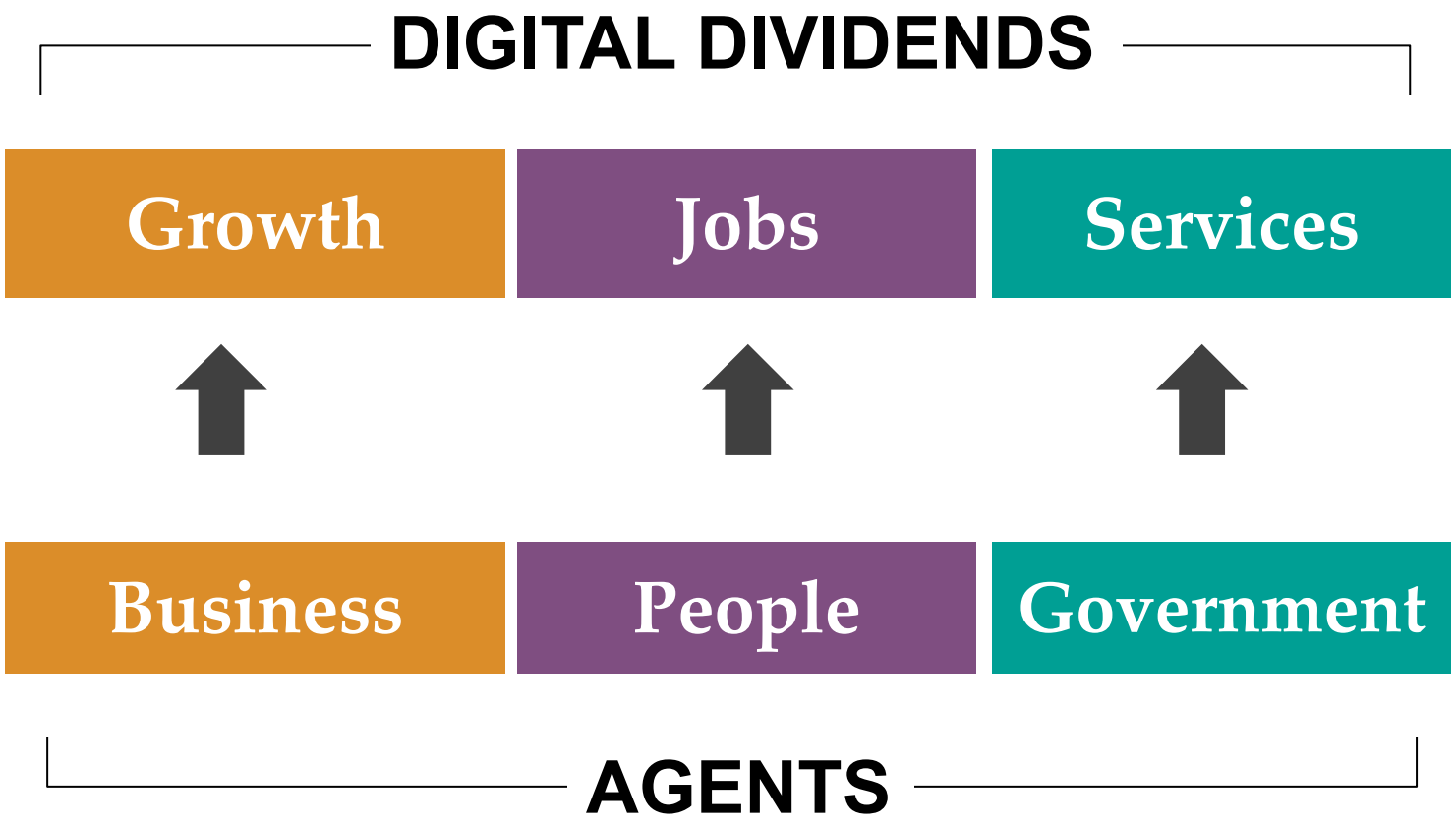
Digital revolution has brought many private benefits

A typical day in the life of the internet



SOURCE: *WDR 2016 team; http://www.internetlivestats.com/one-second/ (As compiled on May 29, 2015)*

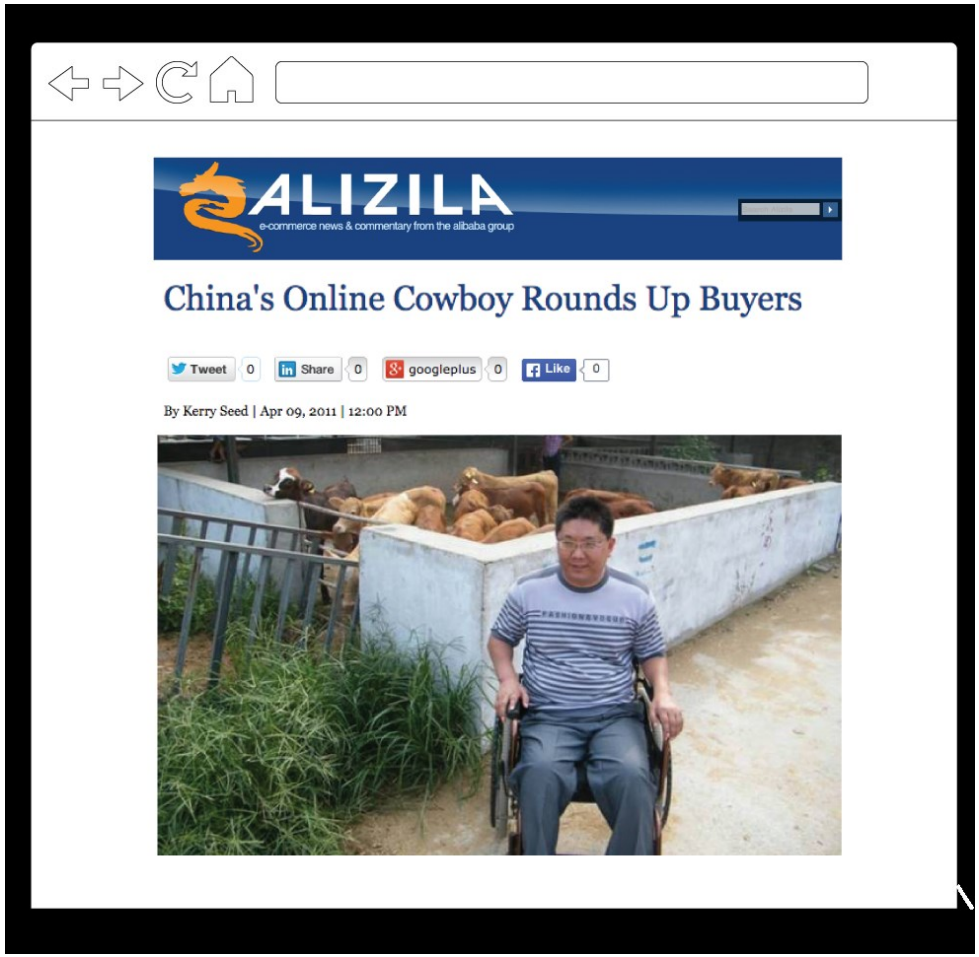
But are countries reaping sizable digital dividends?



Are the benefits reaching everyone, everywhere?

Digital technologies are transforming **BUSINESS**

DIGITAL MARKETPLACE



Number of small & medium enterprises on Taobao (Alibaba):

5 MILLION & COUNTING

SOURCE: *http://www.alizila.com/chinas-online-cowboy-rounds-buyers*

Digital technologies are transforming **PEOPLE'S LIVES**

DIGITAL PAYMENTS

Where mobile money accounts outnumber bank accounts

Number of mobile money accounts worldwide:

300 MILLION & COUNTING

(end of 2014)

SOURCE: *John Owens, Alliance for Financial Inclusion, June 2013.*

Digital technologies are transforming **GOVERNMENT**

DIGITAL IDENTITY

THE NEW INDIAN EXPRESS

Trafficking Victims see New life in Aadhaar

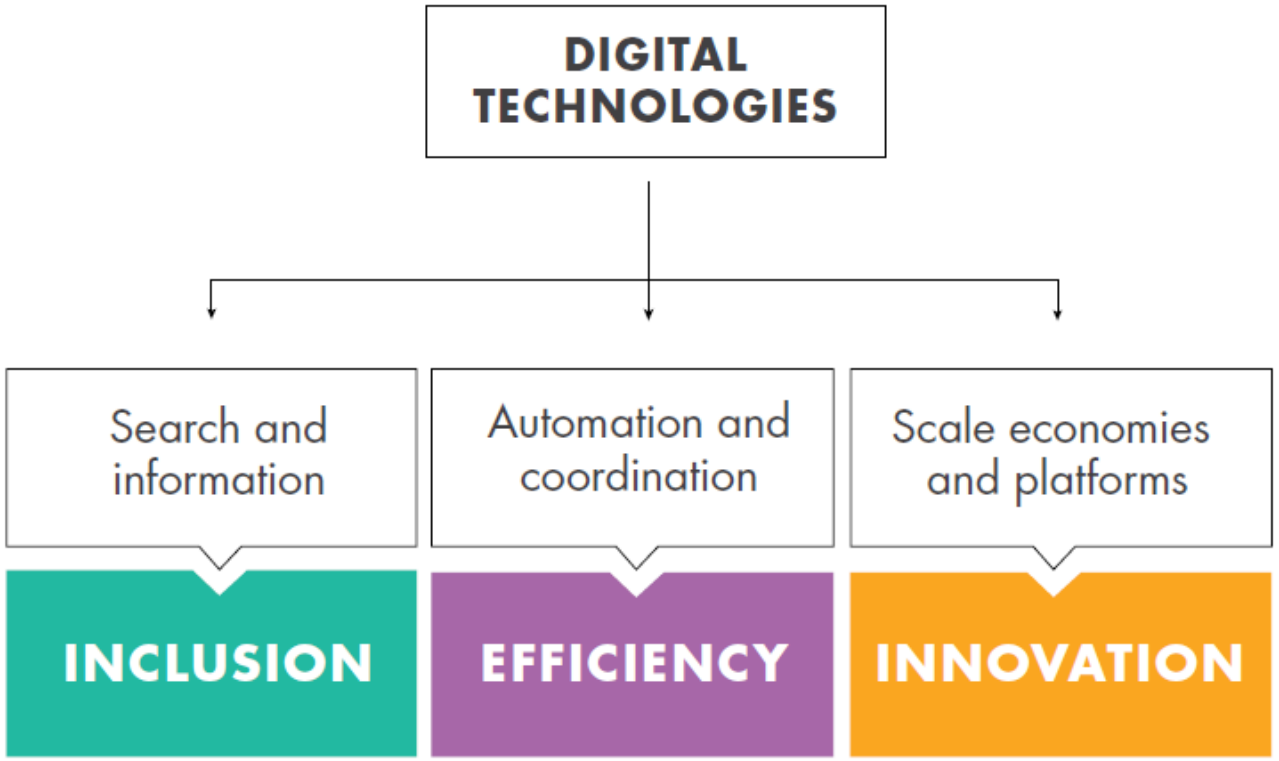
By Daniel Thimmayya | Published: 30th March 2015 06:00 AM Last Updated: 30th March 2015 10:57 AM

