# Connecting Developing Country Firms to Information and Communication Technology Value Chains

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ICT



Enabling Technology

Infrastructure



### **Outline**

- ICT value chains
  - Manufacturing
  - Services
- ICT infrastructure
- Barriers to overcome
  - Results from the OECD-WTO Private Sector Questionnaire
- Where do resources currently go?
  - Priorities of partner countries and Aid for Trade flows
- Conclusions



### ICT manufacturing

- ICT manufacturing is highly fragmented internationally
- "Factory Asia" China, Japan and Korea are the largest producers of ICT goods and China accounts for 37% of world exports
- LDCs and LMICs are of marginal importance with the exception of India, Indonesia and the Philippines
- Tariffs are below 2% for OECD countries and above 12% in LDCs
  - WTO Information Technology Agreement (ITA): 75 participants and 190 IT products covering more than 60% of ICT trade

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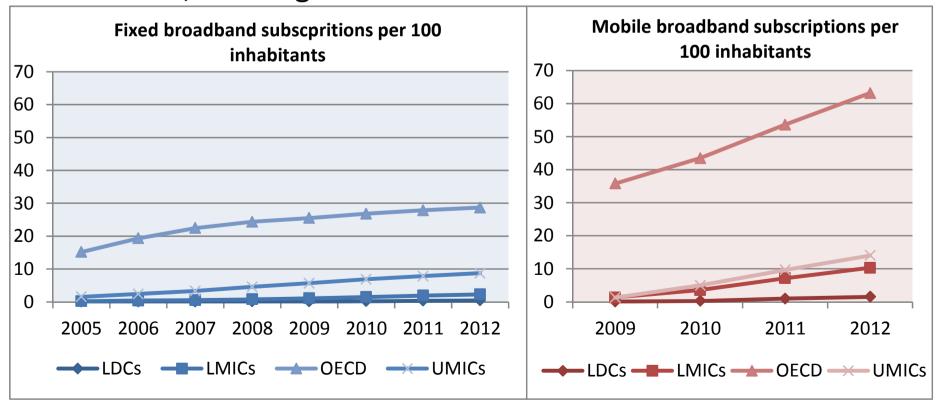
#### **ICT** services

- Telecommunication services and computer services generate more value added than ICT manufacturing in many countries
- ICT services are significant inputs to other sectors
- Prioritisation in development strategies by countries
- India most prominent success story accounting for 20% of world exports in computer services
- Liberalization of telecommunication markets in developing countries since the mid 1990s but challenges remain
  - E.g. limited competition at international gateways



### ICT infrastructure

- The spread of mobile telephony has been a success story in developing countries
  - Penetration in LDCs increased from 7% in 2005 to 52% in 2012
- Proliferation of broadband access is the next stepping stone
- However, the "digital divide" still exists:

