


world development report

2016 

DIGITAL DIVIDENDS

#wdr2016

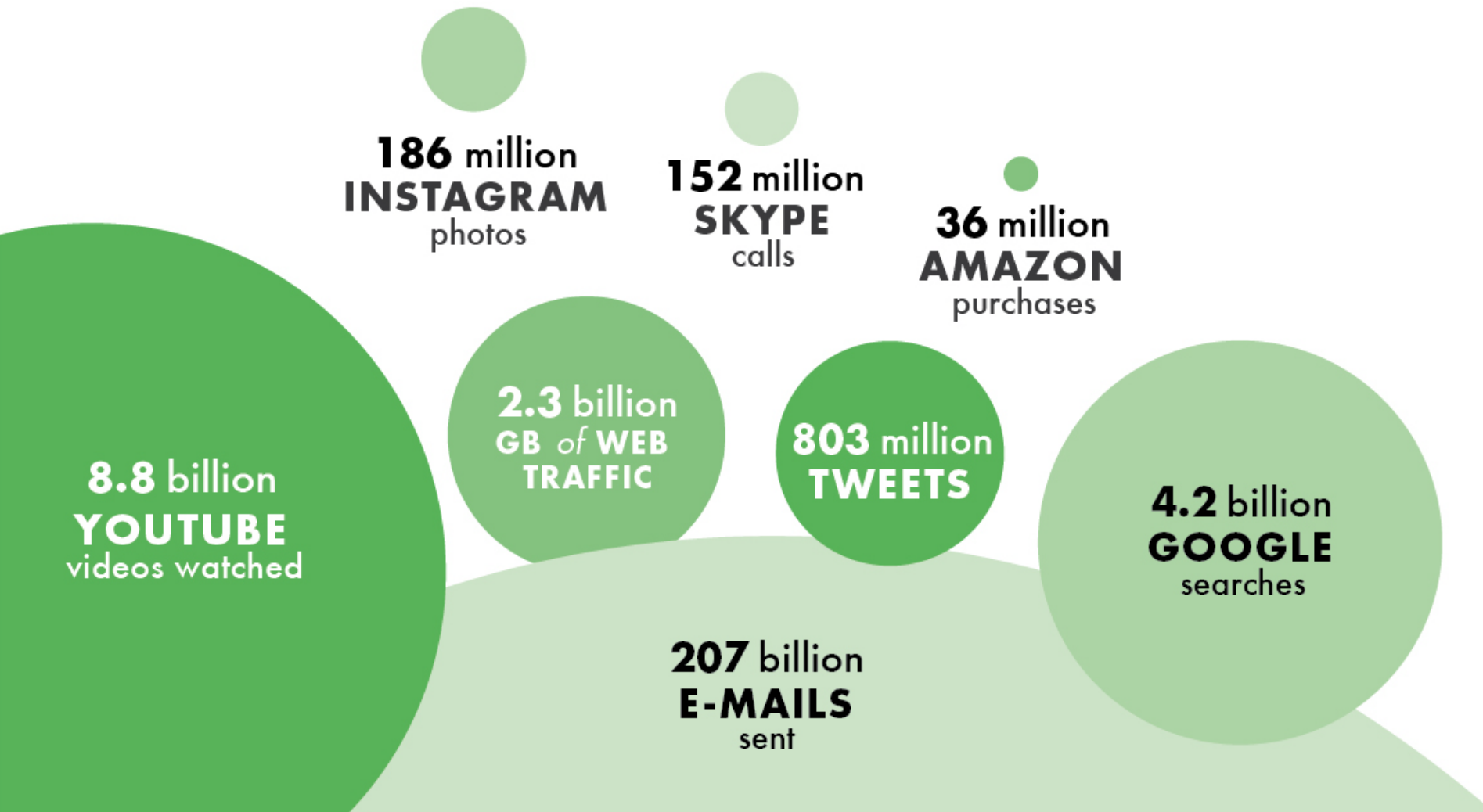
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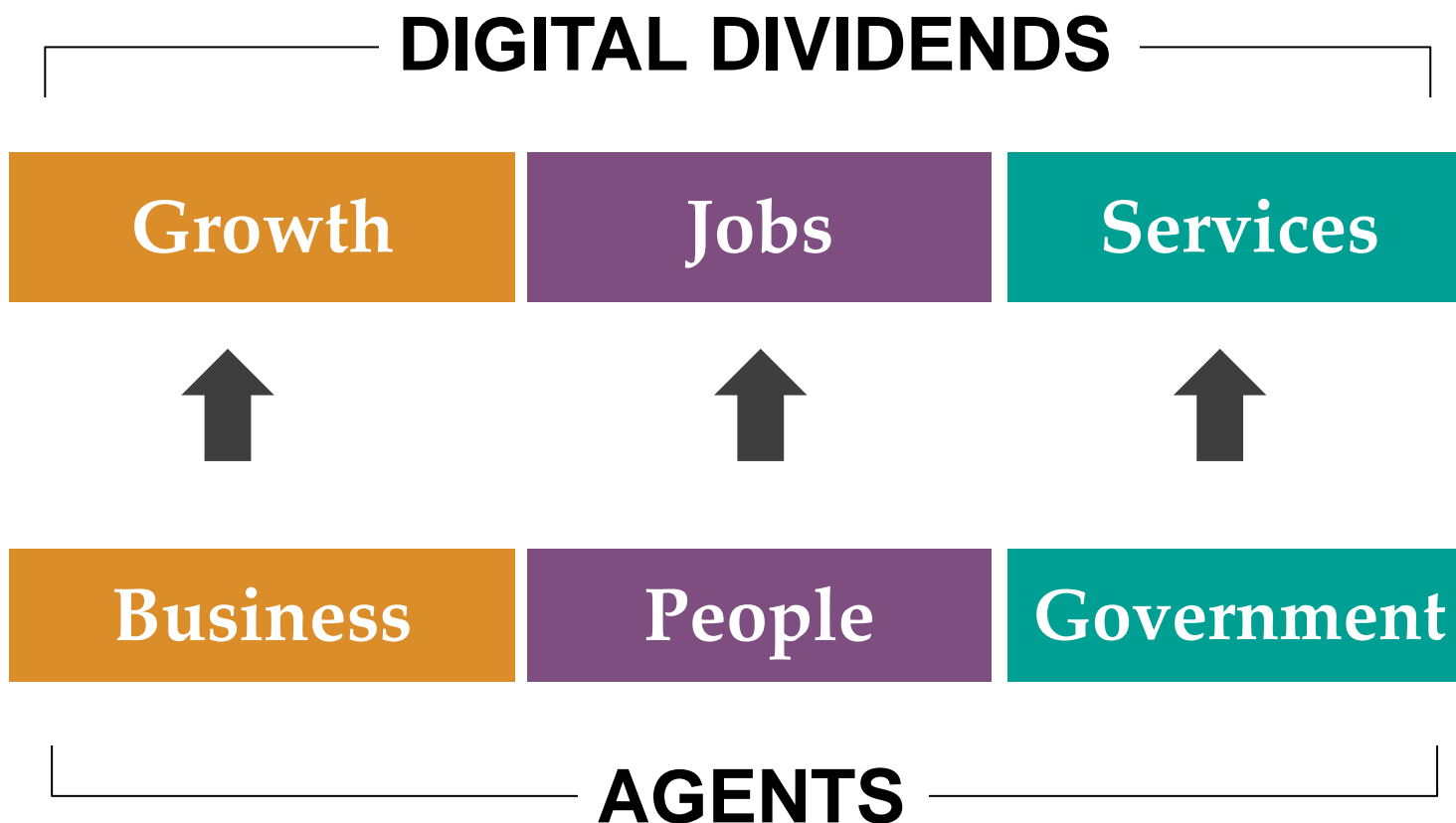
WORLD BANK GROUP

Digital revolution has brought many private benefits

A typical day in the life of the internet



Are countries reaping sizable digital dividends?



Are the benefits reaching everyone, everywhere?

Digital technologies are transforming:

Business



People's lives



Governments



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

**5 MILLION
& COUNTING**

Number of mobile money accounts worldwide:

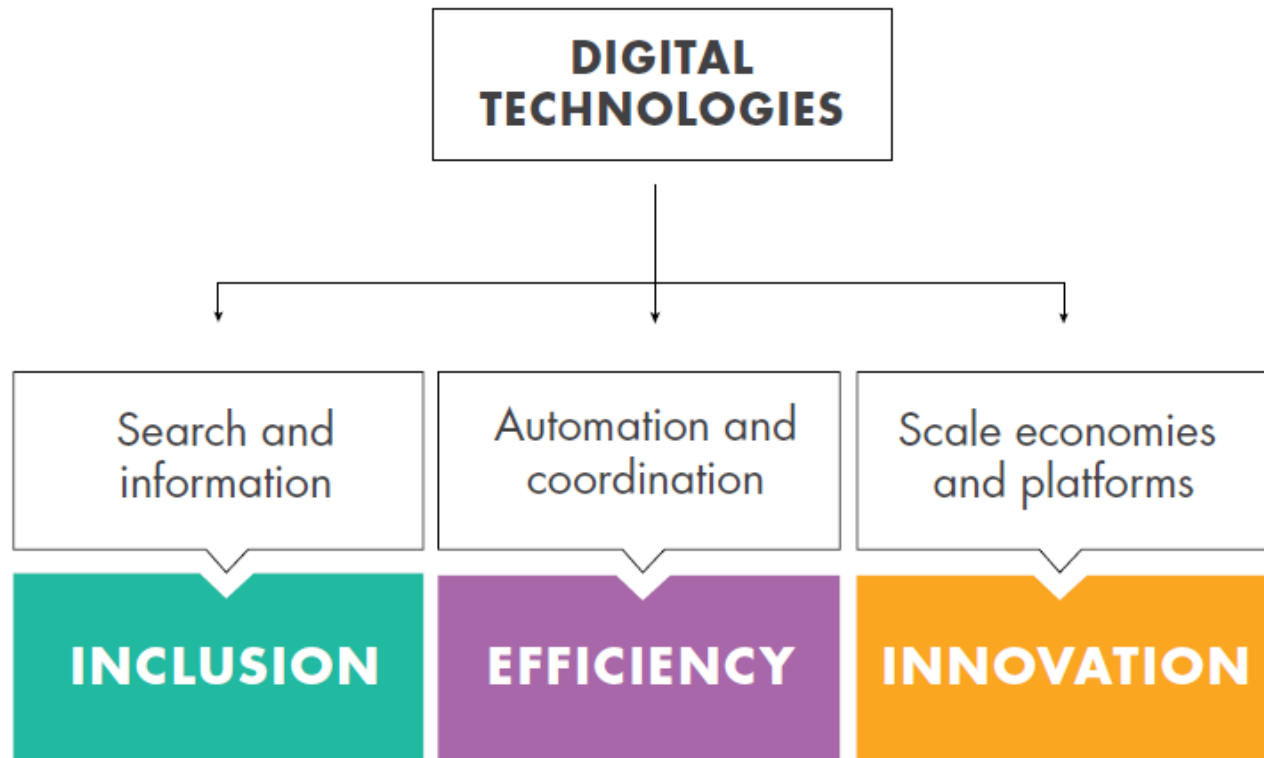
**300 MILLION
& COUNTING**

(end of 2014)

Indians with digital identity:

**950 MILLION
& COUNTING**

The main mechanisms to promote development



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

Then why the deep pessimism surrounding the global economy?

a. Global productivity

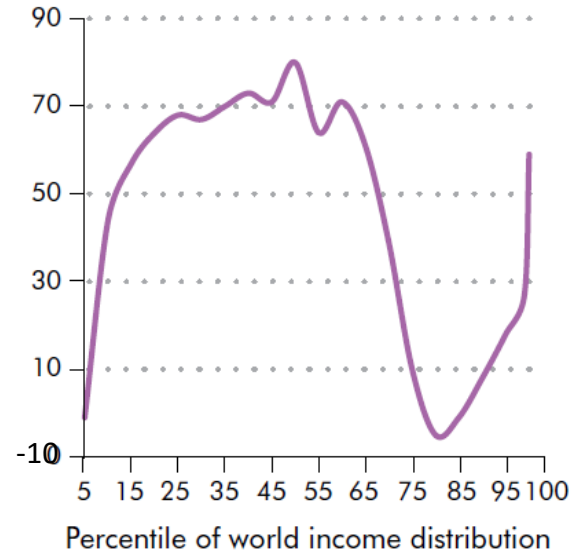
Five-year moving average of median growth of labor productivity per hour worked, in percent, in 87 countries.



