

# The future of world trade: How digital technologies are transforming global commerce

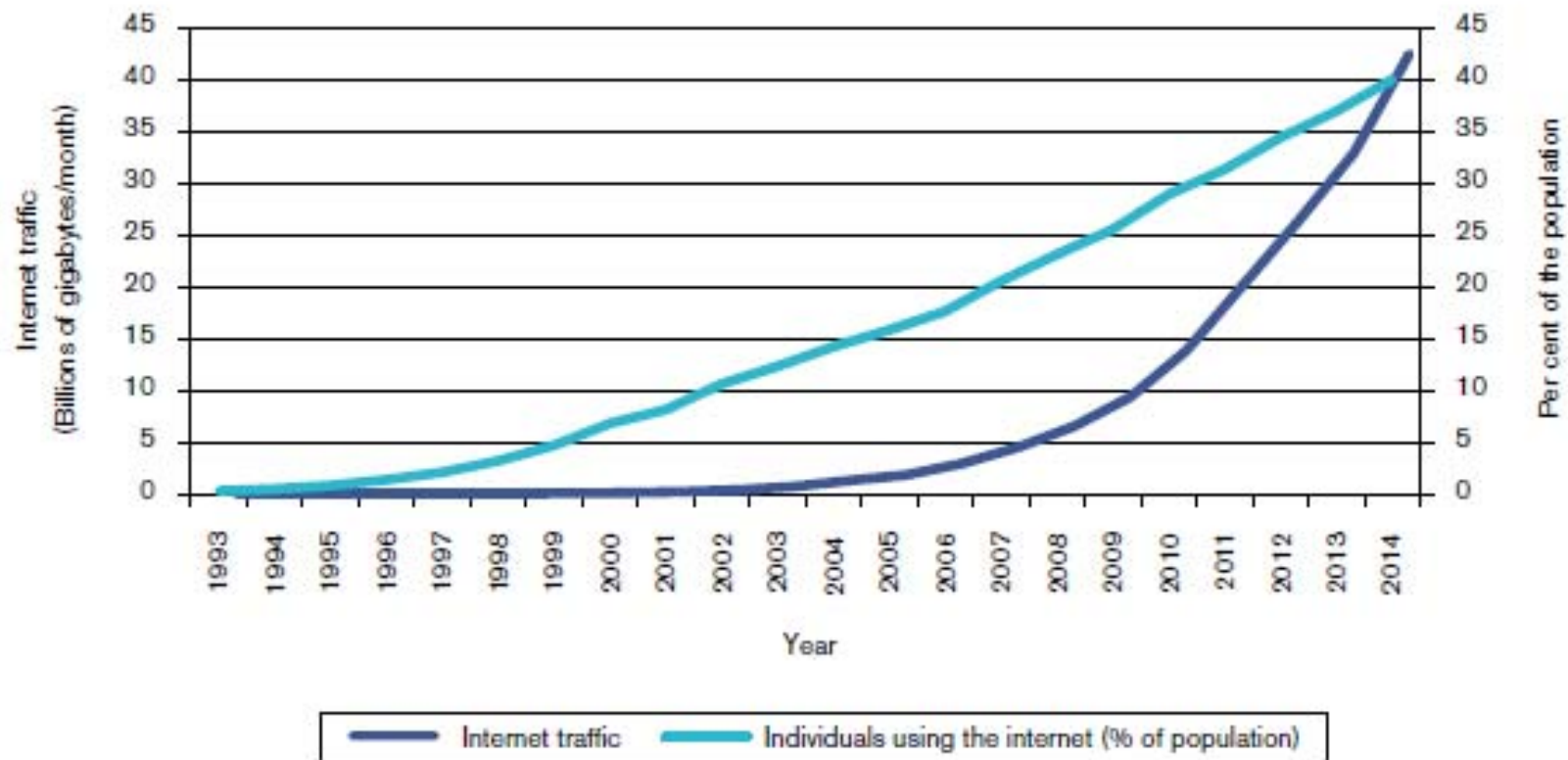
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# Context

- Trade has always been shaped by technology
- But the rapid development of digital technologies that are leveraging the internet to generate, store, process, and analyze data promises to transform the world economy even more deeply in the years to come.
- What will the consequences of this "new digital revolution" be on the world economy, and in particular on international trade?