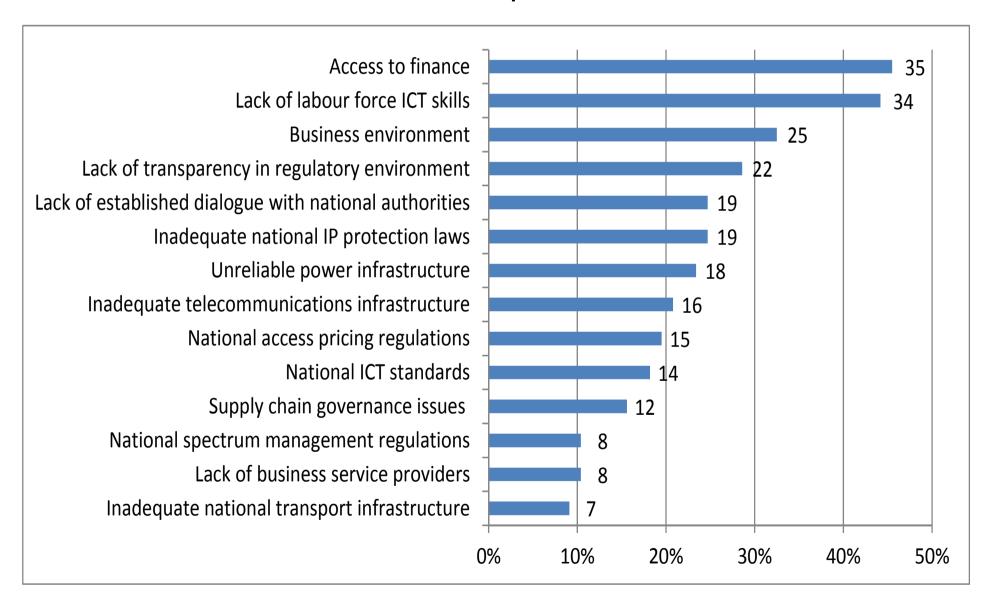


#### Barriers to overcome

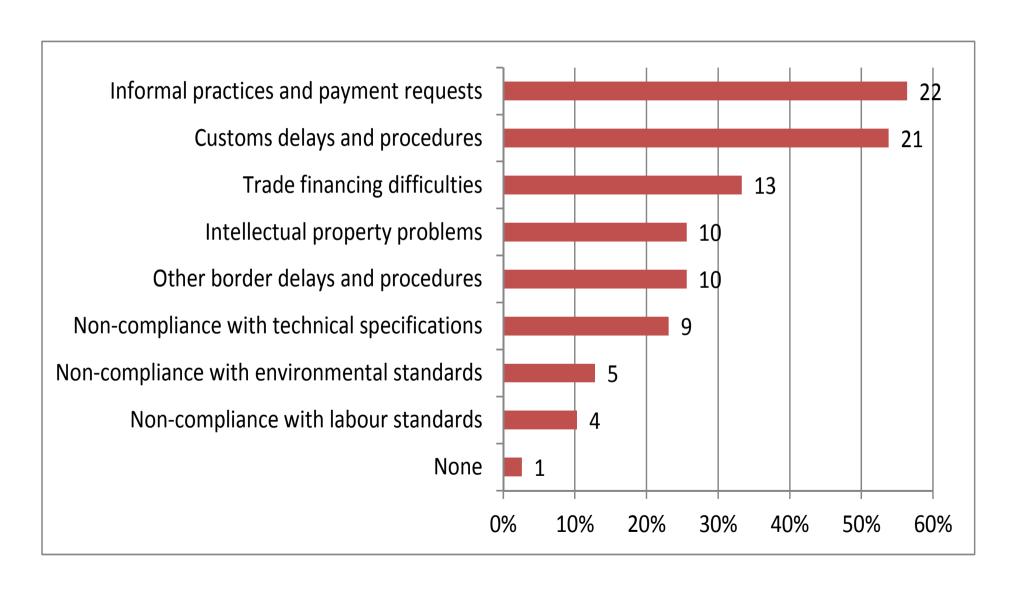
- The OECD-WTO private sector questionnaire
  - Replies by 124 firms from 55 countries, of which:
  - 80 suppliers from developing countries, 44 lead firms
- In many instances, ICT firms face similar problems as suppliers in other value chains
  - "Horizontal" constraints: Access to (trade) finance, the business and regulatory environment, and customs procedures and delays
- Three constraints are sector-specific or ICT-related
  - ICT skills of the labour force, telecommunications infrastructure and telecommunications regulation