Indians with digital identity:

950 MILLION
& COUNTING

SOURCE: *http://www.newindianexpress.com/cities/chennai/Trafficking-Victims-see-New-life-in-Aadhaar/2015/03/30/article2737396.ece*

The main mechanisms to promote development



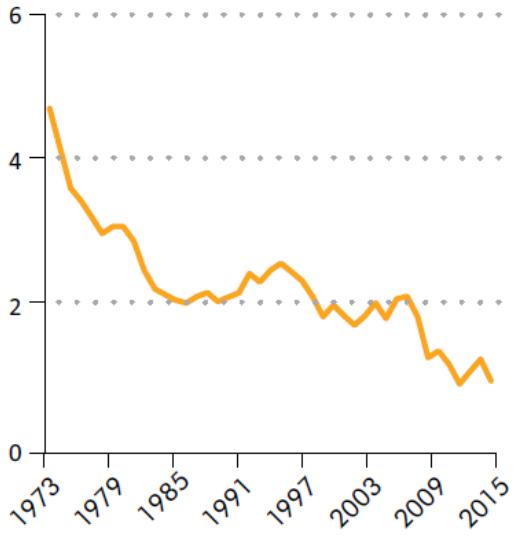
Expand the information base, lower information costs and create information goods

SOURCE: *WDR 2016*

Then why the deep pessimism surrounding the global economy?

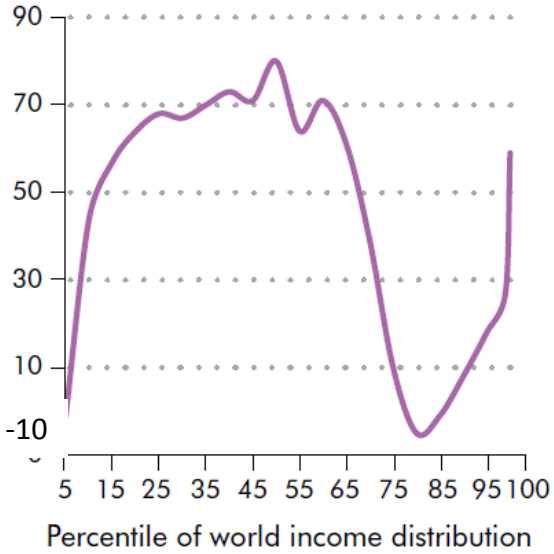
a. Global productivity

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



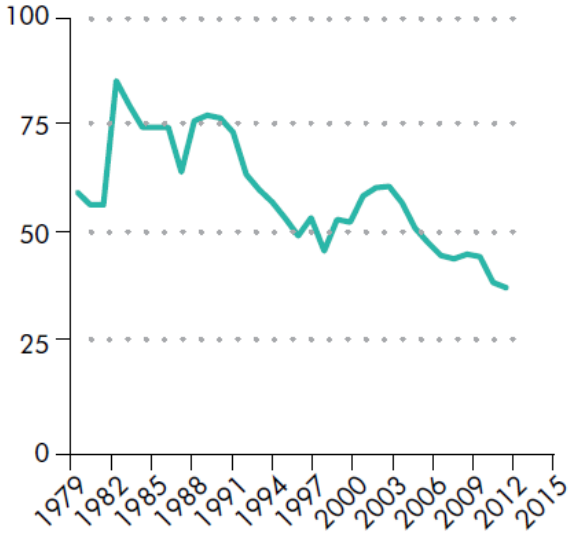
b. Global inequality

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 (%)



Business

People

Governments

Not because of digital technologies, but in spite of them

SOURCE: *Total Economy Database, Conference Board; and WDR 2016 team; Christoph Lakner and Branko Milanovic 2013; Bishop and Hoeffler 2014.*

A significant digital divide remains …

6 BILLION *without* BROADBAND

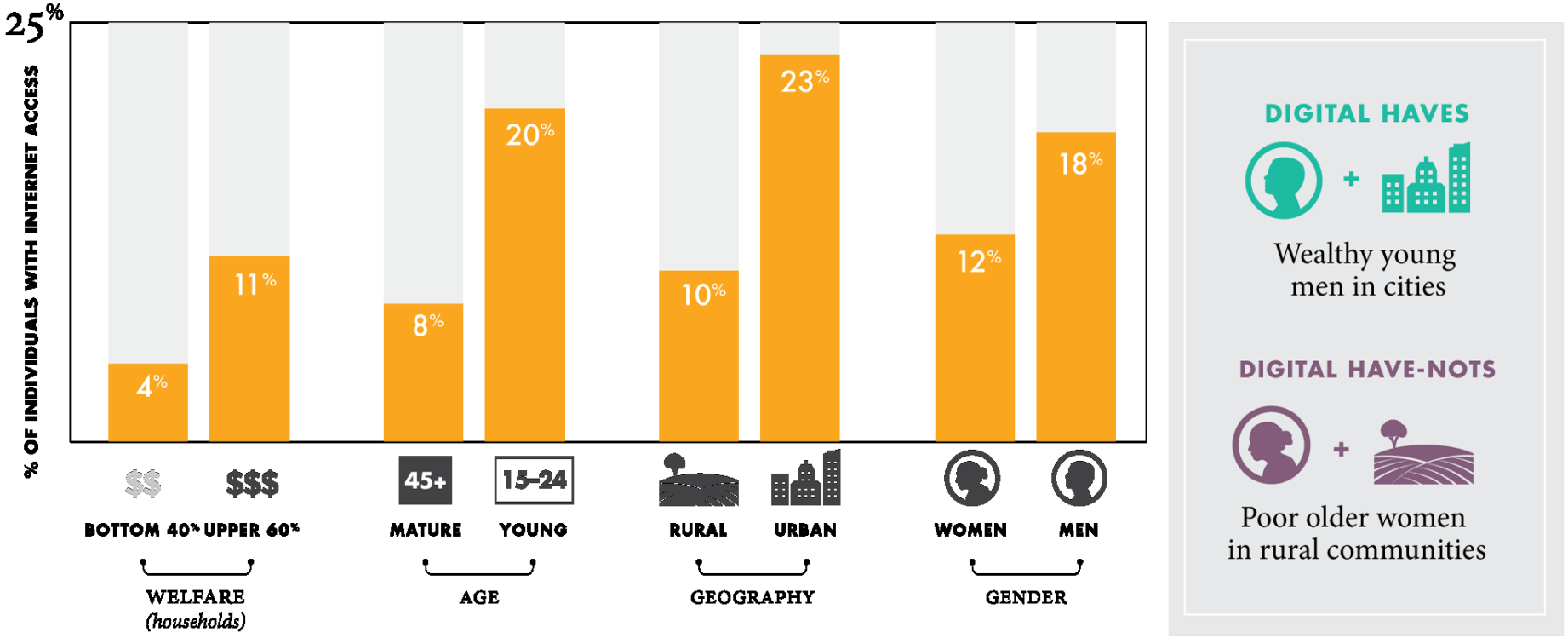
4 BILLION *without* INTERNET

2 BILLION *without* MOBILE PHONES

0.4 BILLION *without* A DIGITAL SIGNAL

SOURCE: *WDR 2016 team based on Research ICT Africa and ITU data*

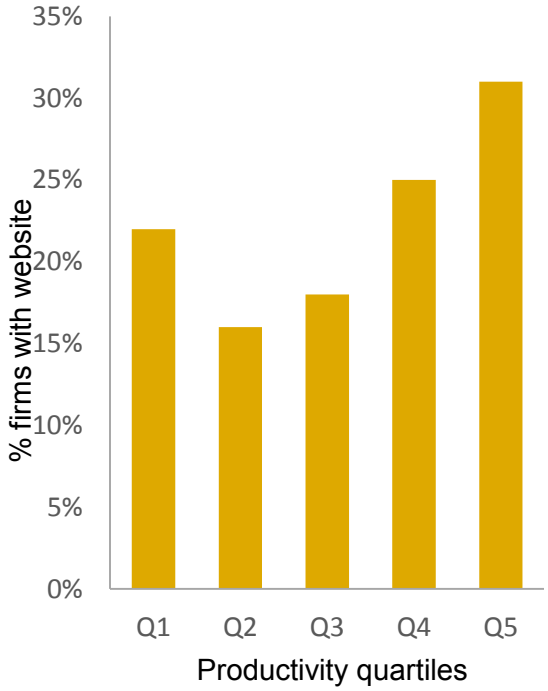
… between and within countries—in access and capability