Business

b. Global inequality

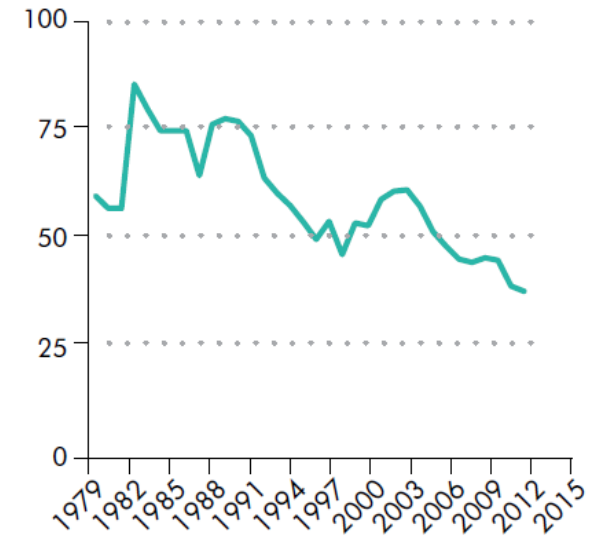
Percentage change in real income between 1998 and 2008 at different levels of world income distribution in 2003 prices



People

c. Global governance

Share of elections that are free and fair (%)



Governments

Not because of digital technologies, but in spite of them

1. A significant digital divide remains



6 BILLION *without* BROADBAND



4 BILLION *without* INTERNET



2 BILLION *without* MOBILE PHONES

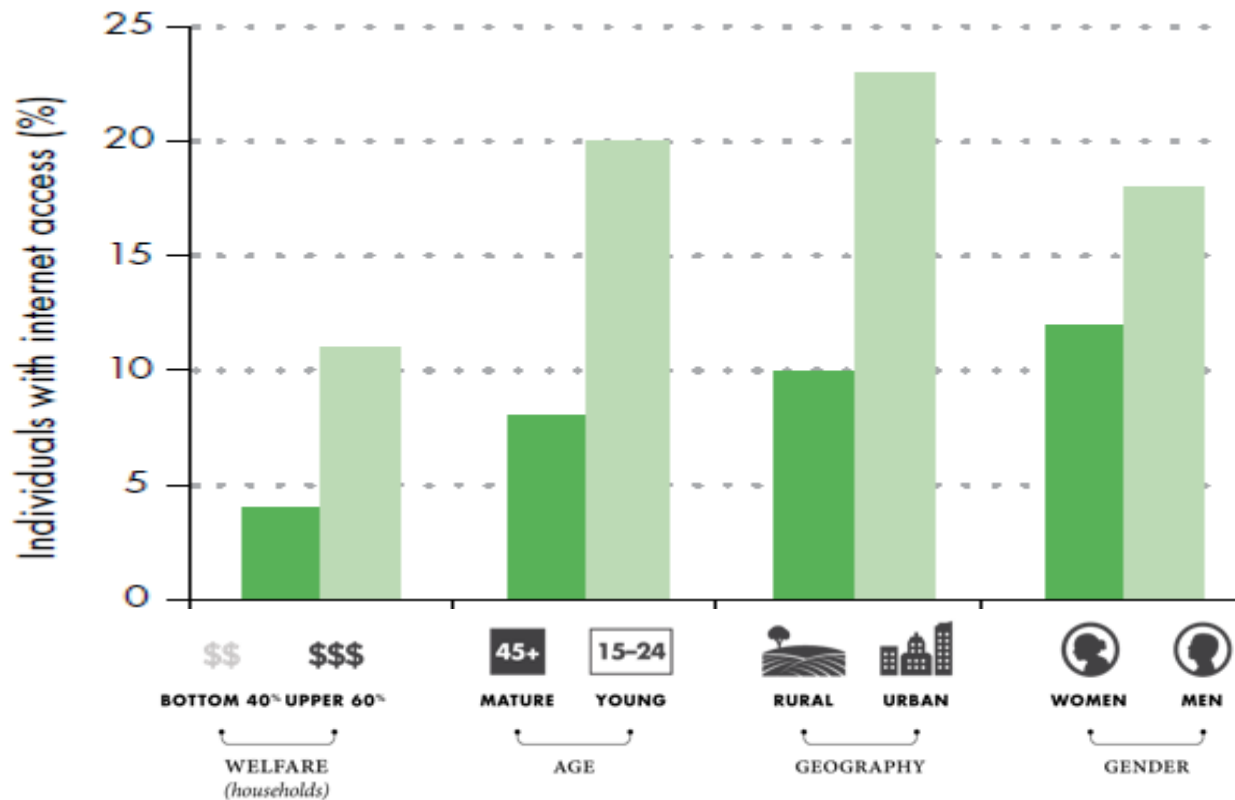


0.4 BILLION *without* A DIGITAL SIGNAL

Divides persist between and within countries—in access and capability

... between and within countries—in access and capability

AFRICA

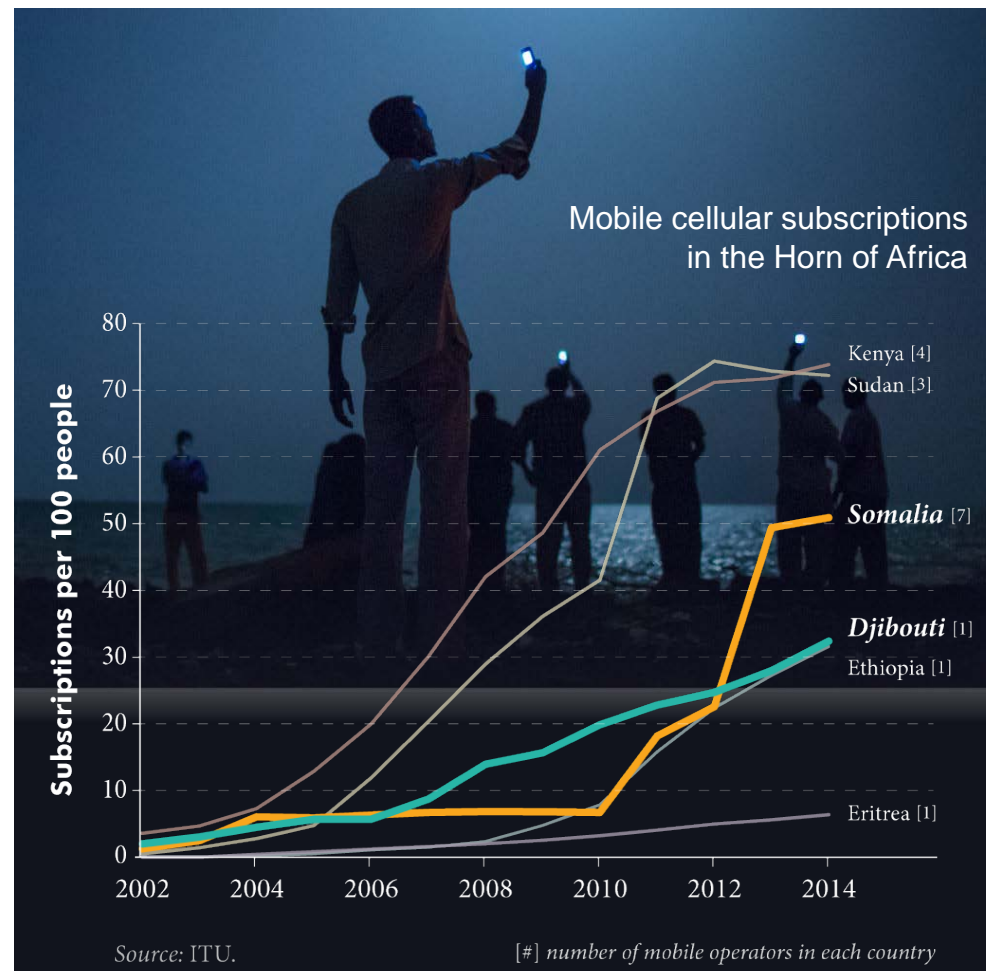


SECTORAL POLICIES

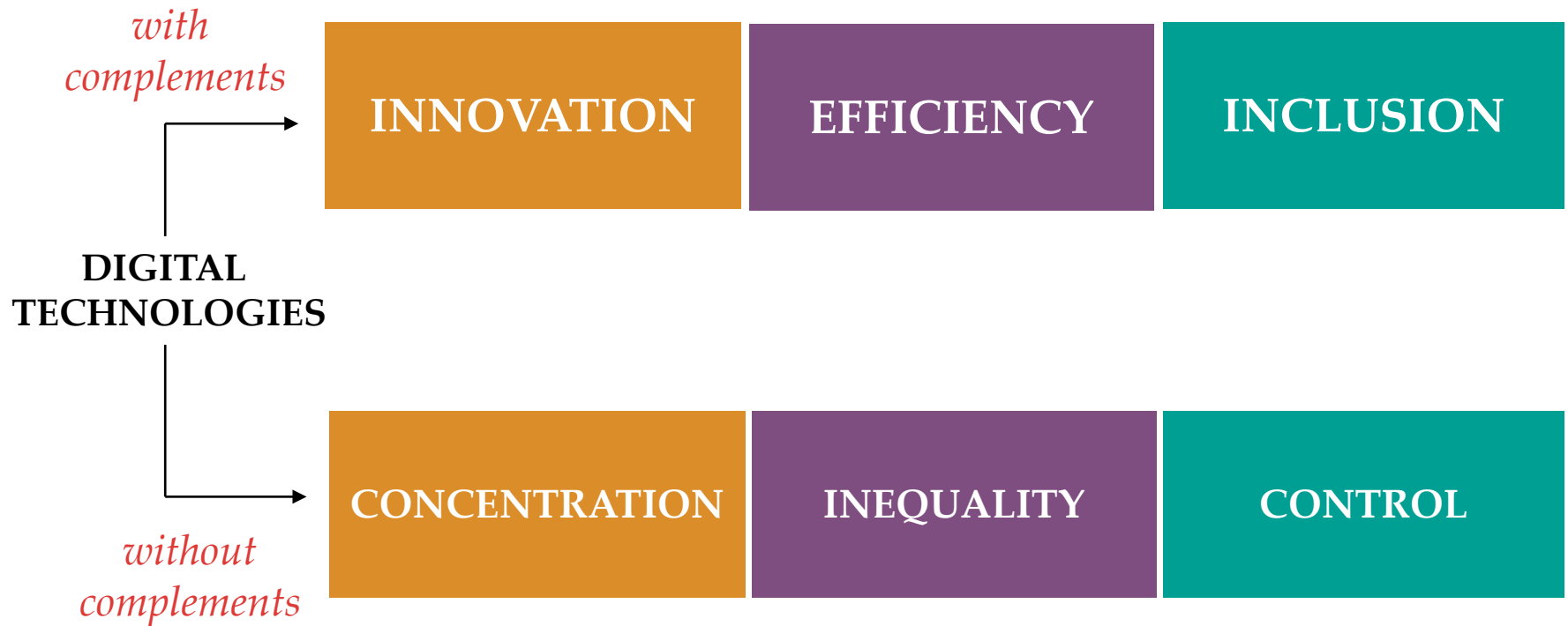
Making internet access
universal, affordable, open and safe

SUPPLY SIDE ISSUES

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



2. Digital technologies hold benefits as well as risks

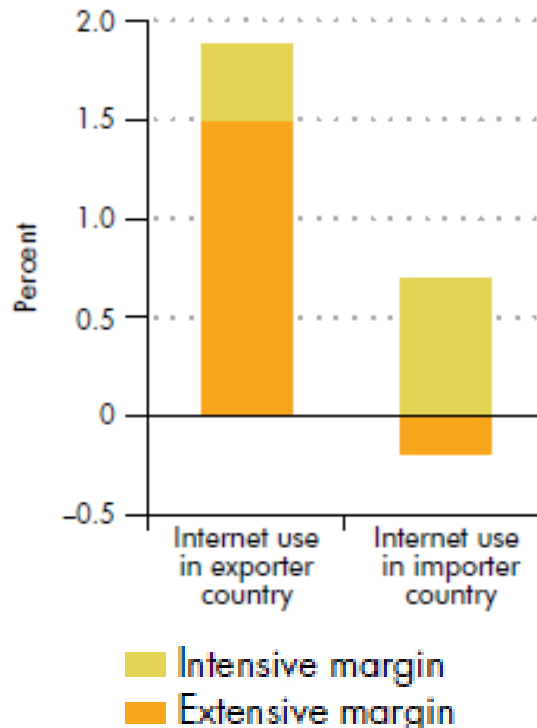


What are those complements?