# Volume of internet traffic



Source: Cisco Systems and World Development Indicators.

# Context

- The exponential rise in computing power - Moore's law
  - The power of integrated circuits roughly doubles every two years
- The abundance of bandwidth - Gilder's law
  - Total bandwidth will grow at least three times faster than computing power
- The digitalization of information - Big data

# Outline

- How are digital technologies transforming global commerce today - and will they impact it tomorrow?
- What about the size of the changes at play?
- Is there a role for international trade cooperation?

# Focus on four digital technologies

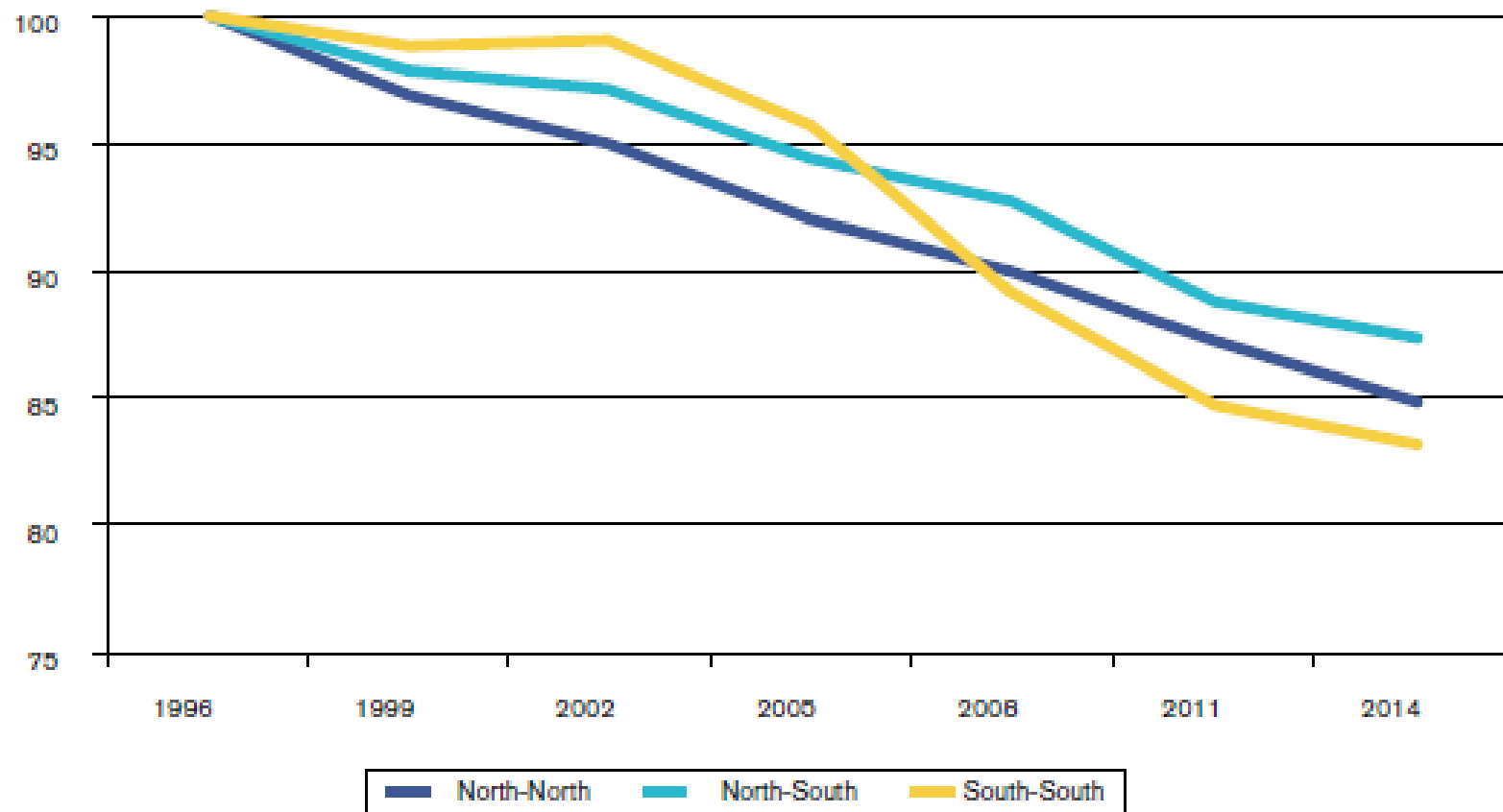
- The Internet of Things (IoT)
- Artificial intelligence (AI)
- 3D printing
- Blockchain