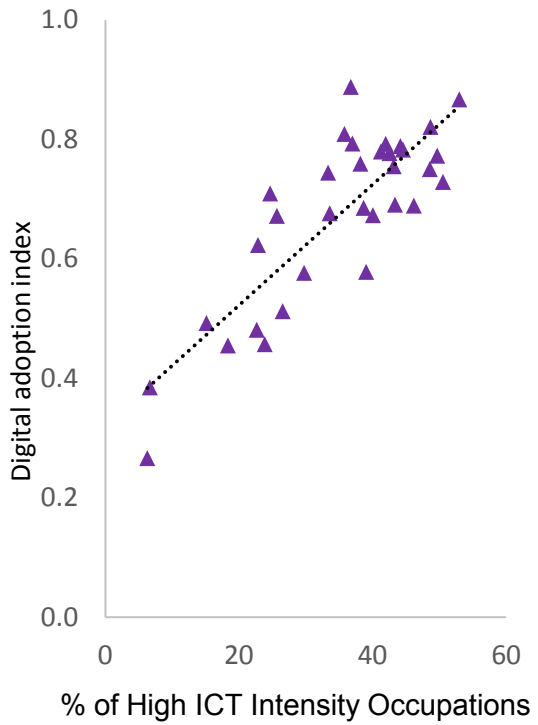
SOURCE: WDR 2016 team, based on Research ICT Africa surveys (various years) for 10 African countries.

Digital technologies tend to be:

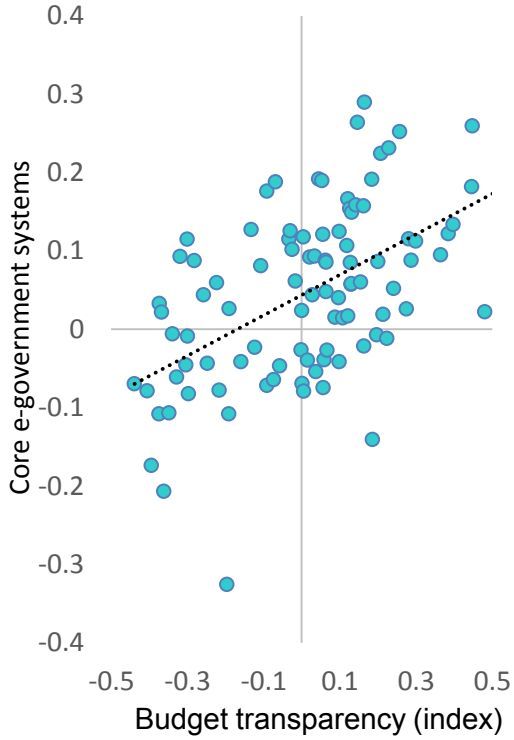
Productivity-biased



Skills-biased



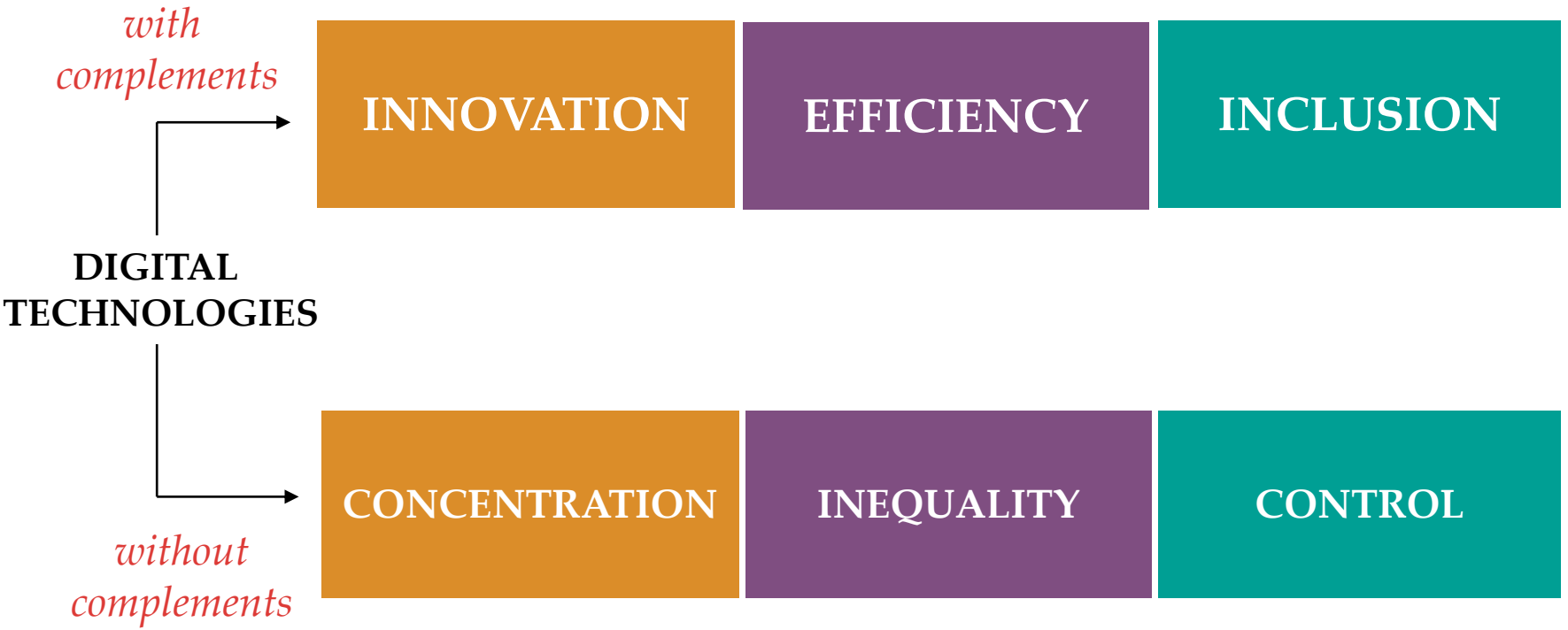
Voice-biased



Limiting the aggregate gains from the digital revolution

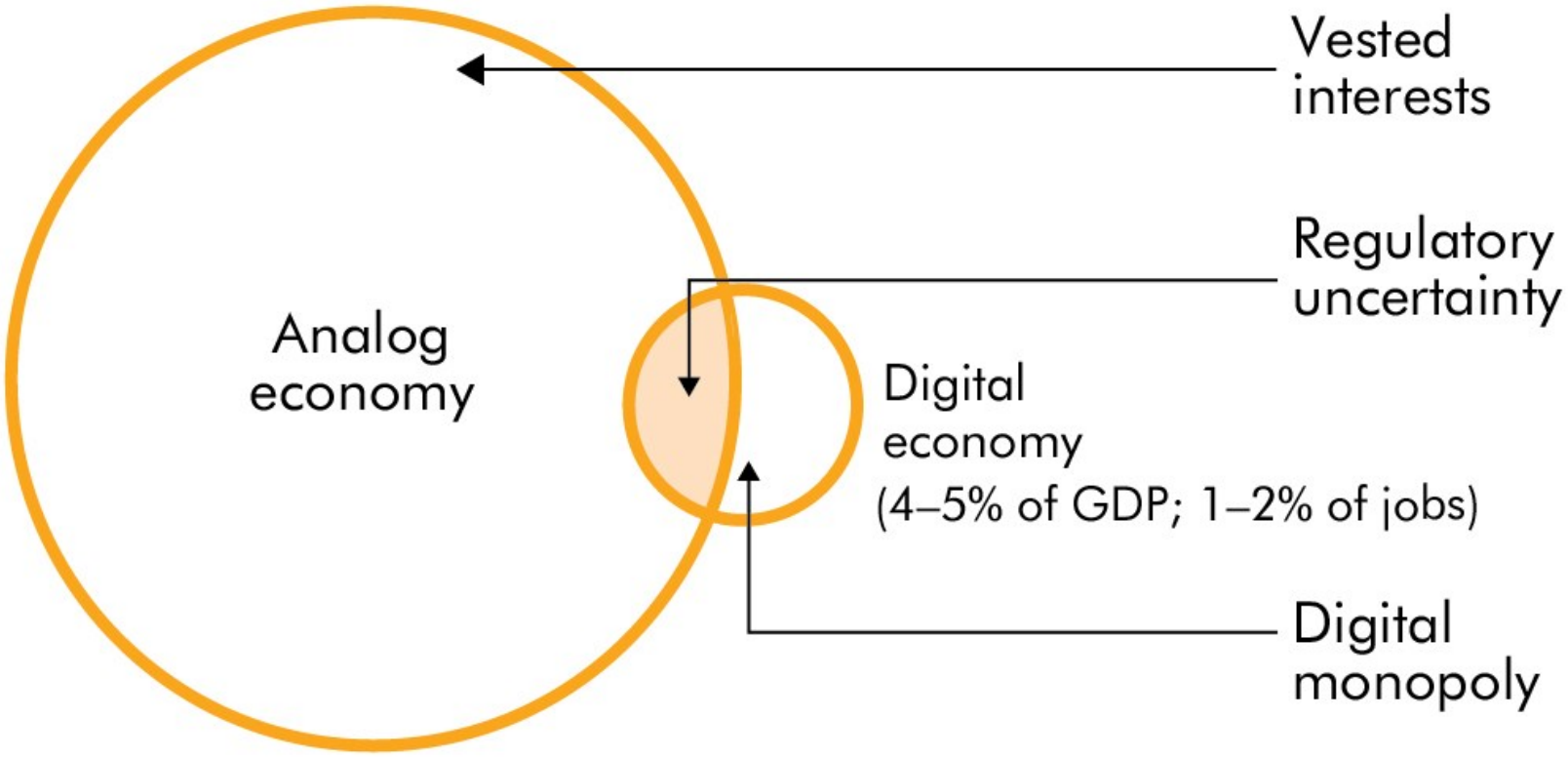
SOURCE: *WDR 2016 team based on Research ICT Africa and ITU data*