Digital technology can accelerate growth ...

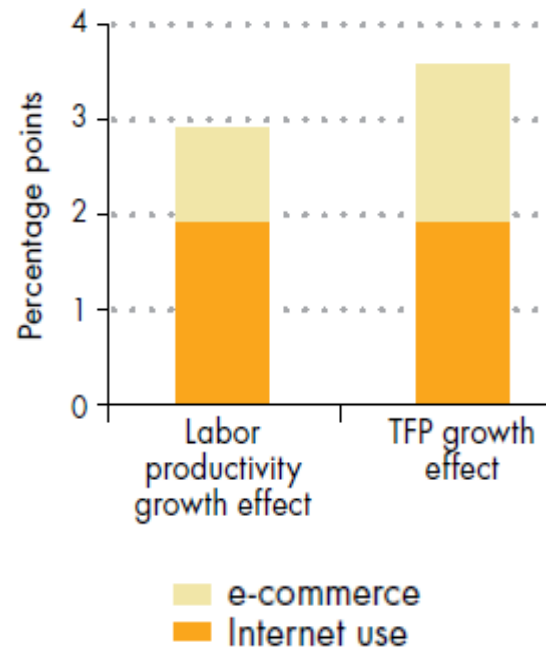
TRADE

The internet enables more firms to reach new markets, 2001-12



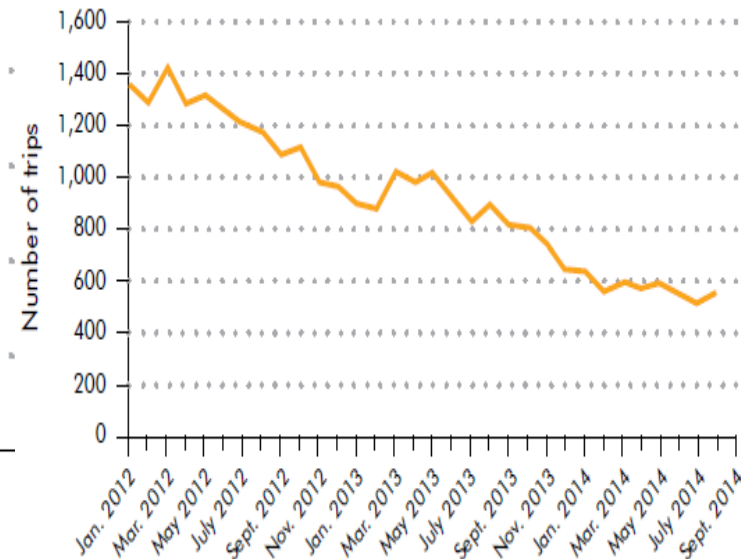
PRODUCTIVITY

Vietnamese firms using e-commerce have higher total factor productivity growth, 2007-12



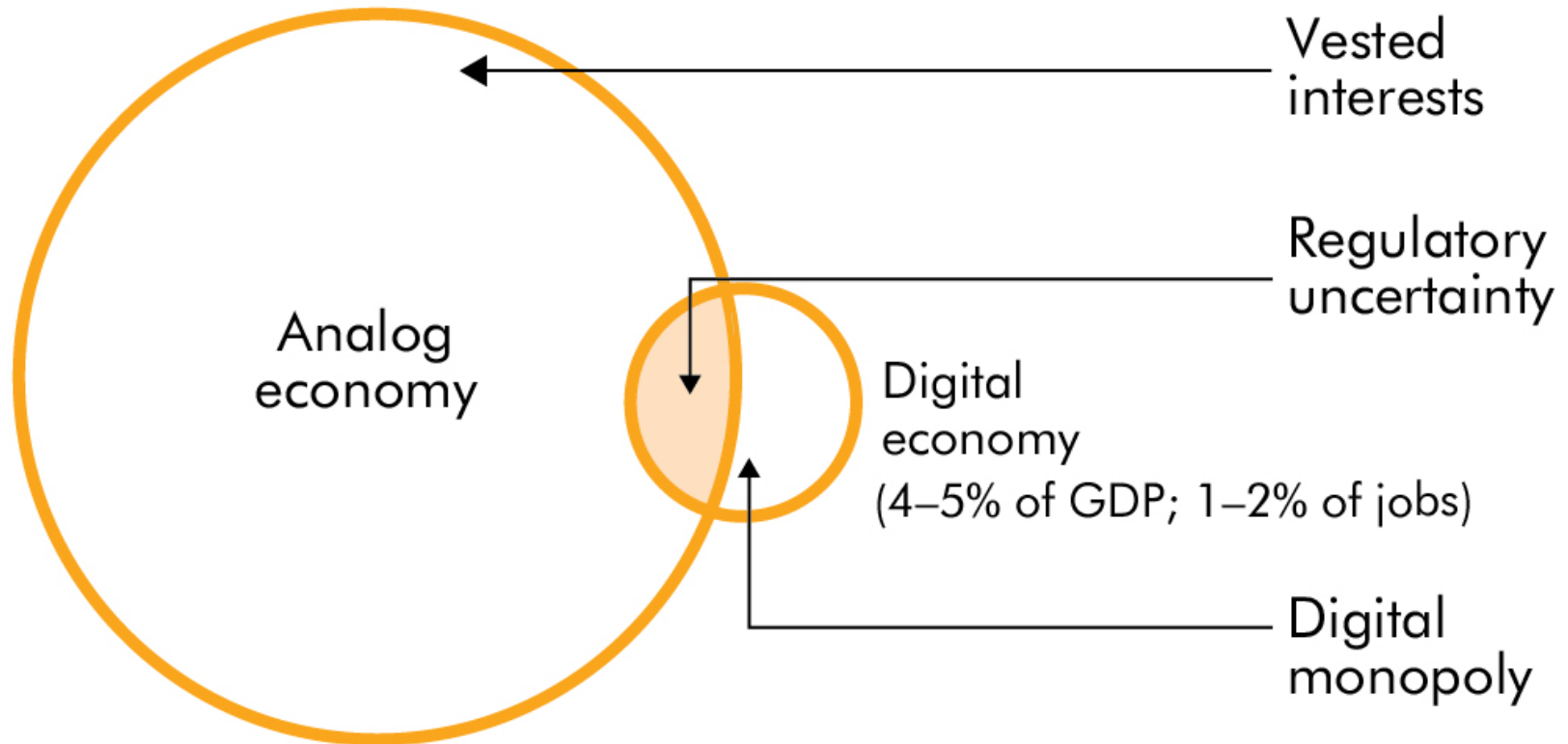
COMPETITION

Average monthly trips per traditional taxi in San Francisco after Uber started operation



...but scale without **COMPETITION**

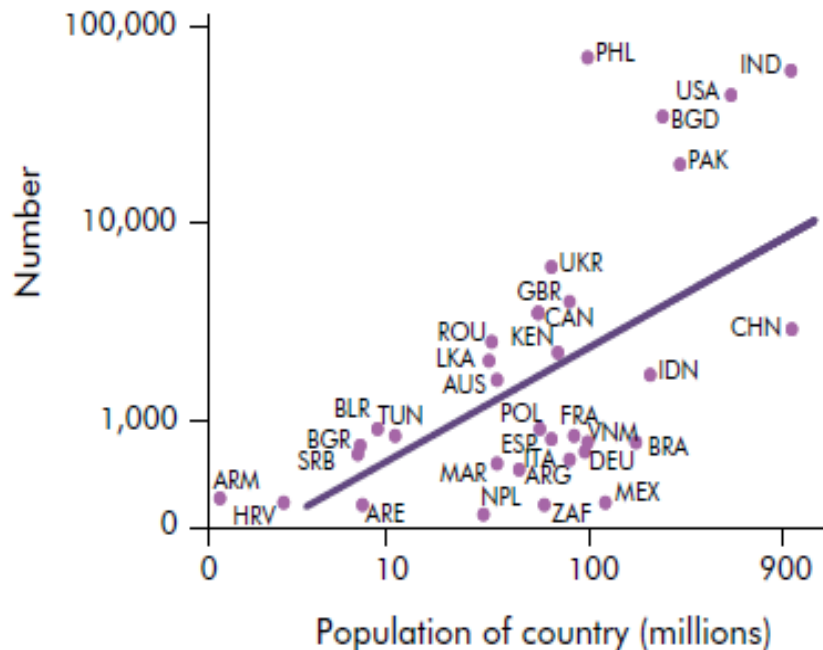
→ risks of lower digital adoption and growing divergence



Digital technology can expand opportunities...