# Key changes

Digital technologies have the potential to:

- Further reduce trade costs
- Redefine what products can be traded across borders
- Reshape patterns of comparative advantage

# Lower trade costs

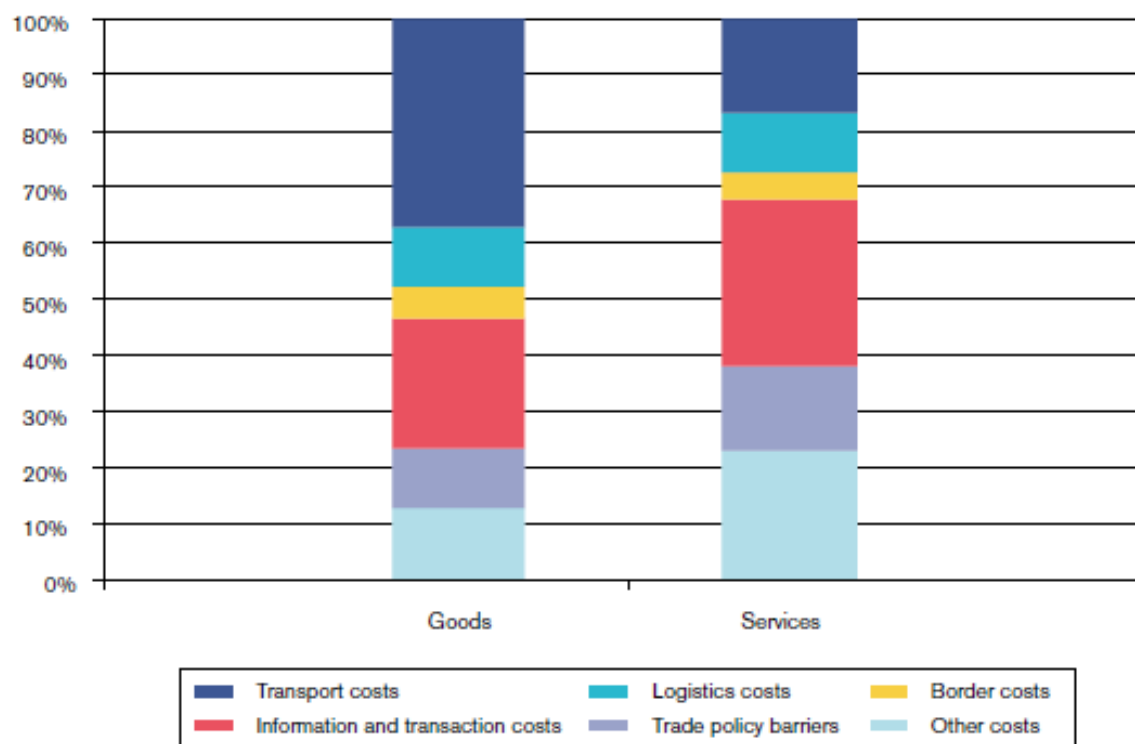


Source: World Bank-ESCAP database on International trade costs.