3. Digital technologies hold benefits as well as risks



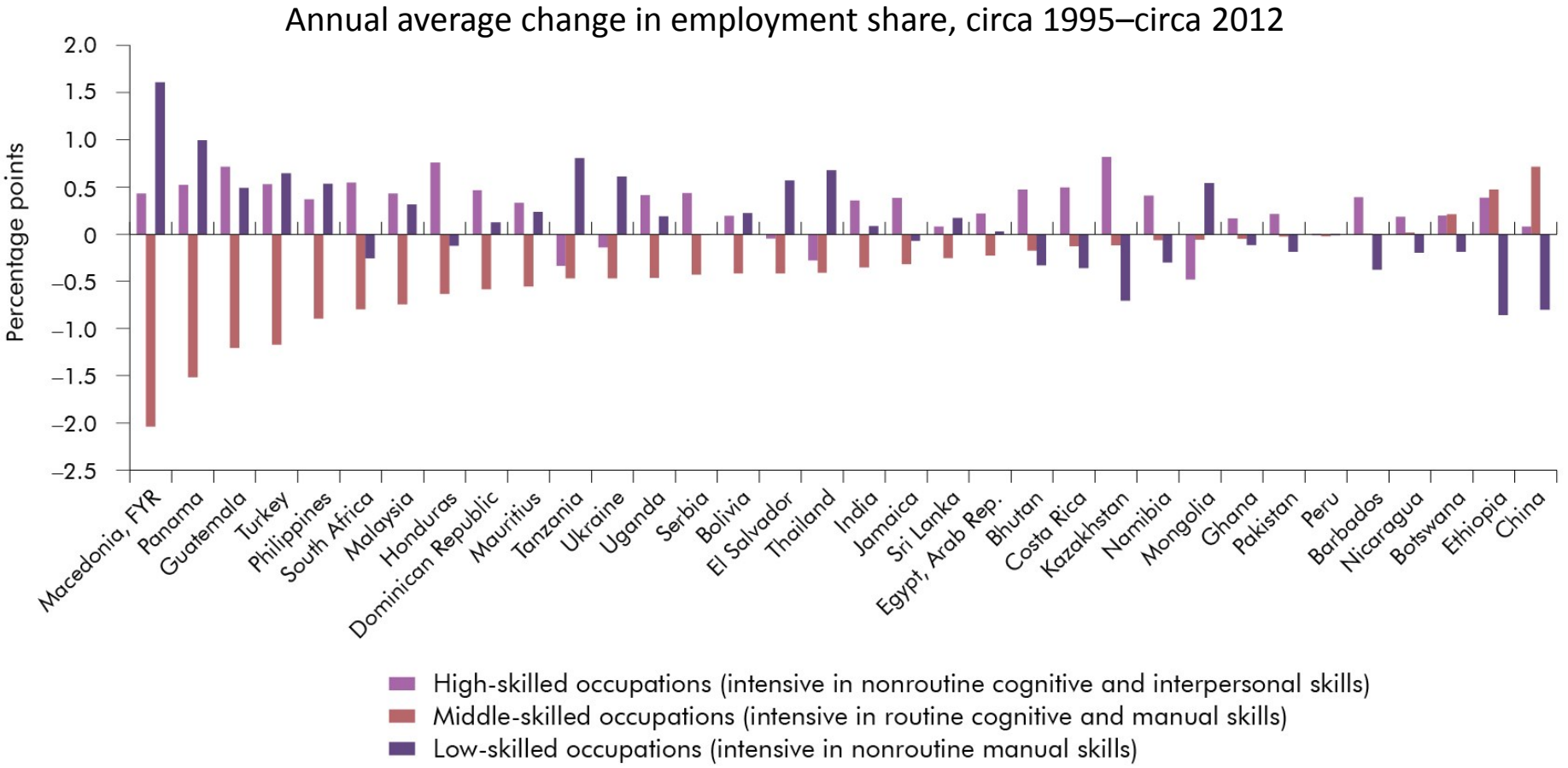
What are those complements?

Scale without **COMPETITION**



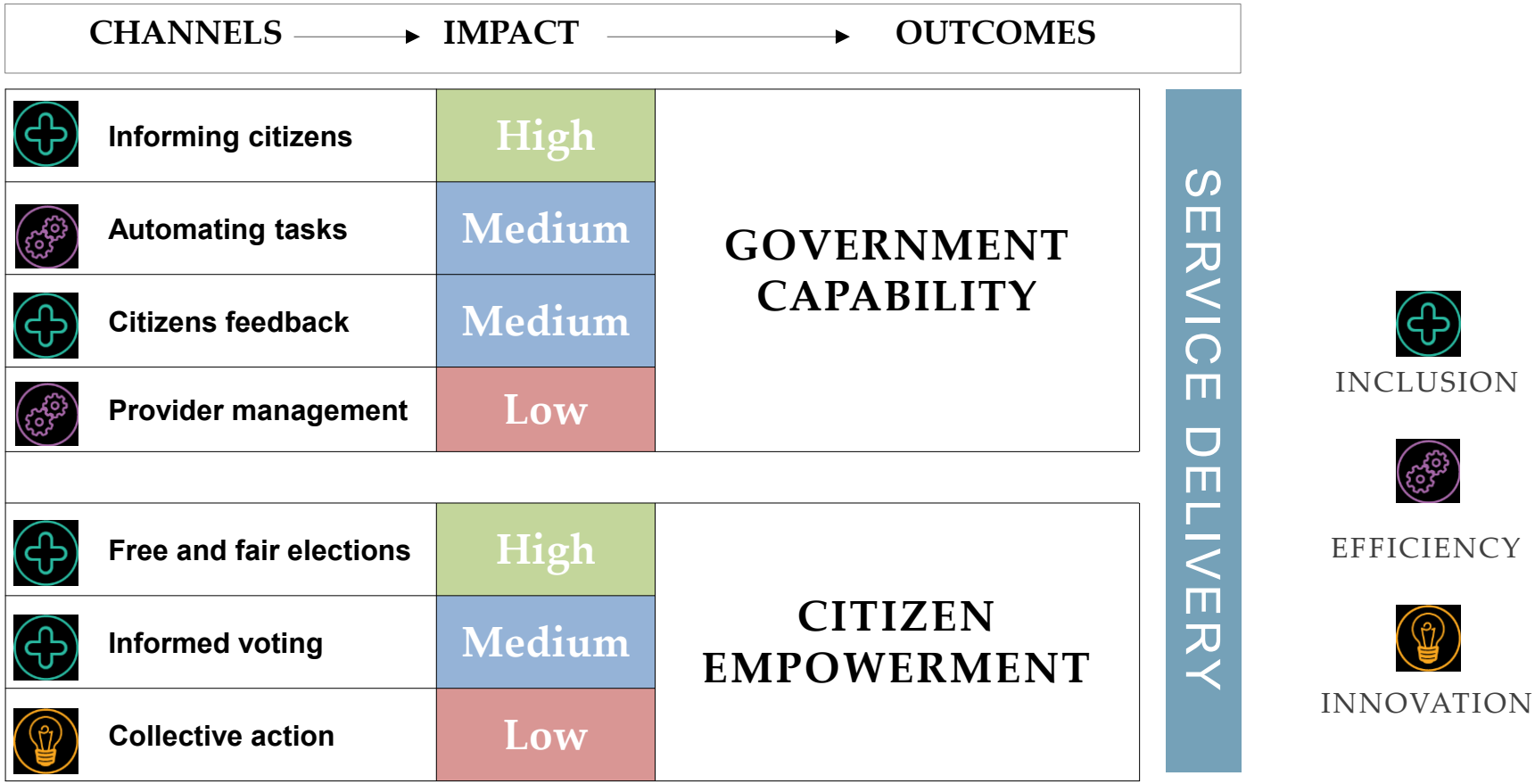
SOURCE: *Eurostat, circa 2014,.WDR 2016 Team*