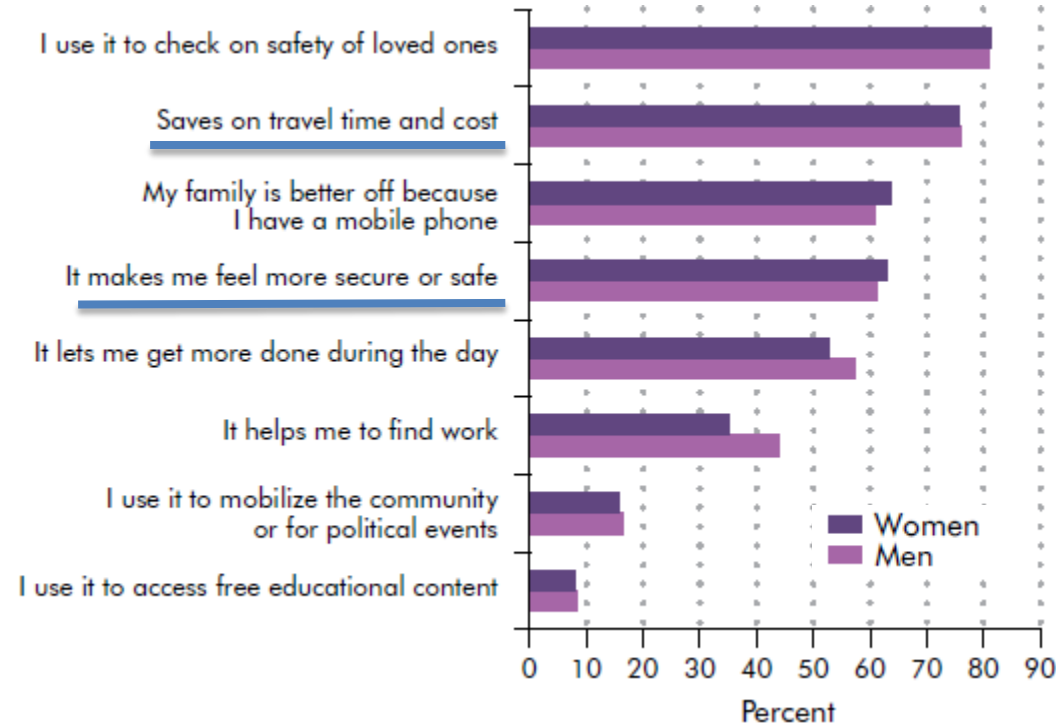
JOB CREATION

Number of oDesk contractors



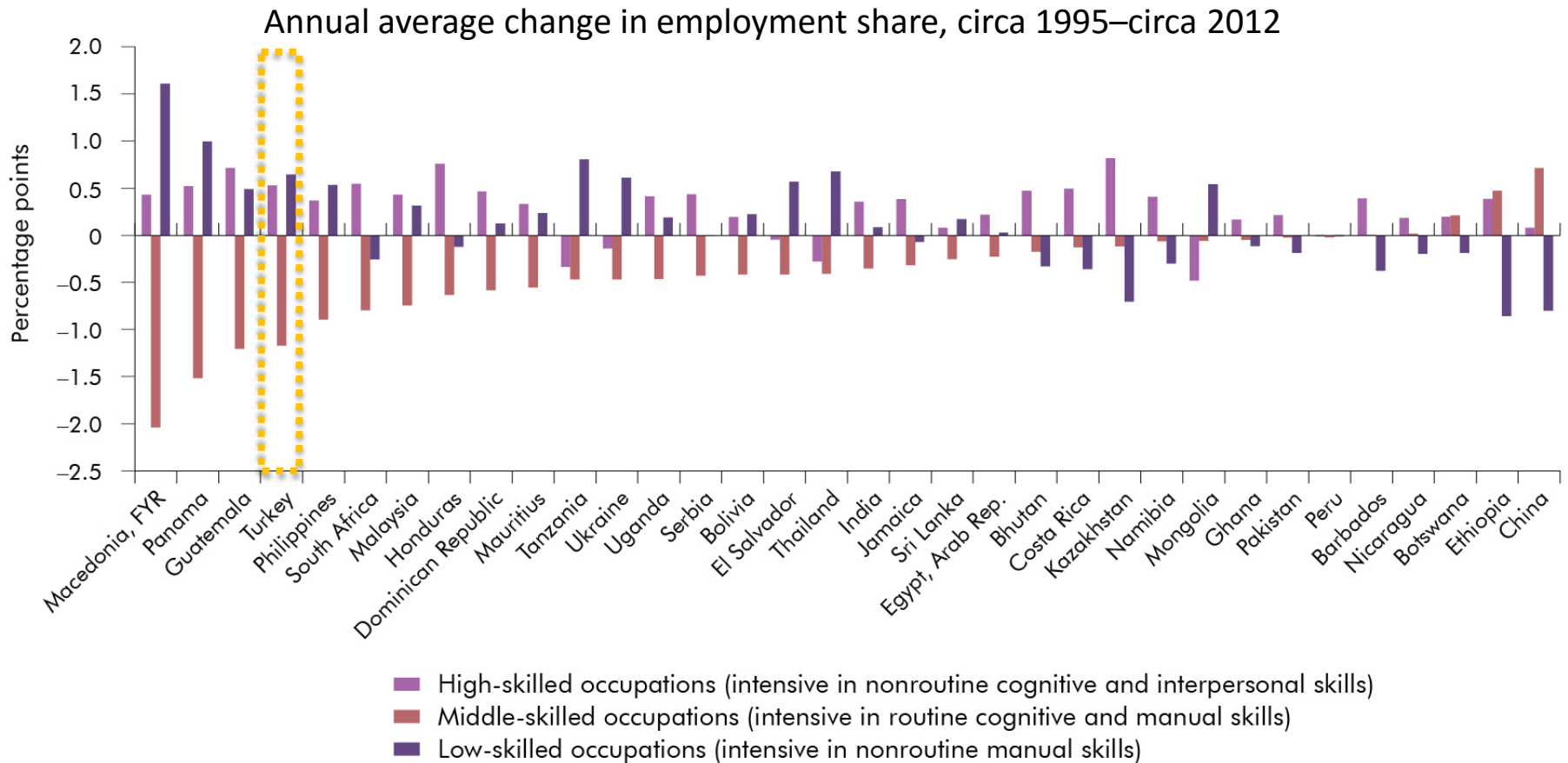
PRODUCTIVITY & CONSUMER SURPLUS

Africa: Respondents that agree with each statement on benefits and use of mobile phones, 2011–12



...but automation without **SKILLS**

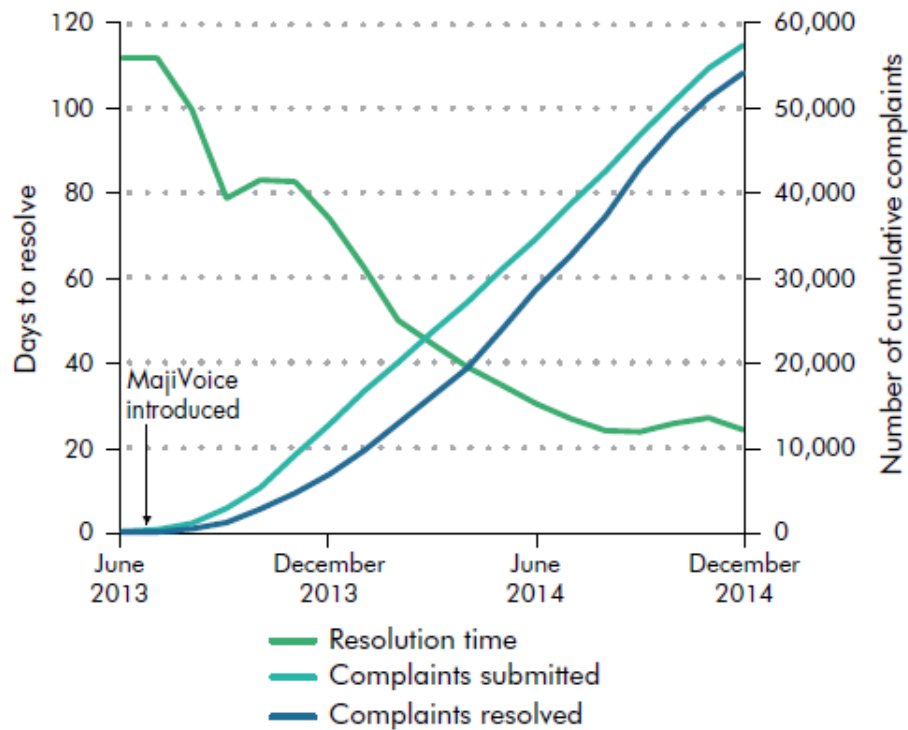
→ risks of polarized labor markets and greater inequality



Digital technology can improve service delivery...

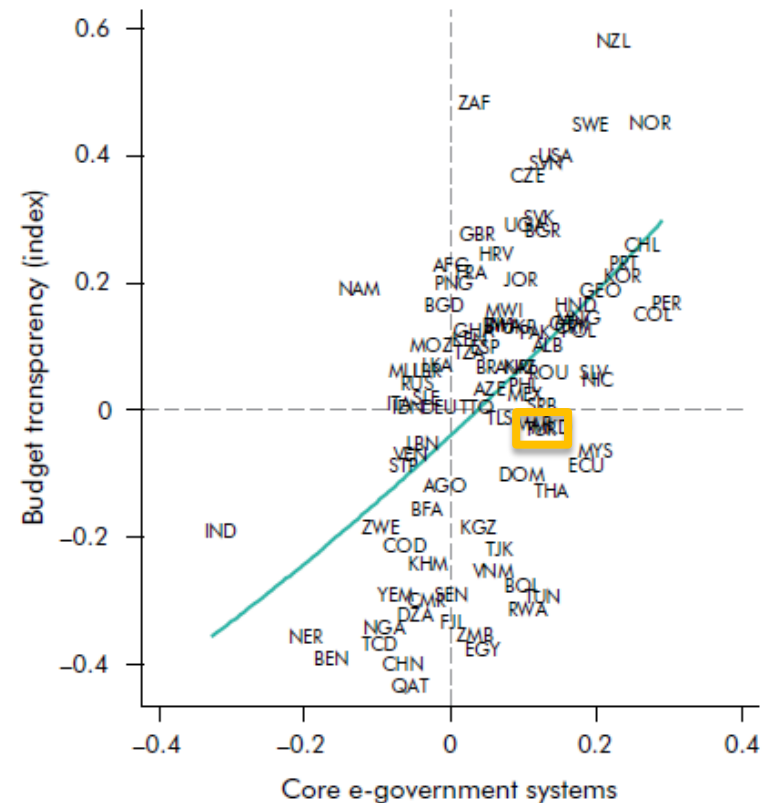
CAPACITY

Complaints were resolved quickly in the Nairobi water utility after the introduction of digital customer feedback



TRANSPARENCY

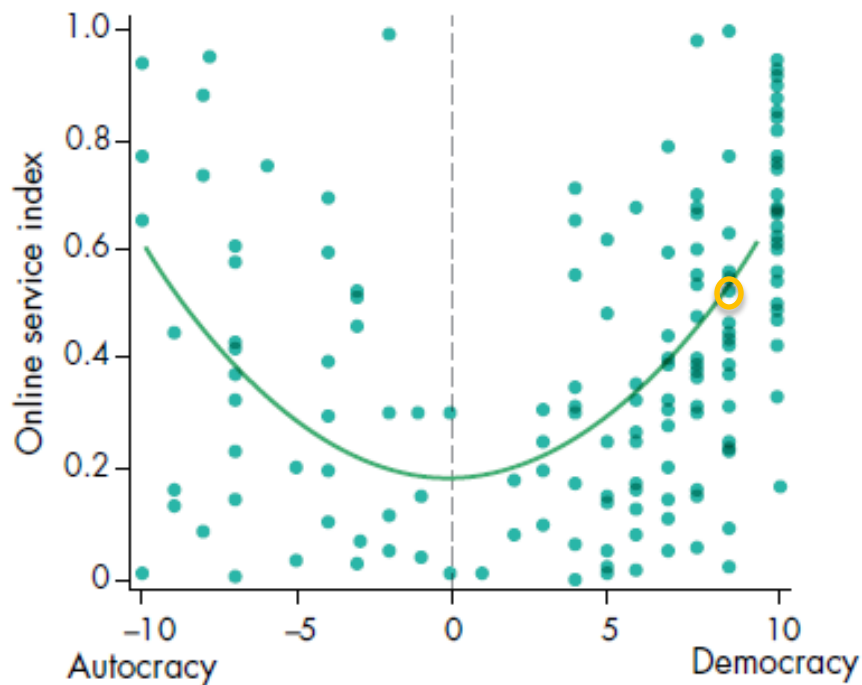
e-government systems increase the transparency of government budgets, 2014



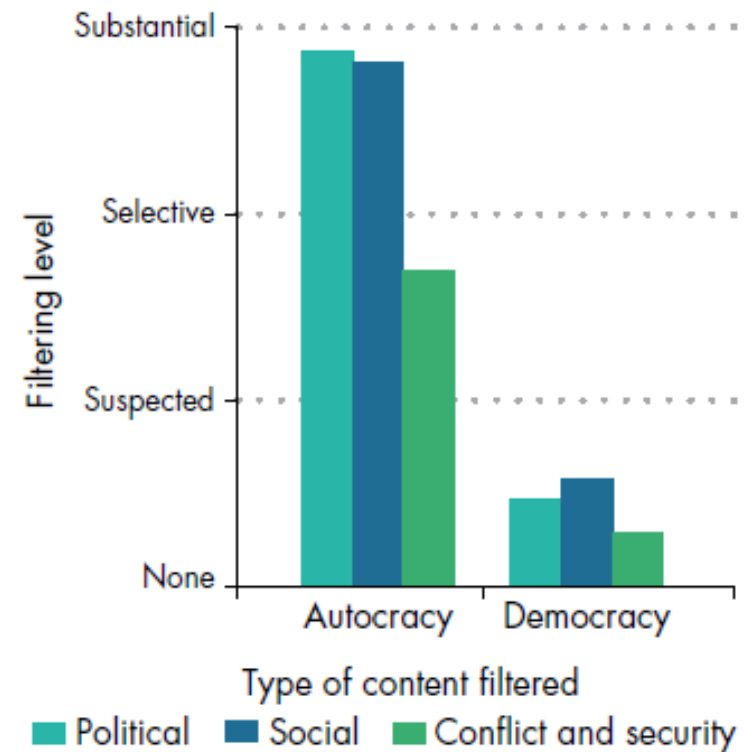
...but information without **ACCOUNTABILITY**