### Suppliers: National supply side constraints to enter, establish or move up ICT value chains

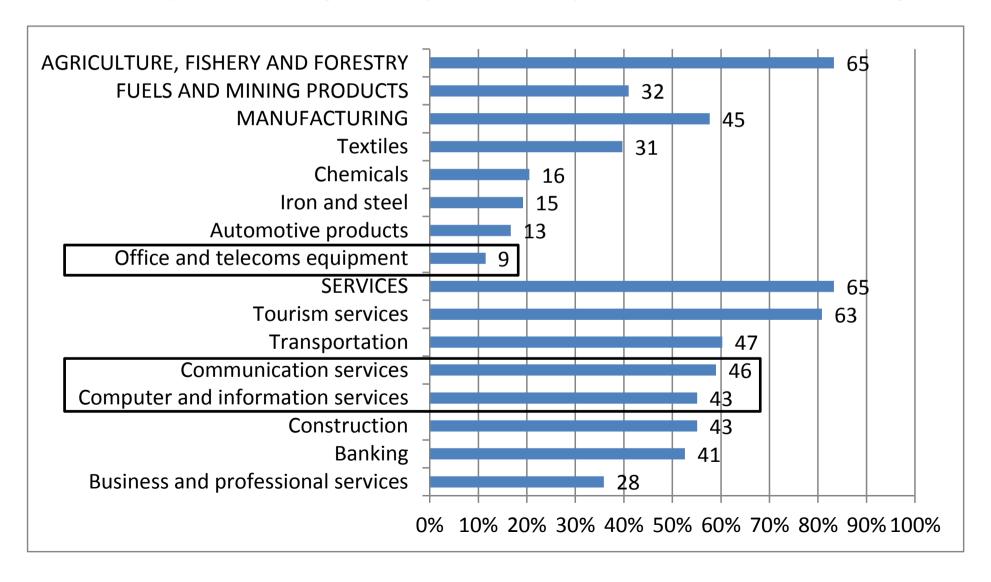


## Lead firms: Typical trade problems that arise when dealing with developing country suppliers



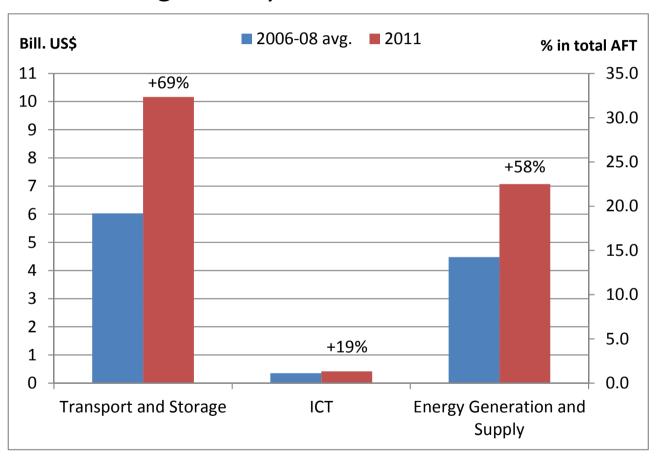
### Priorities of partner countries

 Close to 60% of partner countries have included ICT services in their development strategies compared to only 12% for ICT manufacturing



### Where do resources currently go?

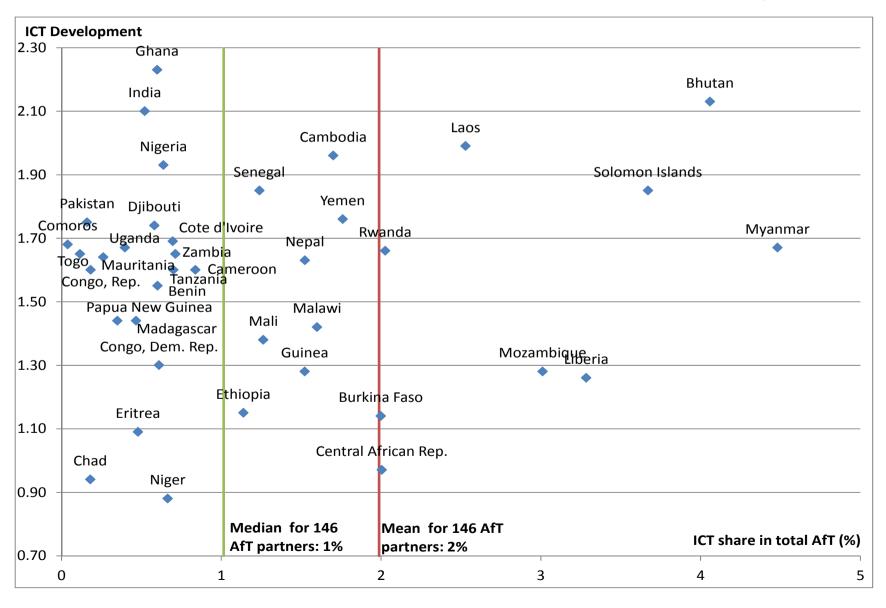
 In 2011, ICT-related Aid for Trade disbursements were US\$418 million accounting for only 1.2% of total AFT



• Investment into ICT infrastructure is more private sector driven than for transport and energy infrastructure

### ICT Development and ICT share in Aid for Trade

• For the majority of the 39 least connected countries (LCCs) the ICT share in total Aid for Trade is below both the mean and median of all Aid for Trade partners



### Conclusions

- ICT can catalyse the achievements of the Millennium Development Goals
- Developing countries have made significant progress in ICT infrastructure development, in particular in terms of mobile phone penetration, but the digital divide still exists
- Value chains in ICT manufacturing are highly fragmented with production concentrated in "Factory Asia"
- ICT services might offer greater potential for developing countries to integrate into value chains

### Conclusions

- In many instances, ICT firms face similar problems to suppliers in other value chains
  - Access to (trade) finance, the business and regulatory environment and customs procedures and delays
- Three ICT-related or sector-specific constraints:
  - ICT skills of the labour force, telecommunications
     infrastructure and regulation of telecommunications markets

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 Aid for Trade could play a more important role in facilitating investments into ICT infrastructure, in particular in LDCs and "Least Connected Countries"

### Thank you for your attention!

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