Automation without **SKILLS**



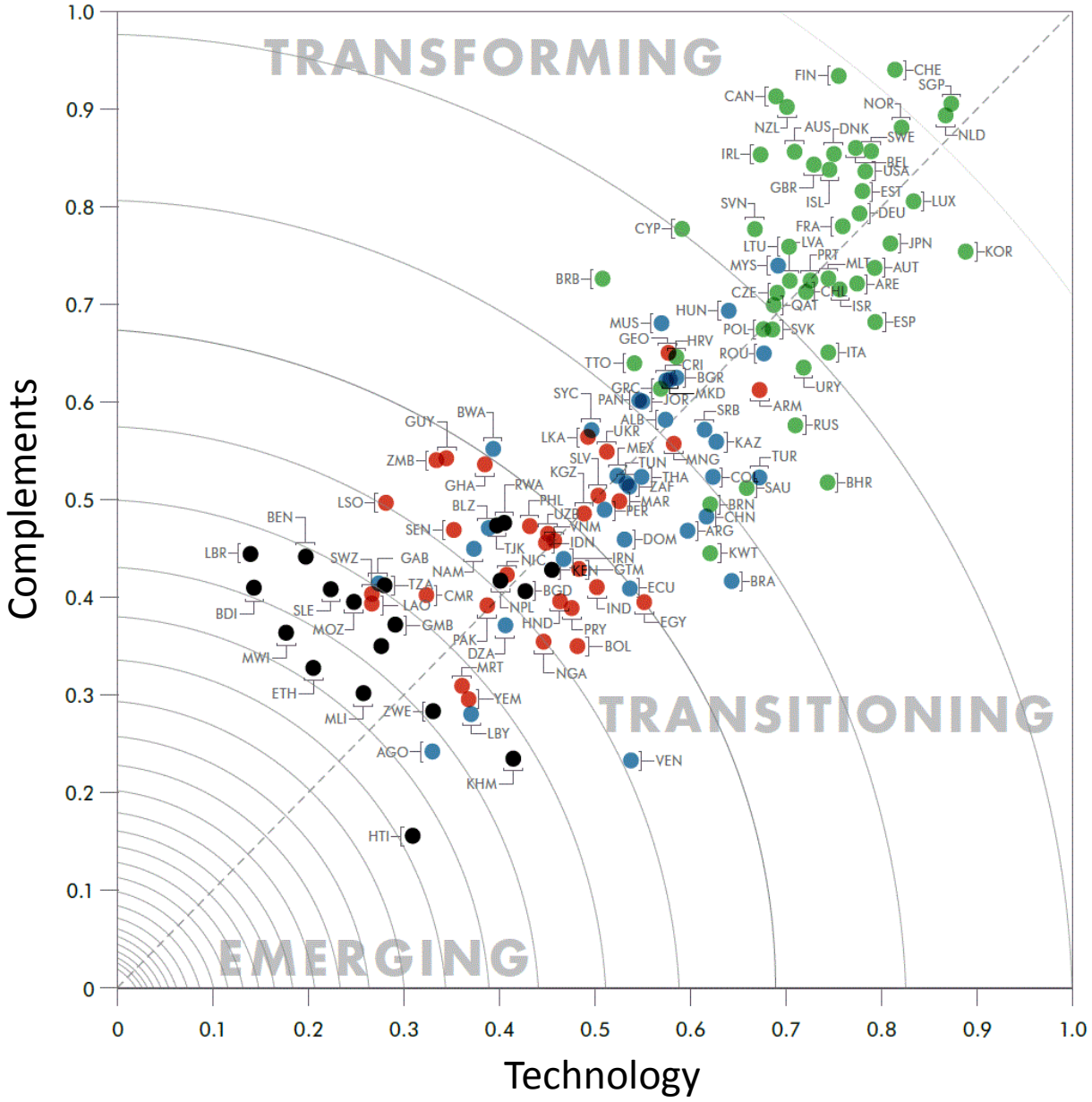
SOURCE: *WDR 2016 team, based on ILO KILM (ILO, various years); I2D2 (World Bank, various years); National Bureau of Statistics of China (various years)*

Information without ACCOUNTABILITY



SOURCE: *WDR 2016 Team, Pew Research*

Race between technology and complements



- High-income
- Upper-middle-income
- Lower-middle-income
- Low-income

Complements: *Index of quality of institutions, skills and regulations.*

Technology: *Index of quality of access to internet and related technologies.*

SOURCE: *WDR 2016 team. For more details see figure 5.3 in the full Report.*

The WDR 2016 proposes policies at three levels

SECTORAL

NATIONAL

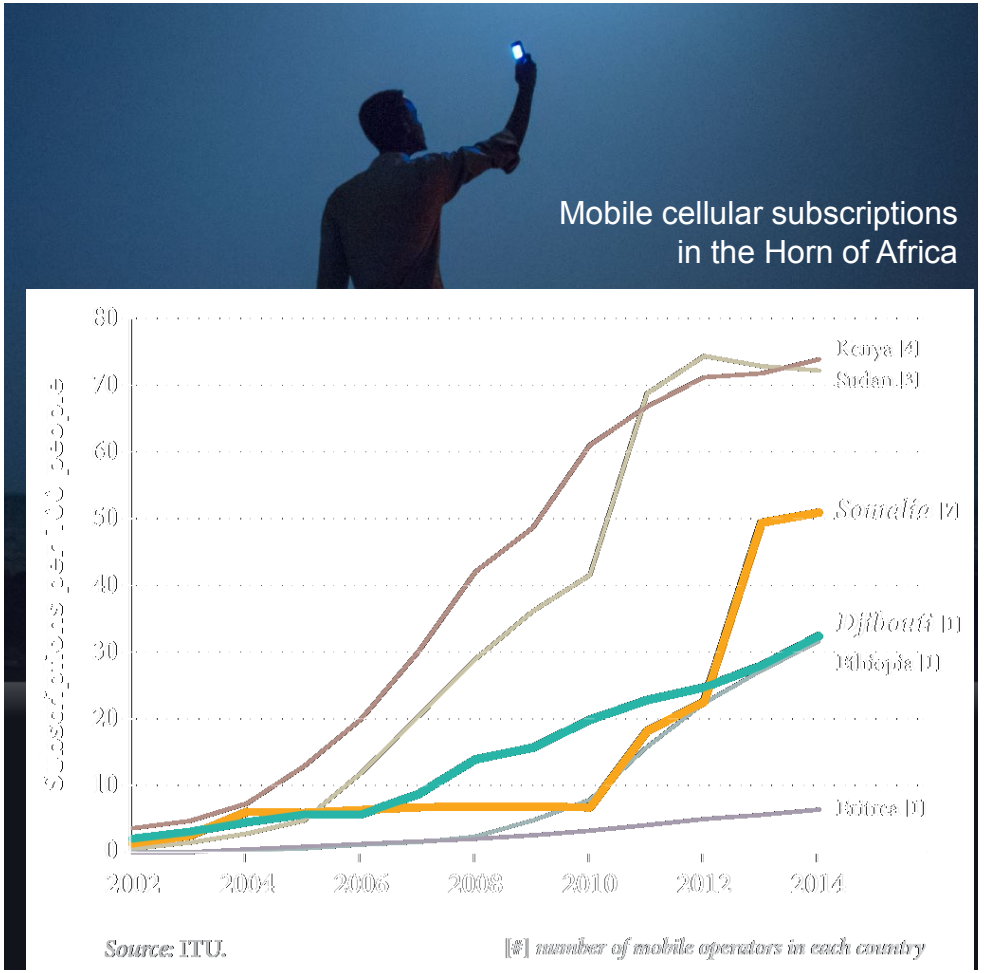
GLOBAL

SECTORAL POLICIES

Making internet access universal, affordable, open and safe

SUPPLY SIDE ISSUES

- Competition policy
- Public-private partnerships
- Effective telecom & internet regulation



SECTORAL
POLICIES

Making internet access universal, affordable, open and safe

DEMAND SIDE ISSUES

- Protecting personal privacy
- Cybersecurity
- Censorship and content filtering

1993

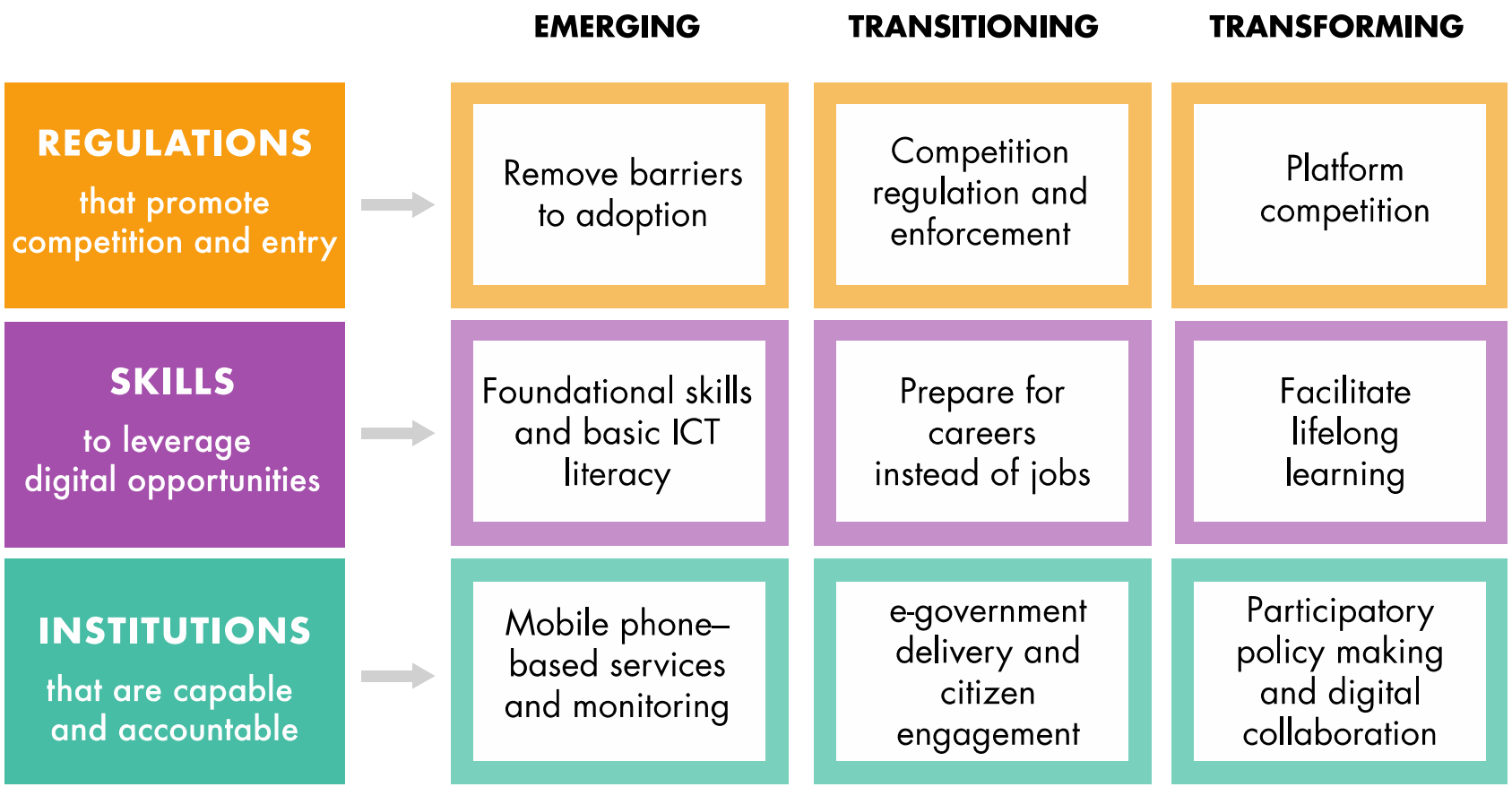
"On the Internet, nobody knows you're a dog."