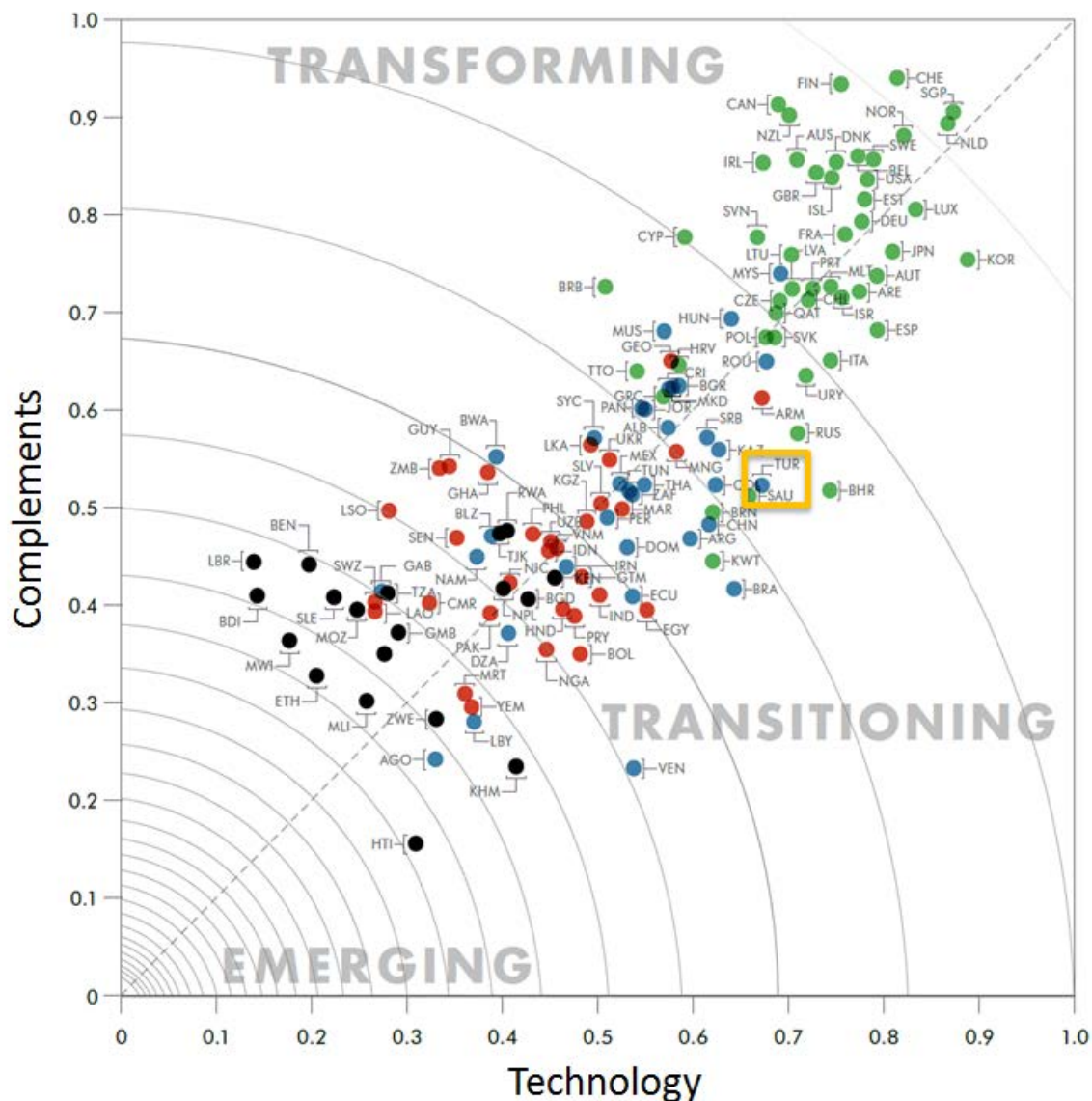
→ risks of greater state control and elite capture

a. e-government provision, by government type



b. Internet filtering, by government type





Race between technology and complements

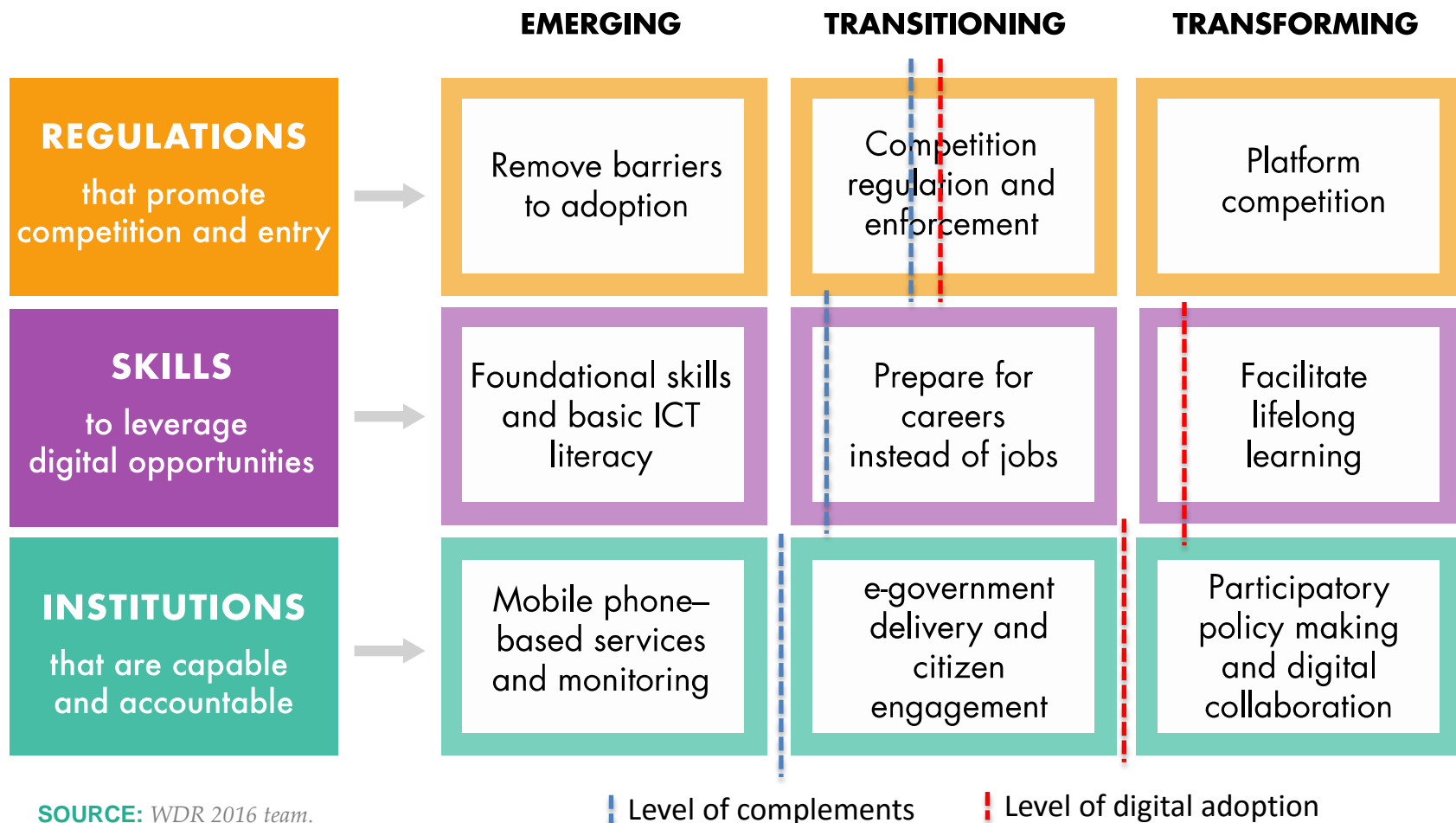
- High-income
- Upper-middle-income
- Lower-middle-income
- Low-income

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

Technology: Digital adoption index - businesses, people and governments.

NATIONAL PRIORITIES

Analog foundations for a digital economy



SOURCE: WDR 2016 team.

Digital development strategies need to be broader than ICT strategies

Connectivity + Complements → Digital Dividends

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

Digital technologies add two new dimensions to development:

- They amplify the impact of good (and bad) policies → Failure to reform means falling further behind
- While not a short-cut to development, they can be an accelerator, by raising the quality of complements

The payoff

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

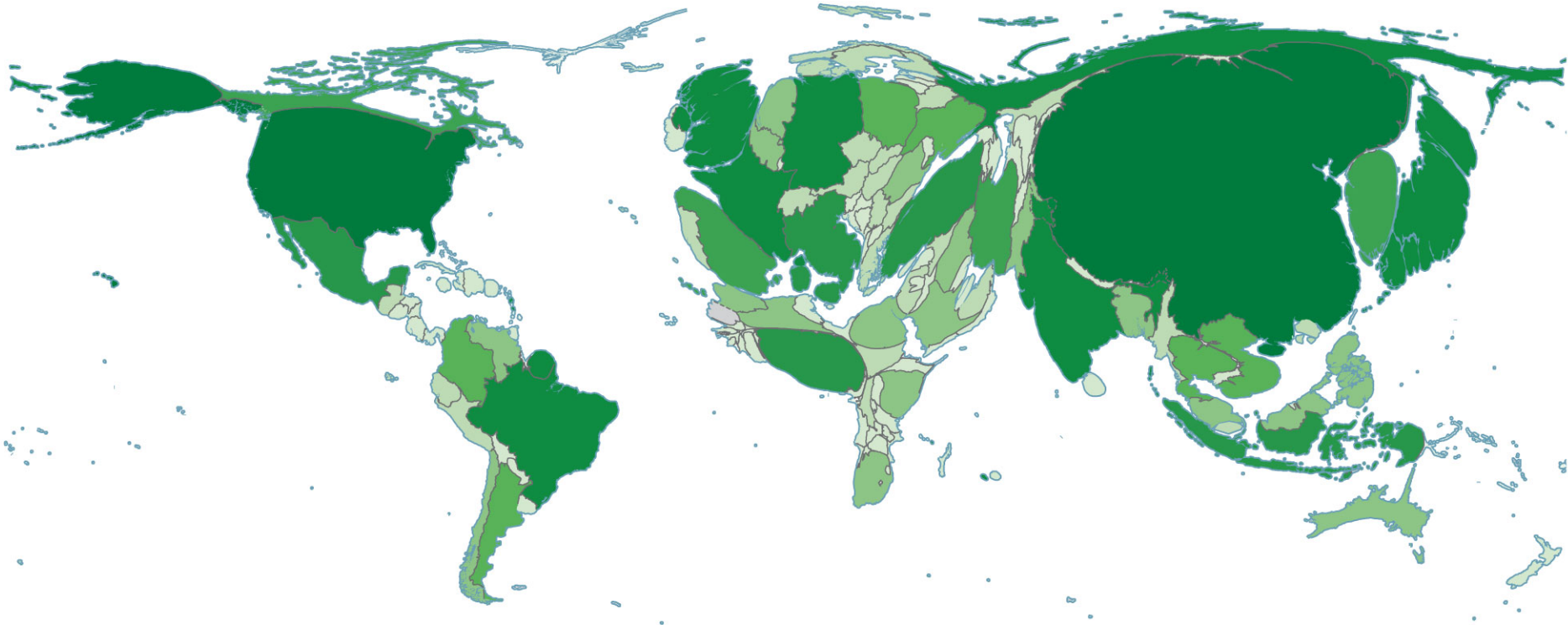
A group of people are silhouetted against a dark night sky over a body of water. Several individuals are holding up their mobile phones, with the screens glowing and illuminating their faces. The scene is captured from a low angle, emphasizing the height of the people and the brightness of the moon or stars in the sky.