# Further reduce trade costs

- In particular transport costs which account for a large share of overall trade costs

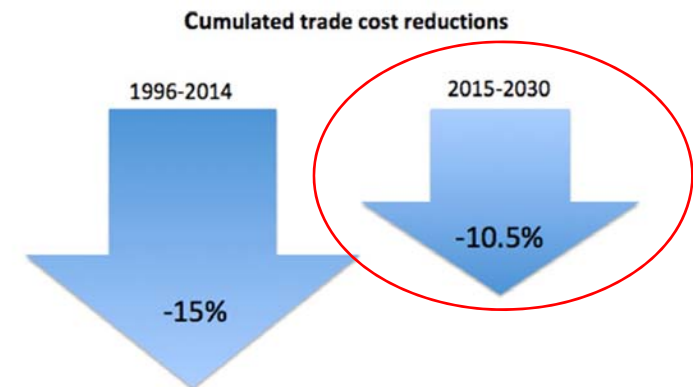


Source: WTO calculations using World Input-Output Database (WIOD) data and methodology from Chen and Novy (2011).

# Lower trade costs

Other costs impacted:

- *Transaction/search costs* (matching of buyer/seller, easier access to information)
- *Communication costs*
- Facilitate *customs procedures*
- Facilitate *cross-border payments*



- Overall, WTO projections predict that until 2030:
  - Cumulated trade cost reductions could reach 10.5% as a result of technological change
  - Trade growth could be 31 to 34 percentage points larger as a result of the falling trade costs

# Change in trade patterns

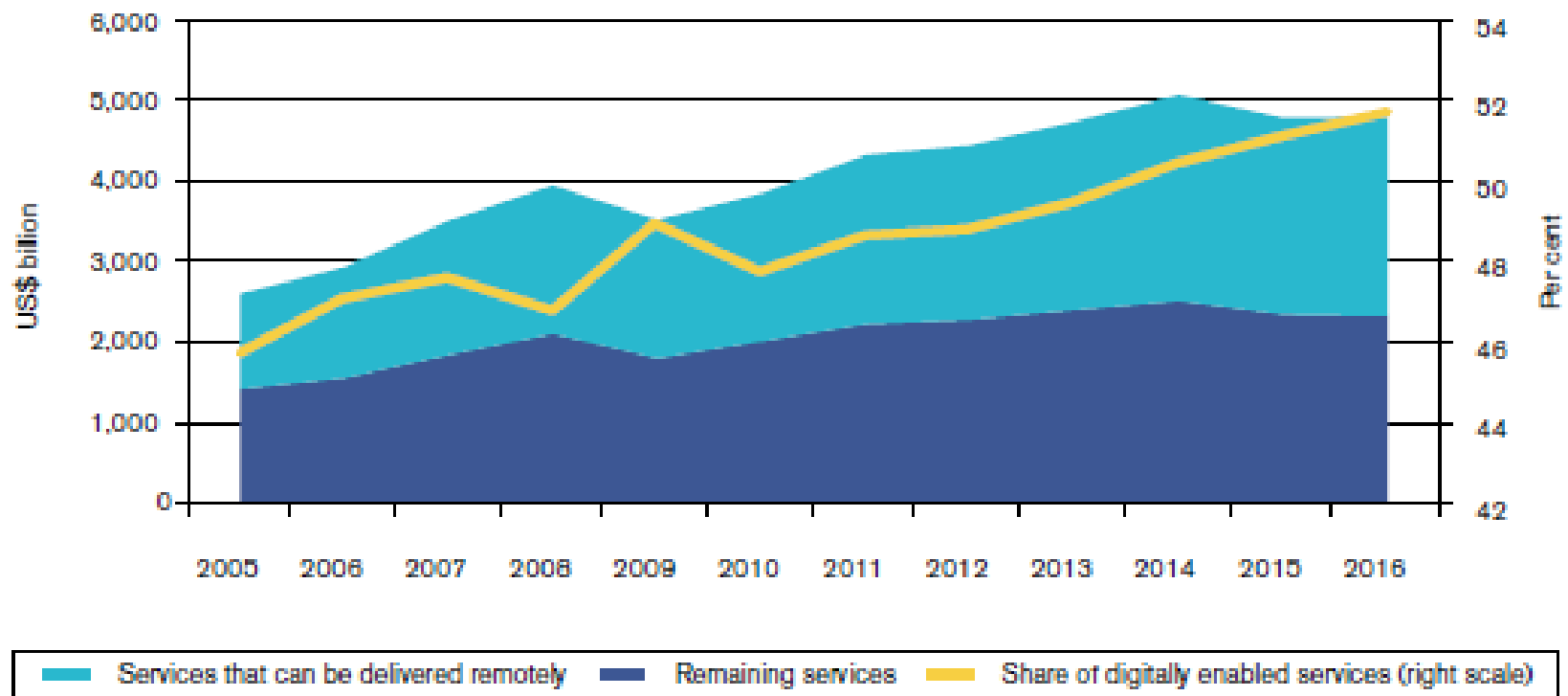
- Blurring distinction between goods and services
- Increasing importance of data flows and intellectual property