2014

"Now Google and its like are surveillance machines that know not only that you're a dog but whether you have fleas and which brand of meaty chunks you prefer." (Economist)

NATIONAL PRIORITIES

Analog foundations for a digital economy



SOURCE: *WDR 2016 team.*

GLOBAL
COOPERATION

International consensus on cross-border issues

- A governance model for an open and safe internet
- Removing barriers to a global digital market
- Leveraging information for sustainable development
  - *Get wired*
  - *Build platforms*
  - *Go global*

Digital development strategies need to be broader than ICT strategies

Understand the importance of analog complements

- Regulations that allow firms to connect and compete
- Skills that leverage technology
- Institutions that are accountable and capable

Match policies to the level of digital development

- Emerging: Lay the foundations by promoting digital adoption
- Transitioning: Enable everyone to take advantage of new technologies
- Transforming: Deal with the wicked problems faced in the new economy

The payoff

- Increasing digital dividends:
  Faster growth, more jobs and better services

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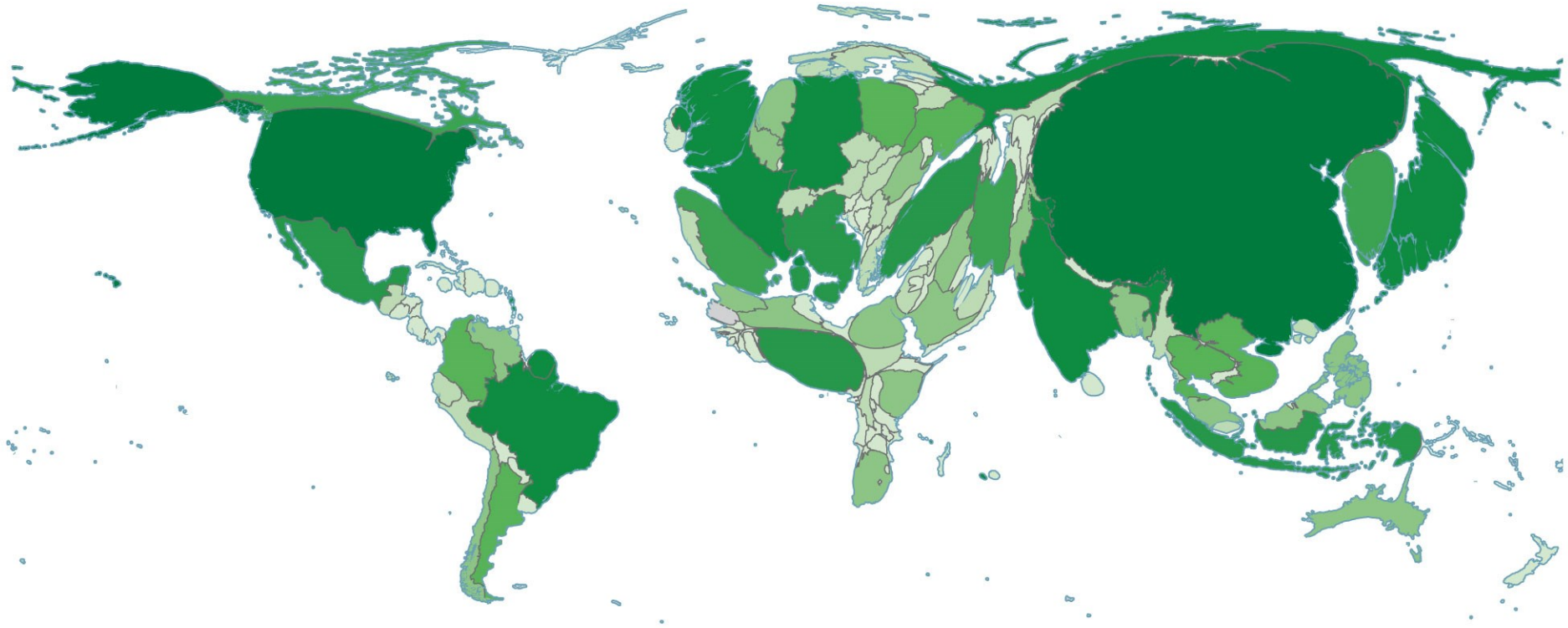
www.worldbank.org/wdr2016

WORLD BANK GROUP

Backup slides

Digital technologies have spread rapidly

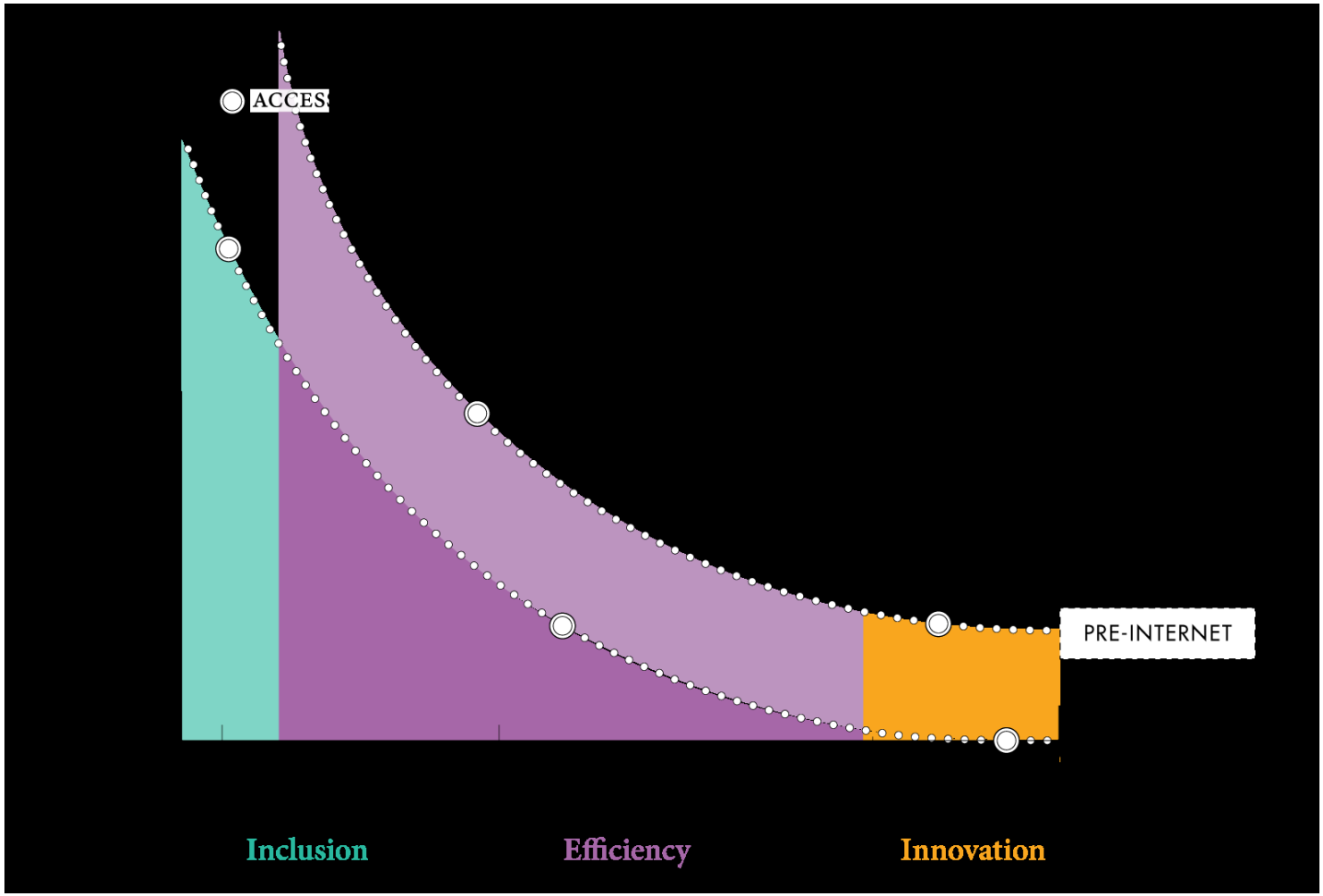
The world, based on internet population (2014)