www.worldbank.org/wdr2016

Back-up Slides

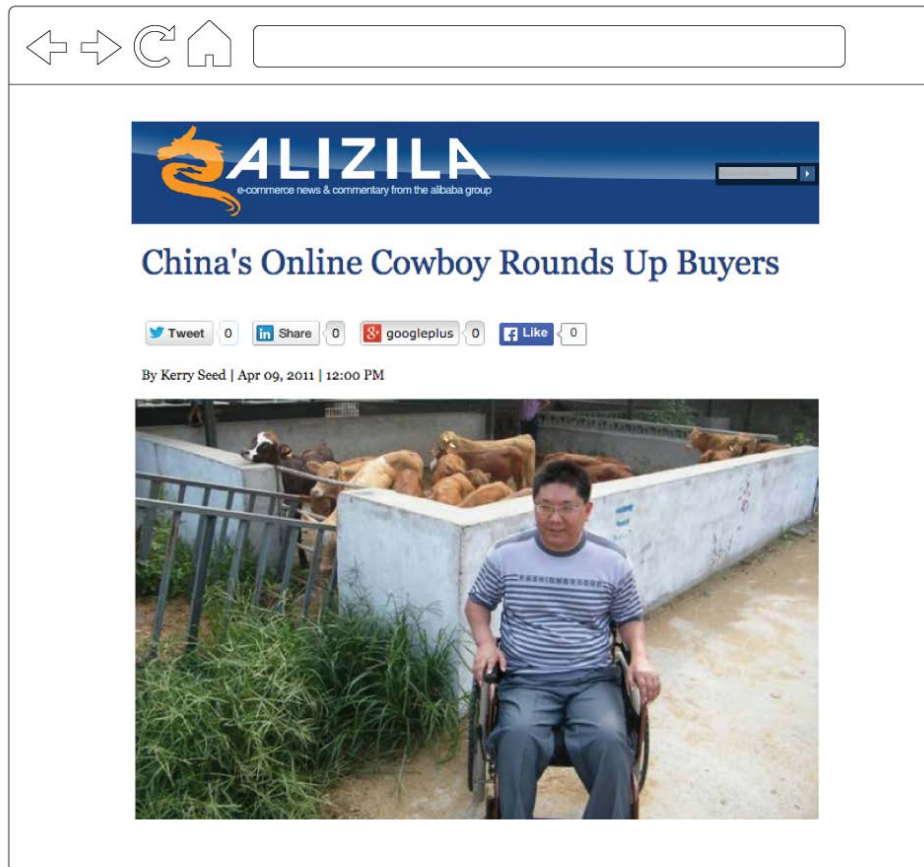
Digital technologies have spread rapidly

The world, based on internet population (2014)



Digital technologies are transforming *BUSINESS*

DIGITAL MARKETPLACE



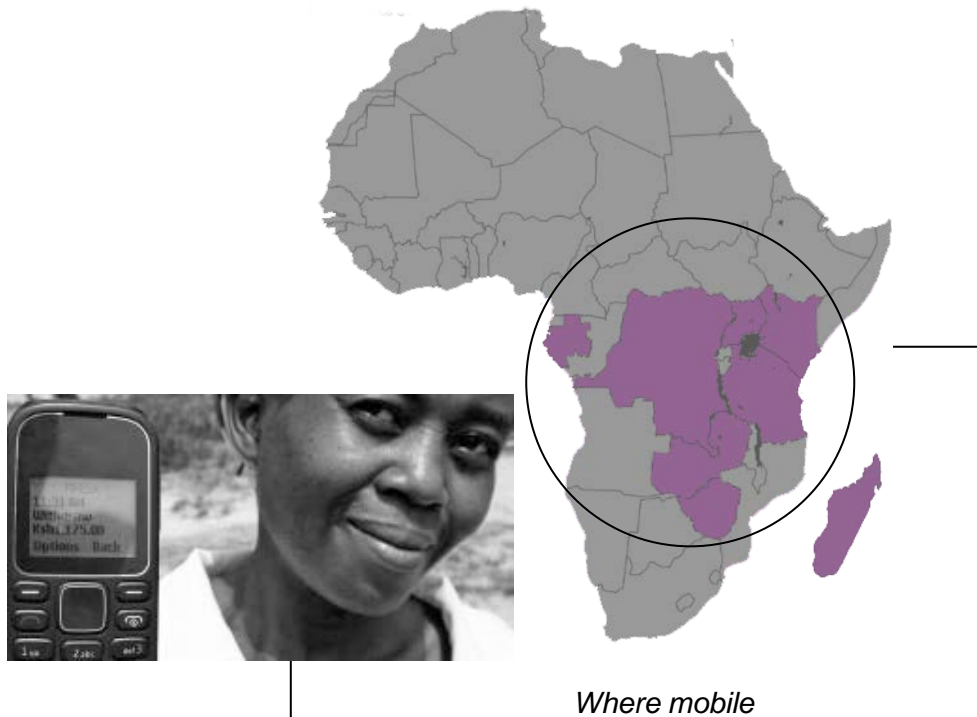
The image shows a screenshot of a news article from Alizila. At the top, there is a navigation bar with back, forward, refresh, and home icons, followed by a search box. The Alizila logo, featuring a stylized orange dragon, is prominently displayed. Below the logo, the article title "China's Online Cowboy Rounds Up Buyers" is shown in a blue font. Social media sharing buttons for Twitter, LinkedIn, Google Plus, and Facebook are visible, each with a "0" next to it. The author's name "By Kerry Seed" and the date "Apr 09, 2011 | 12:00 PM" are listed below the title. The main image of the article depicts a man in a wheelchair sitting in a concrete enclosure filled with brown cows, likely a cow auction or market.

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

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& COUNTING**

Digital technologies are transforming *PEOPLE's* lives

DIGITAL PAYMENTS



Number of mobile money accounts worldwide:

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(end of 2014)

Digital technologies are transforming *GOVERNMENT*

DIGITAL IDENTITY



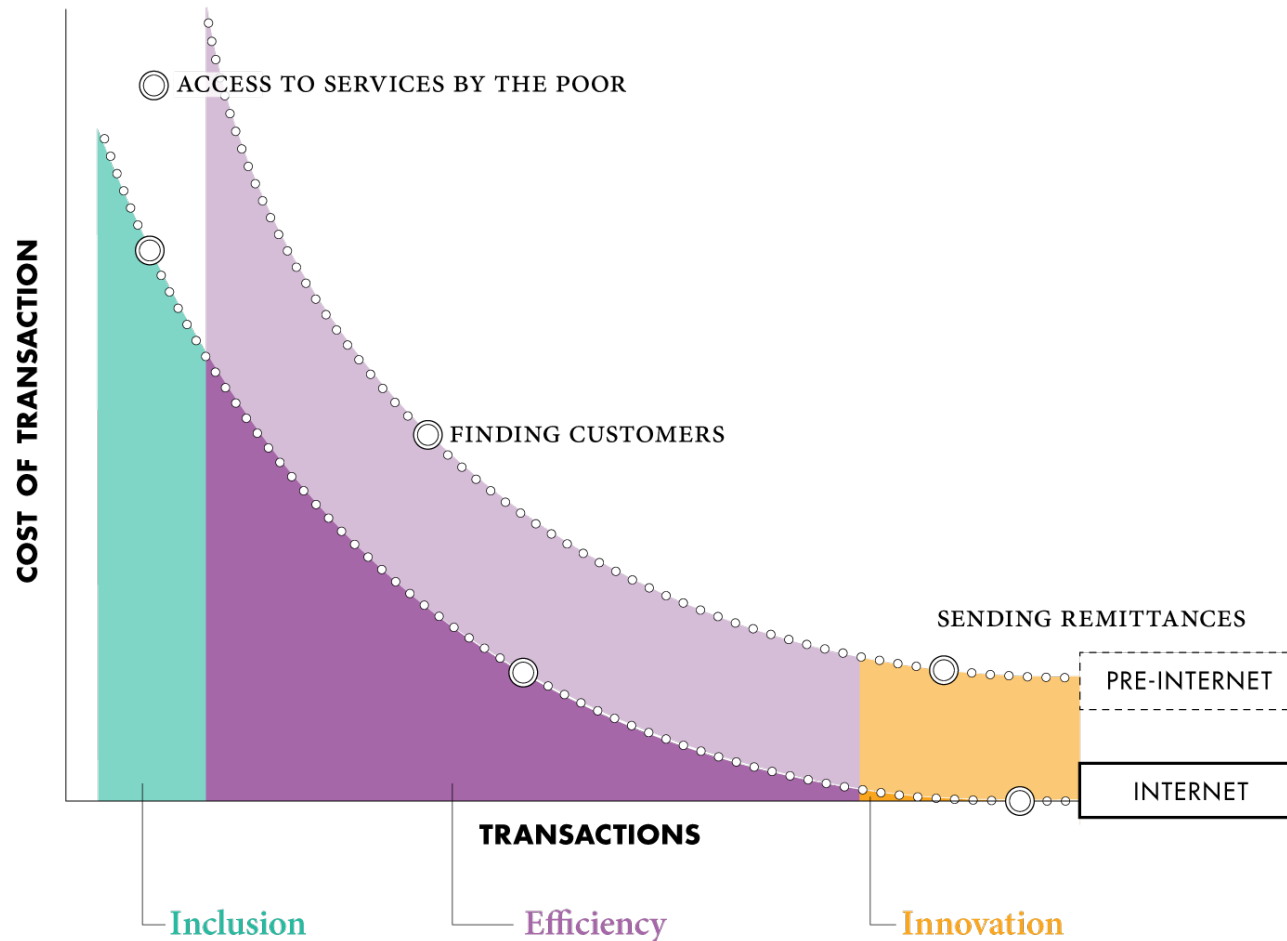
The screenshot shows a news article from 'THE NEW INDIAN EXPRESS'. The headline is 'Trafficking Victims see New life in Aadhaar'. Below the headline, it says 'By Daniel Thimmaya | Published: 30th March 2015 06:00 AM | Last Updated: 30th March 2015 10:57 AM'. The main image shows a group of people, including children and adults, holding up their Aadhaar cards. A small caption 'The New Indian Express' is visible in the top left corner of the image.