→ A 3D printed object = a "3D traded object"

# Change in trade patterns

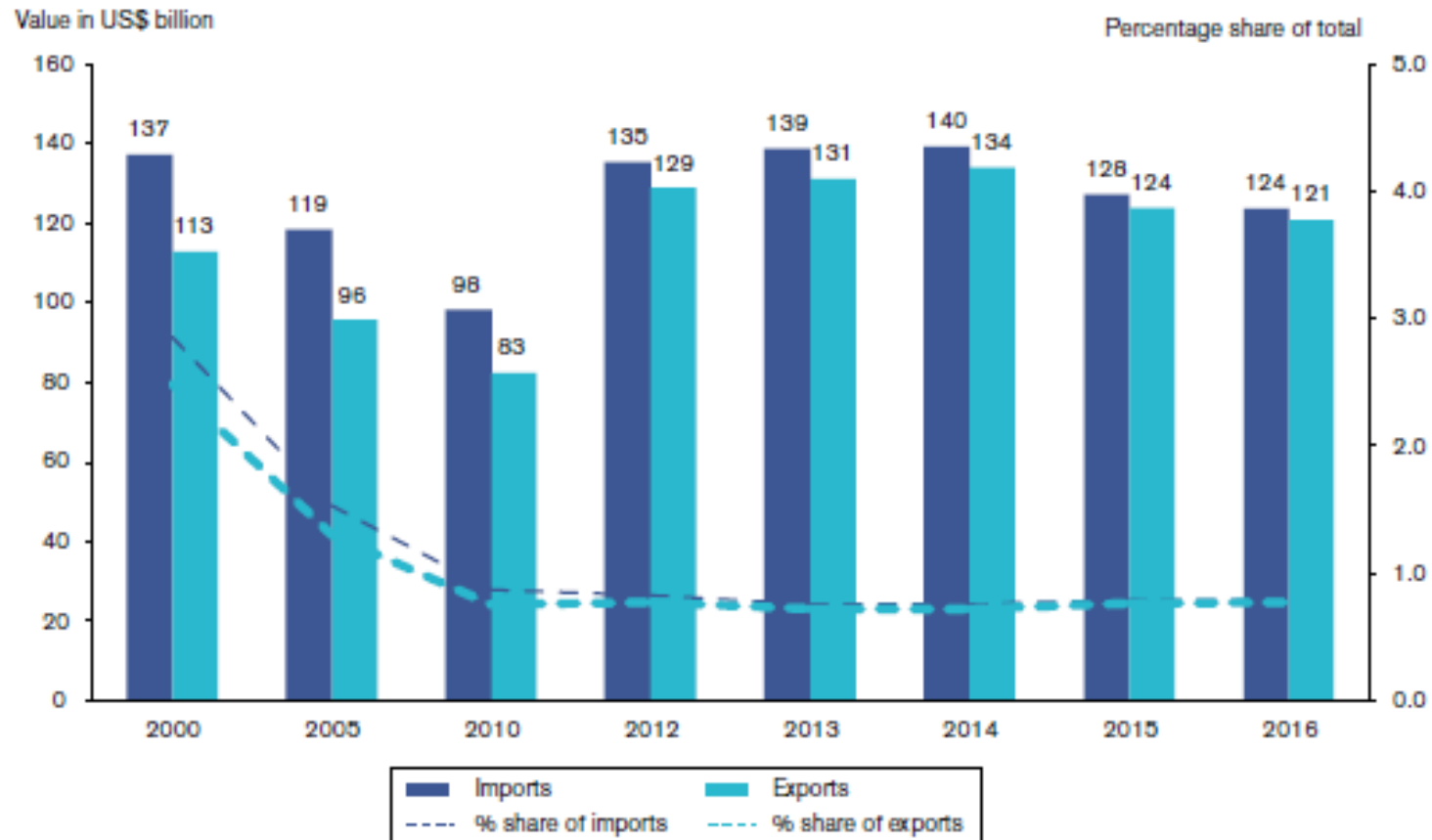
- The sectoral composition of trade will be affected:
  - Services trade (especially of digitally-enabled services) will grow in importance
    - from 21% to 25% of total trade by 2030
  - Trade in time-sensitive, certification-intensive and contract-intensive goods will increase
  - Mass customization could lead to an increase in trade
  - Trade in digitizable goods likely to continue falling