SOURCE: *World Bank. Data at http://bit.do/WDR2016-MapO_1.*

How the internet affects development

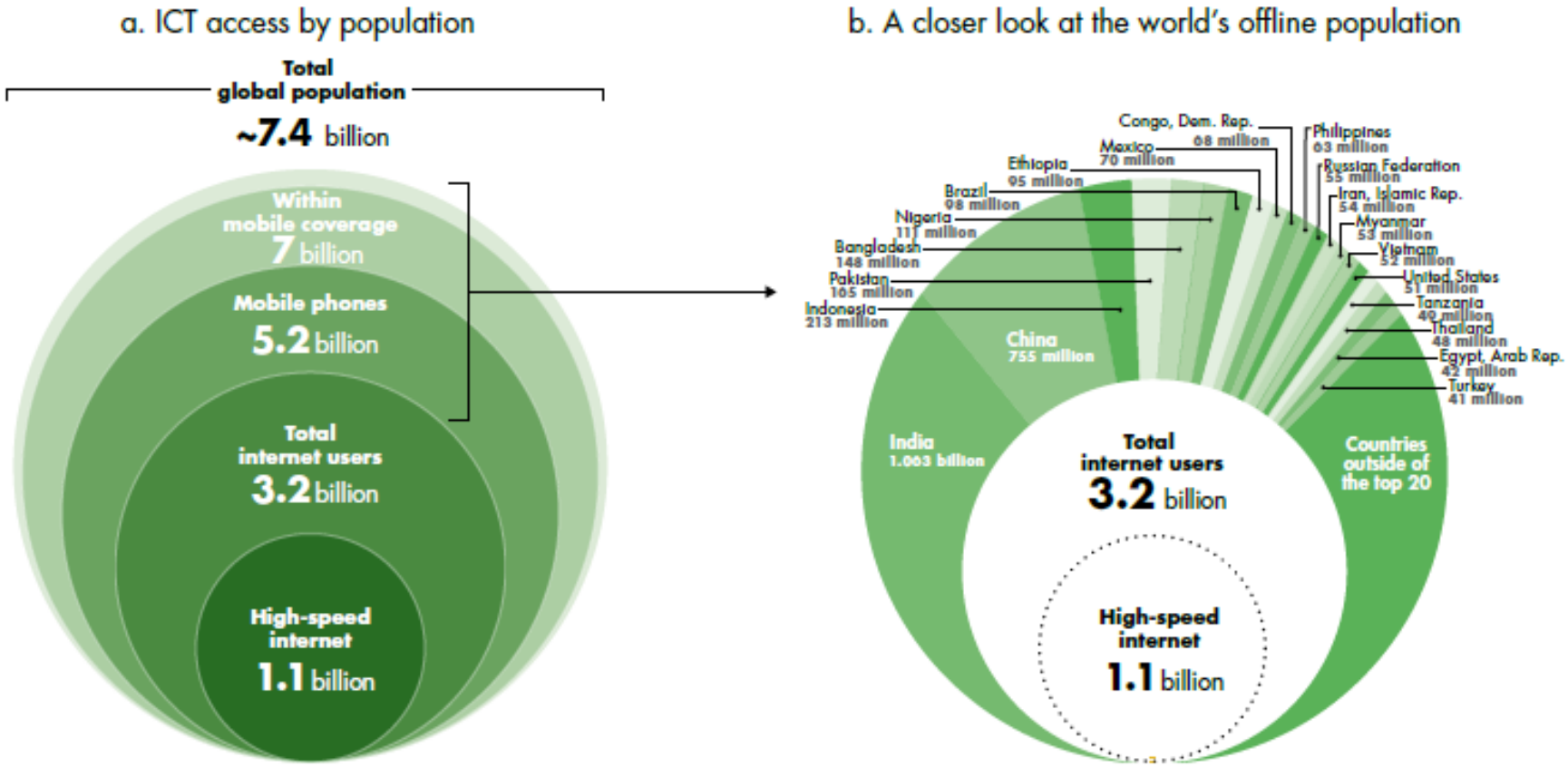
DECREASING MARKET AND NON-MARKET TRANSACTION COSTS



SOURCE: *WDR 2016 Team*

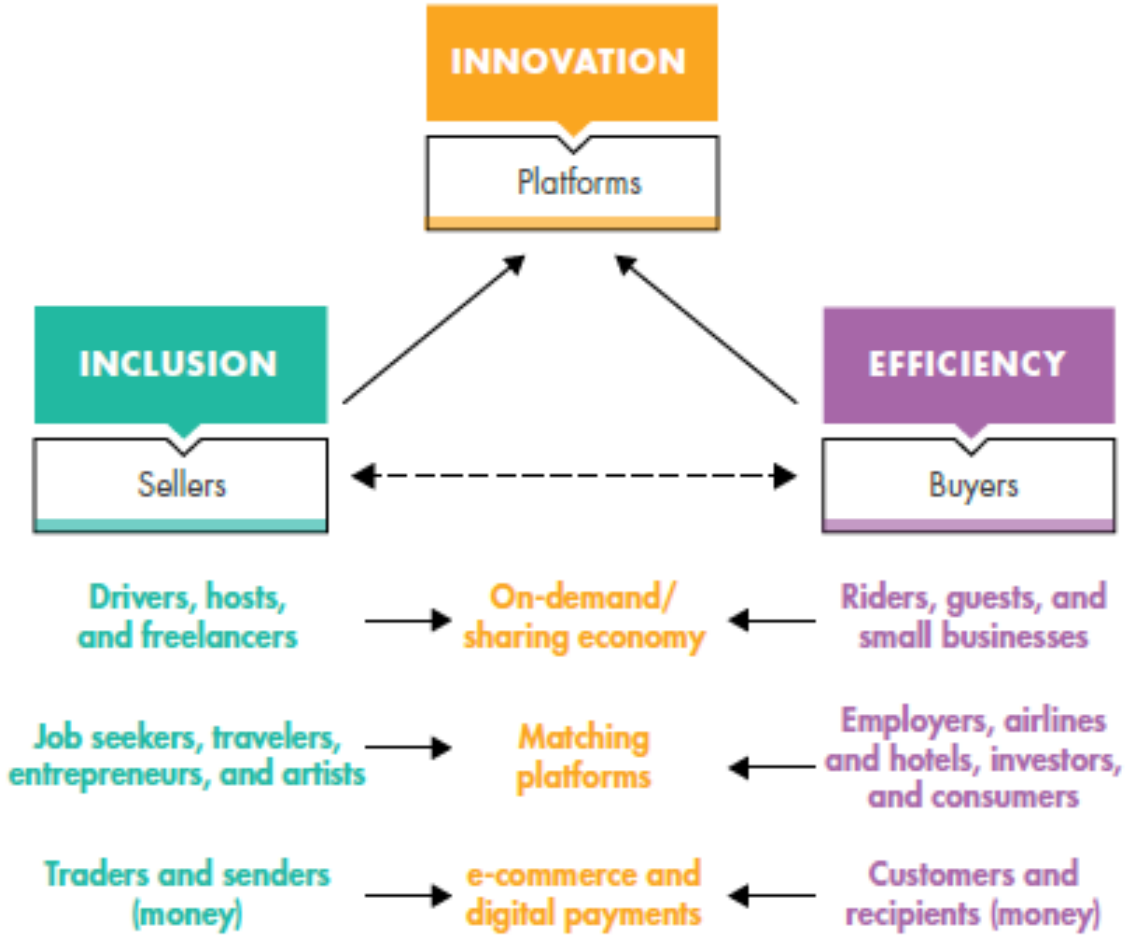
#1. A significant digital divide remains

Between and within countries, as well as in access and capability



SOURCE: *WDR 2016 team based on Research ICT Africa and ITU data*

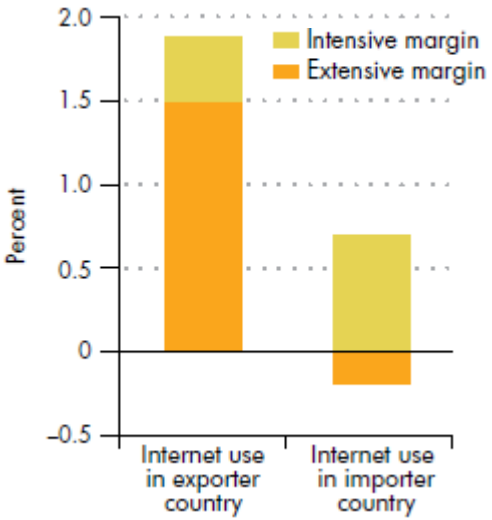
Many digital transactions involve all three mechanisms and a two-sided market



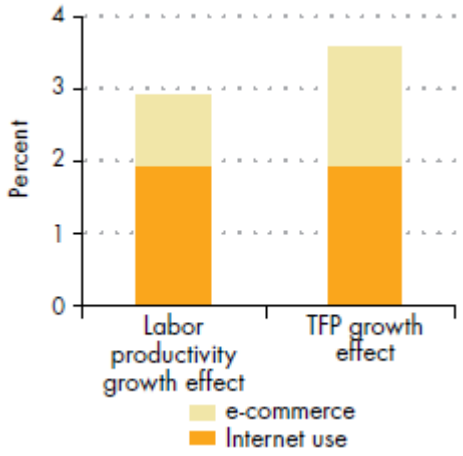
SOURCE: *WDR 2016 team*.

Digital technology creates opportunities to accelerate growth ….