Indians with digital identity:

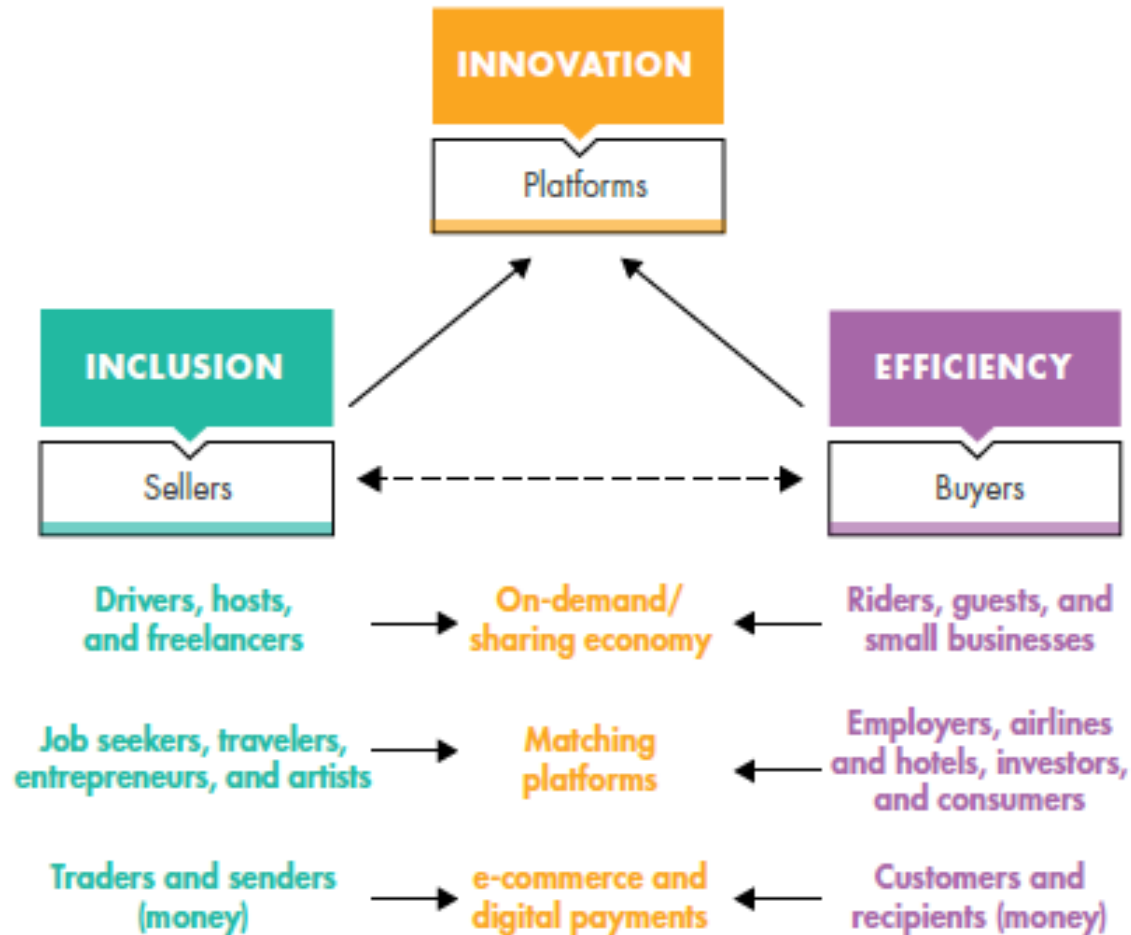
**900 MILLION
& COUNTING**

How the internet affects development

DECREASING MARKET AND NON-MARKET TRANSACTION COSTS



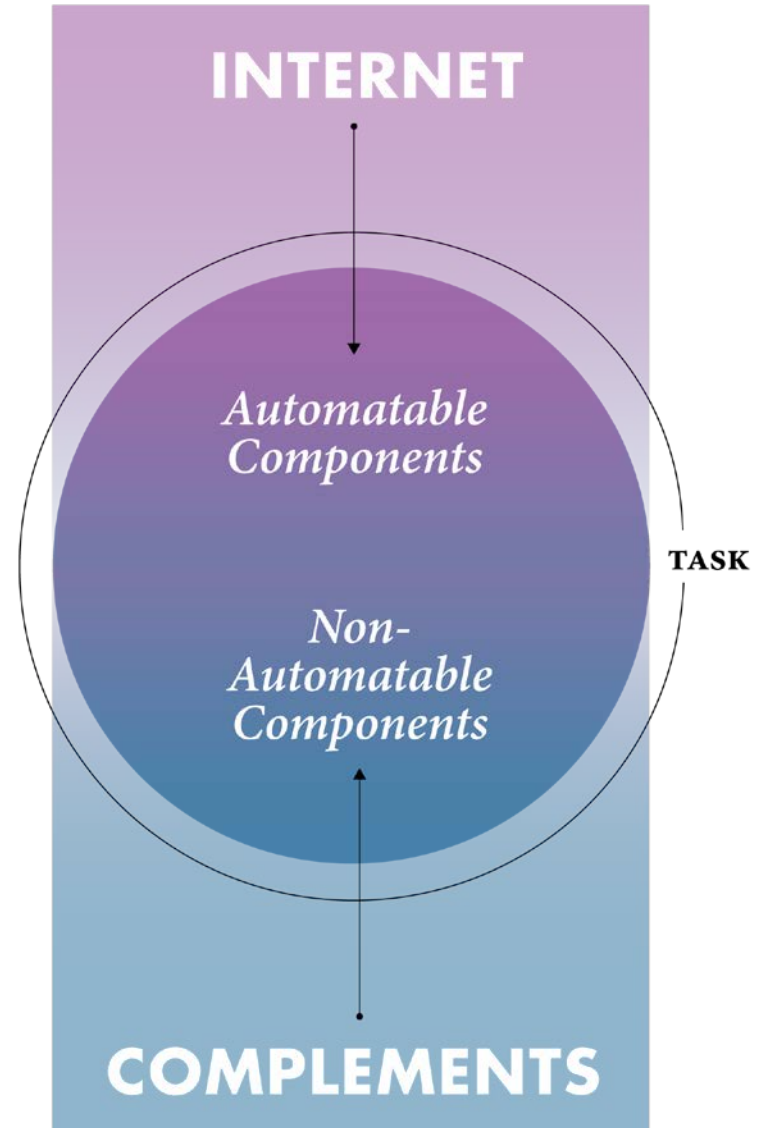
Many digital transactions involve all three mechanisms and a two-sided market



But technology will
not be enough

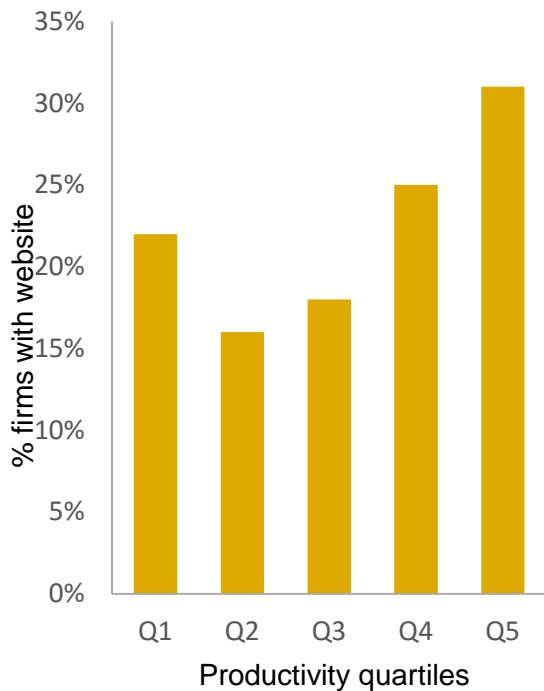
***“Be an expensive complement
(stats knowhow) to something
that’s getting cheaper (data).”***