# Services trade will grow...



Source: Author's calculation based on data from the WTO Trade in Services Database (BPM6).

# Trade in digitizable goods...



Source: WTO Secretariat calculations based on UN COMTRADE data.

# Change in trade patterns

- Digital technologies will affect the nature, complexity and length of value chains in the future...
- ...but it is hard to predict whether digital technologies will reduce or increase GVC trade.
- To date, there is no evidence of a significant reshoring trend.

# Changes in comparative advantage

- Skills and capital endowment, market size or the quality of institutions are likely to become more important determinants of CA
- Physical infrastructure, border processes and geographical factors might become less relevant
- The regulation of intellectual property rights, data flows, and privacy are likely to become important determinants
- Changes will bring about opportunities... but also challenges



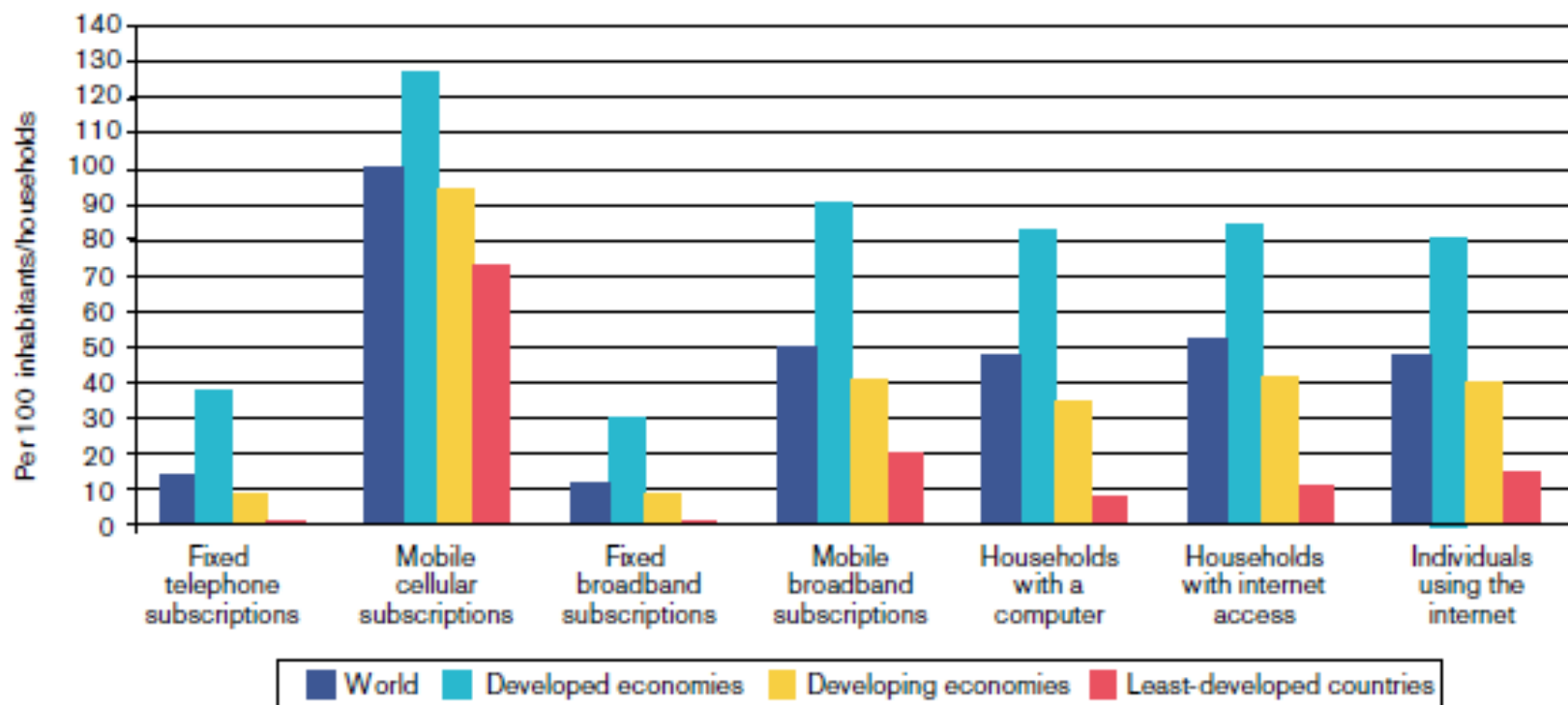
# Opportunities

- Digital solutions may facilitate inclusion
- Trade cost reduction could be especially beneficial for:
  - Small enterprises
  - Remote countries and remote areas

# Challenges

- Many dimensions of digital divide
  - Access to ICT
  - Digital gender divide
  - Digital divide between small and big firms
  - Digital divide between high and low skilled workers
- Inadequate regulatory framework
- Loss of privacy and security threats
- Market concentration
- New forms of barriers

# Digital divide - access to ICT



Sources: UNCTAD (2017b), based on ITU data.

# How can we prepare?

- National digital development strategies
- Key initiatives by other organisations
- Provisions related to digital technologies in Regional Trade Agreements (RTAs)
- How are these issues addressed in the WTO context ?

# How can governments respond?

- Investment in infrastructure and human capital
- Trade policy measures
  - Efficient services market policies
  - Merchandise trade policies
- Domestic regulatory framework
- Data localization policies
- Intellectual property-related issues

# WTO agreements on digital trade

- Work programme and new initiatives on e-commerce
- General Agreement on Trade in Services (GATS)
- Information Technology Agreement (ITA)
- Trade Facilitation Agreement (TFA)
- Customs Valuation Agreement (CVA)
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)
- Aid for Trade initiative

# WTO agreements and digital trade

- The WTO framework, and in particular the General Agreement on Trade in Services (GATS), is relevant for digital trade
- WTO members have taken certain steps to promote digital trade within the existing framework
- There is debate as to whether and how more could be done to support inclusive digital trade



Thank you!