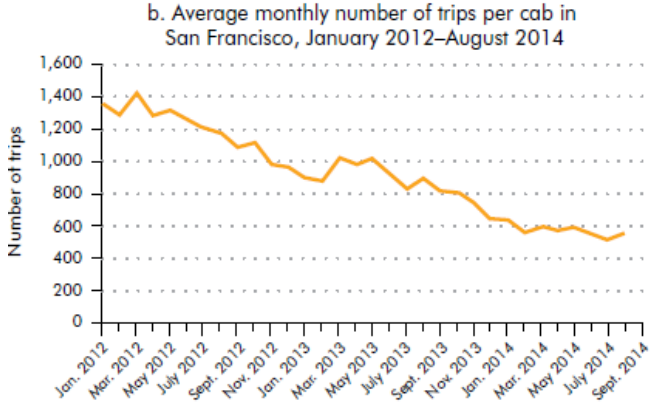
TRADE



PRODUCTIVITY

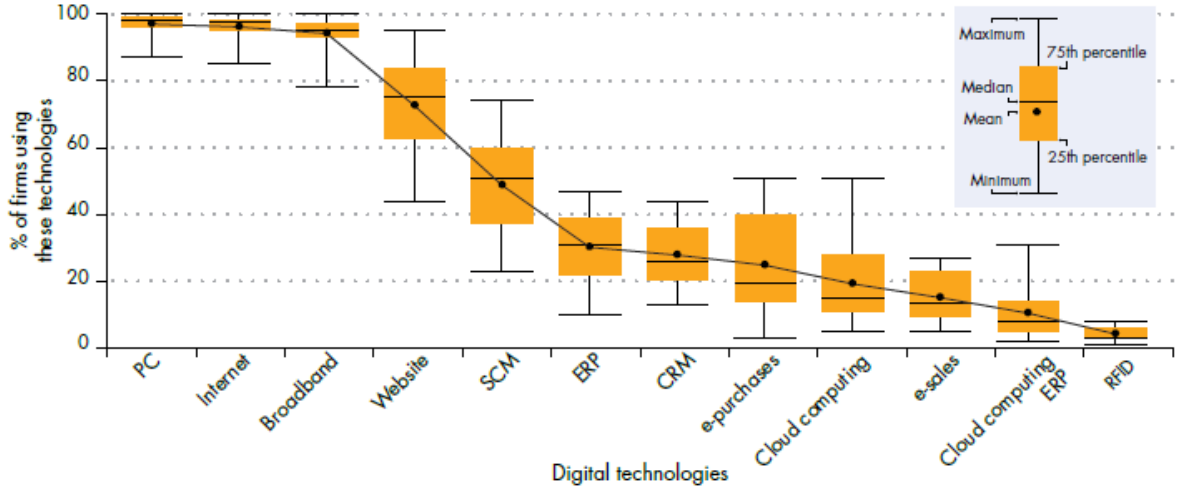


COMPETITION



….but many firms are not adopting them. Why?

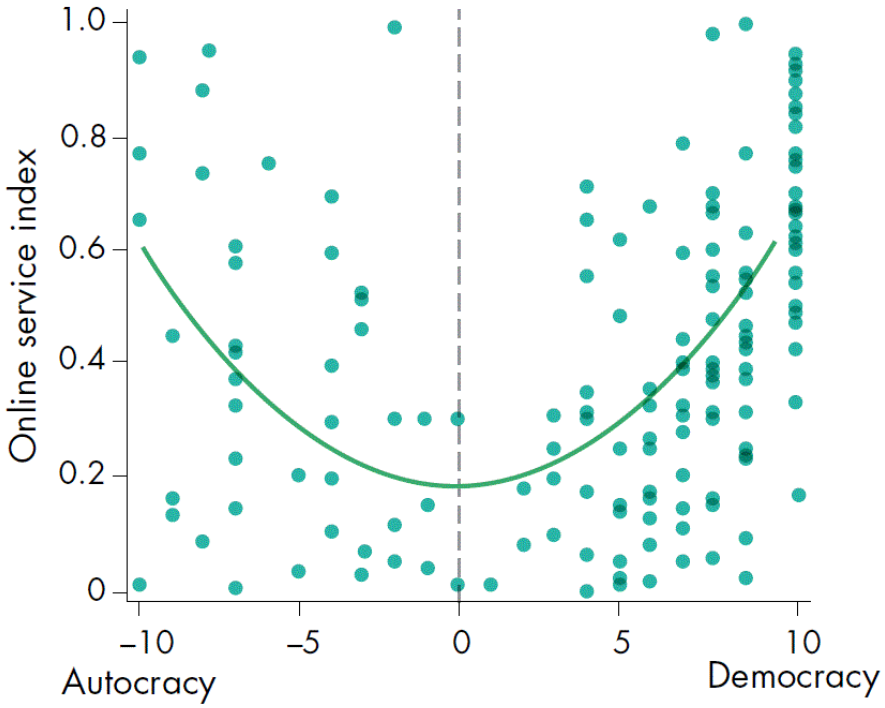
Figure 1.3 Many advanced digital technologies have not yet diffused across firms in high-income countries



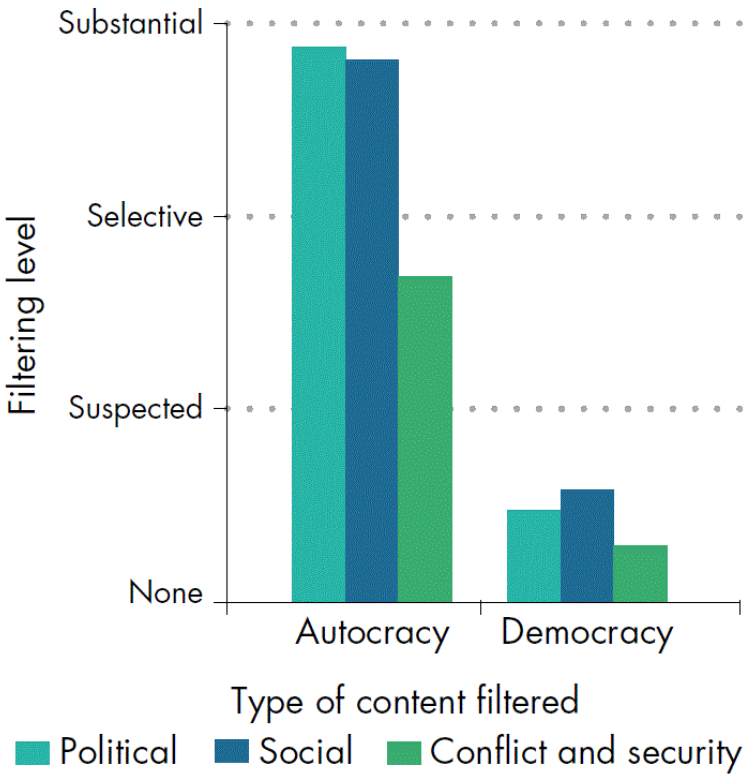
SOURCE: *WDR16 team, Osnago and Tan 2015, Nguyen and Sc for the 2016 WDR, Eurostat, circa 2014 (EU, various years).*

Information without ACCOUNTABILITY

a. e-government provision, by government type

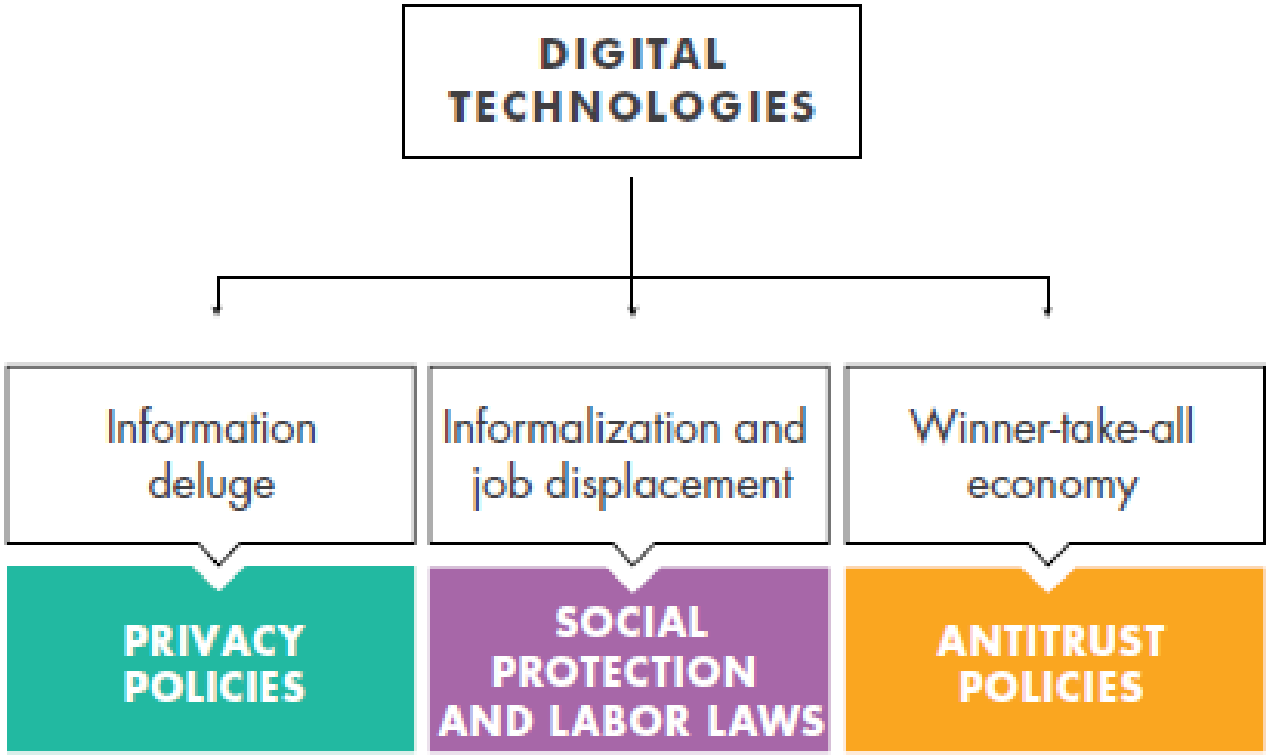


b. Internet filtering, by government type



SOURCE: *WDR team, based on Polity IV 2015; UN 2014; Open Net Initiative 2013.*

Dealing with the downside risks of the digital economy



SOURCE: *WDR 2016 team*.