—Hal Varian

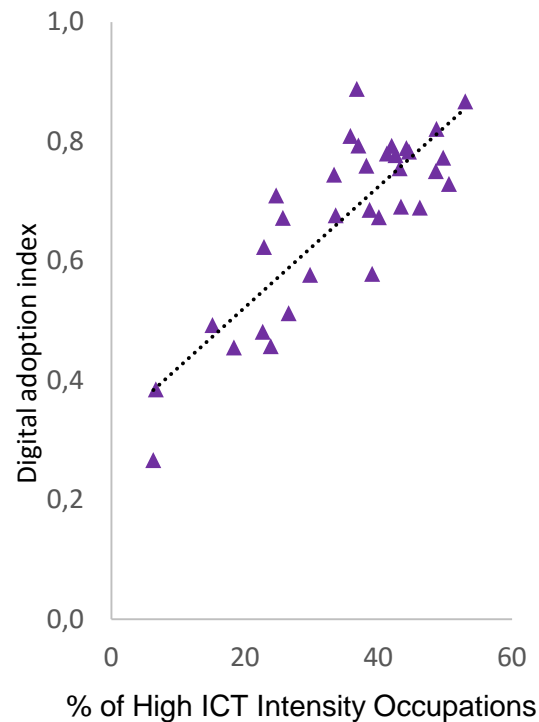


2. Digital technologies tend to be:

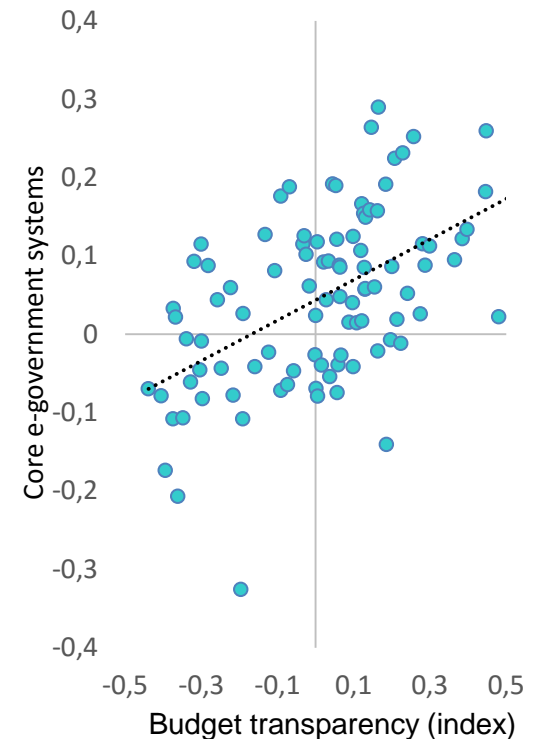
Productivity-biased



Skills-biased



Voice-biased

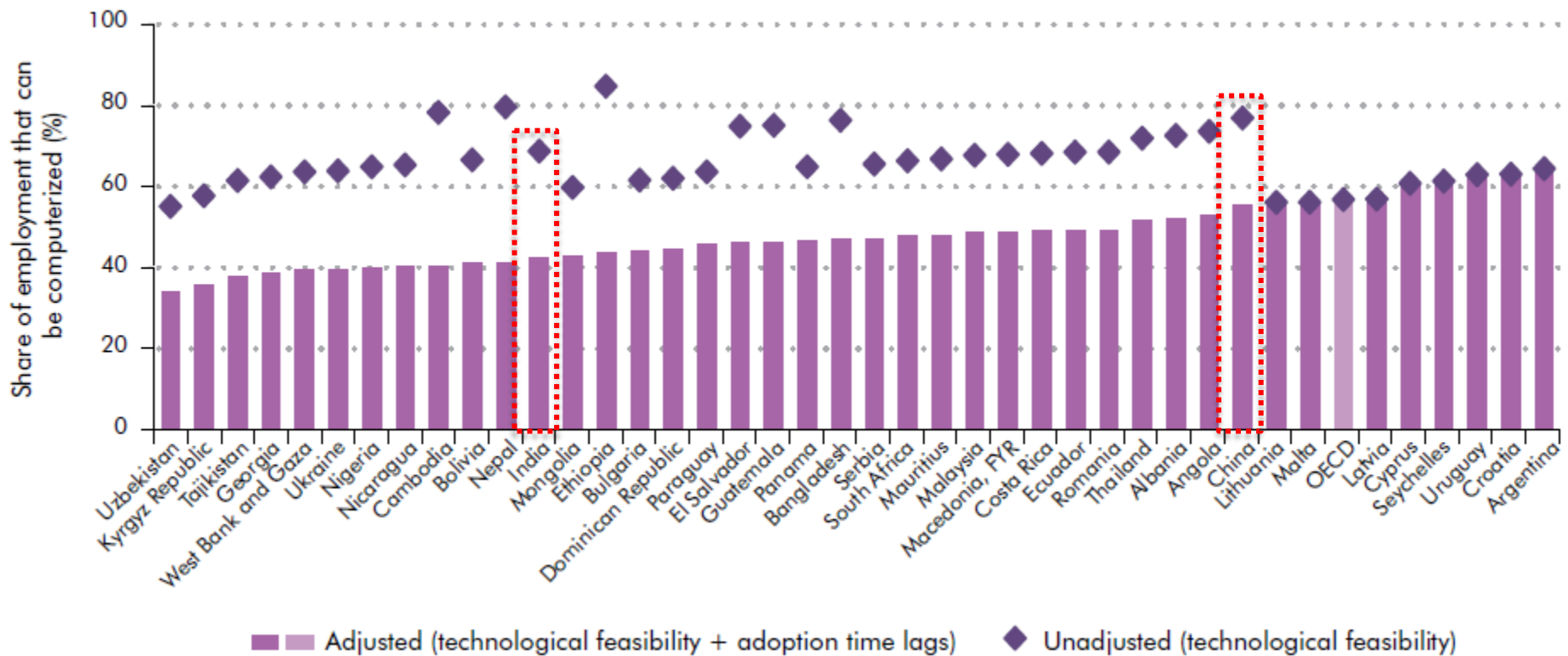


Limiting the aggregate gains from the digital revolution

...but automation without **SKILLS**

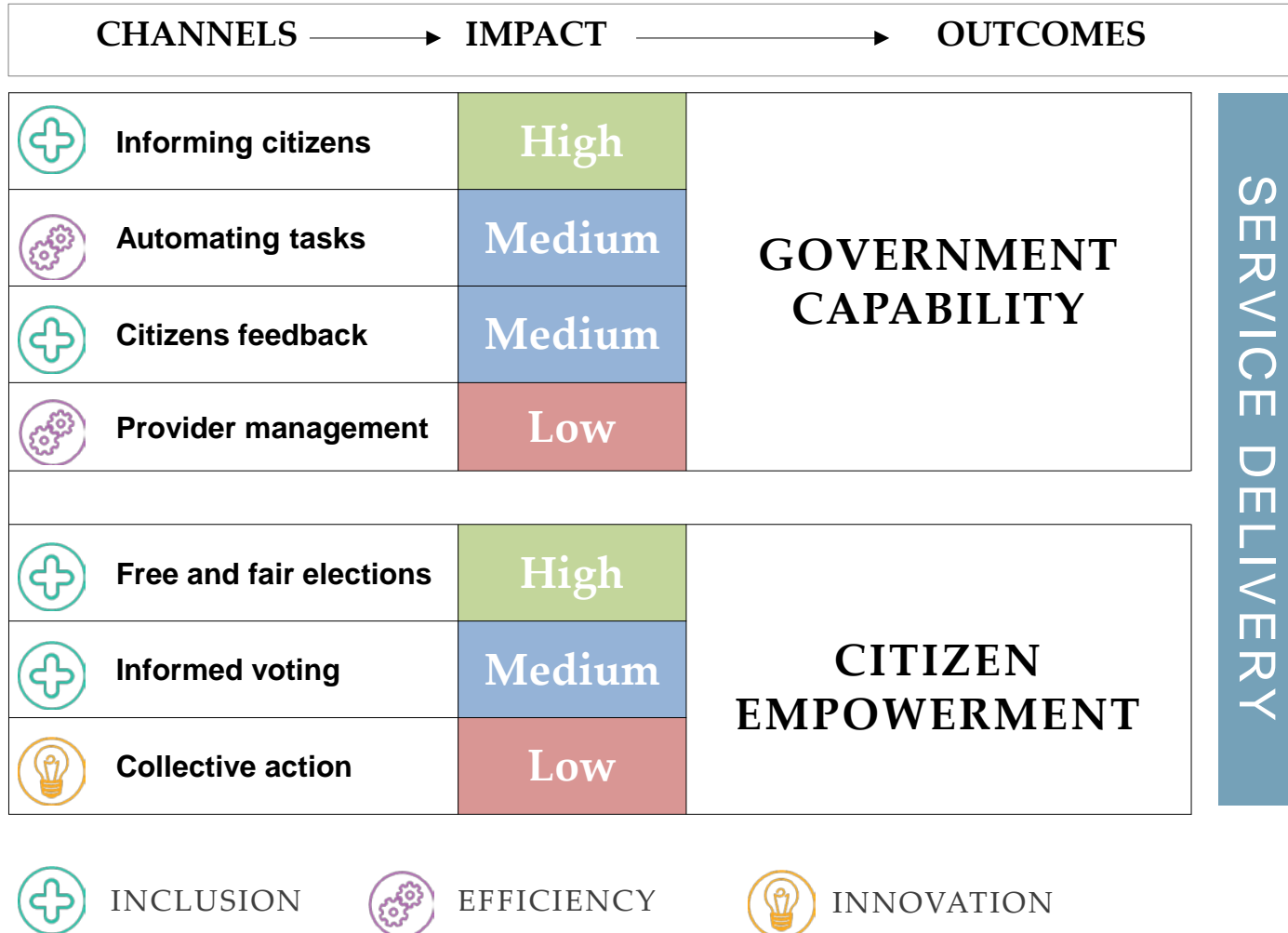
→ risks of polarized labor markets and greater inequality

Estimated share of employment that is susceptible to automation, latest year



Information without **ACCOUNTABILITY**

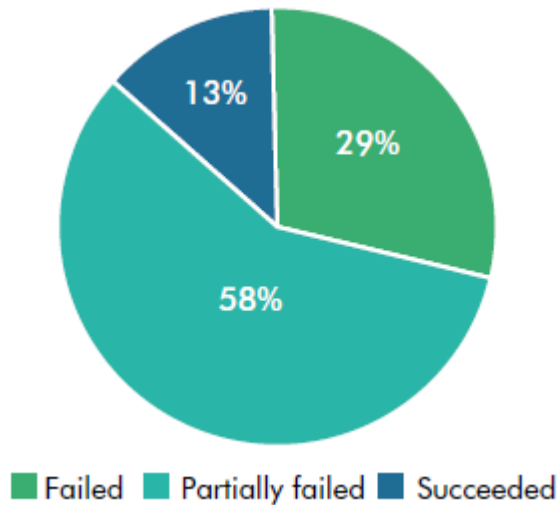
→ risks of greater state control and elite capture



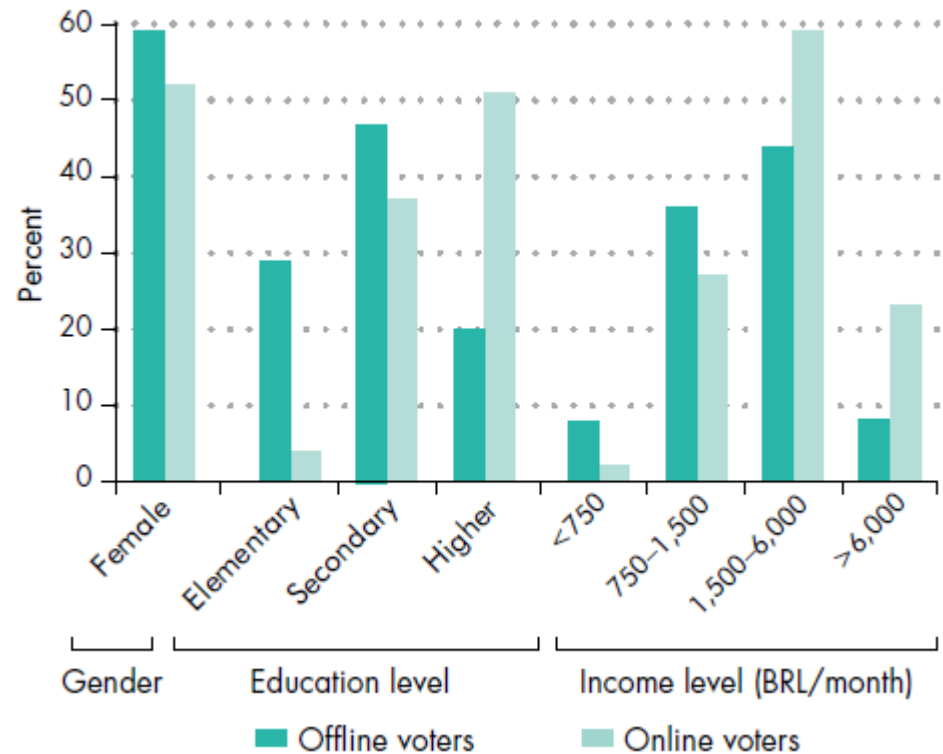
...but information without **ACCOUNTABILITY**

→ risks of fiscal waste and elite capture

Success rate of large public sector ICT projects



Profile of online and offline voters in a participatory budgeting vote in Rio Grande do Sul, Brazil, 2011–12



The WDR 2016 proposes policies at three levels

SECTORAL

NATIONAL

GLOBAL

SECTORAL POLICIES

Making internet access universal, affordable, open and safe

DEMAND SIDE ISSUES

- Protecting personal privacy
- Cybersecurity
- Censorship and content filtering

1993



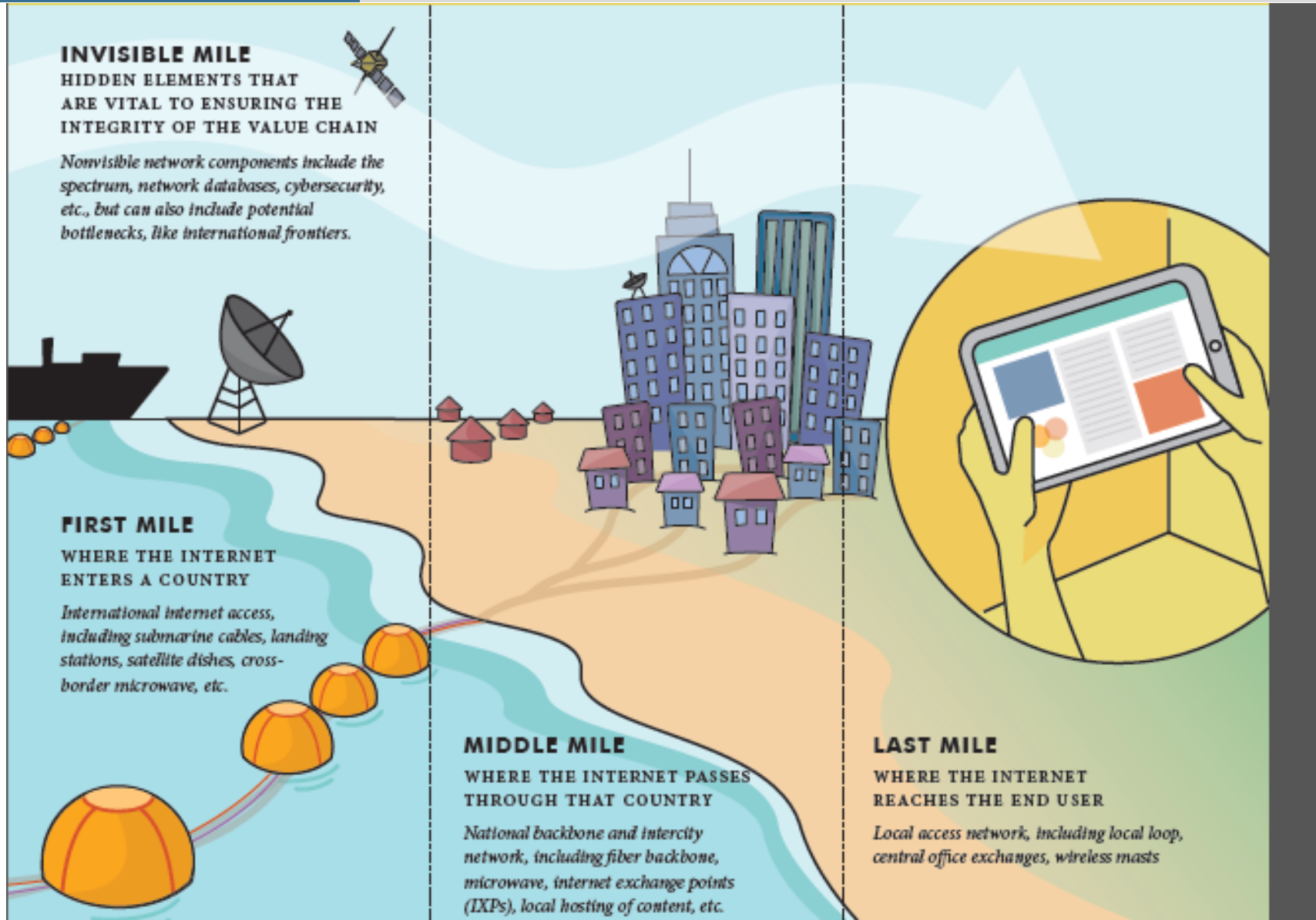
"On the Internet, nobody knows you're a dog."

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)

SECTORAL POLICIES

A Framework for considering policy interventions



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*

Dealing with the downside risks of the digital economy

