Mapping the Digital Economy

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Mapping the Digital Economy

The Digital Economy Defined

“The ecosystem comprising goods, products, services, platforms and solutions that are either instrumental to or avail themselves of online connectivity.”

Digital Trade Defined

“Cross-border provision of goods, products, services and solutions that are instrumental to or avail themselves of online connectivity.”

1. Infrastructure
   - Telecommunications networks and connectivity infrastructure;
   - Optical fiber, cables, switches, signal amplifiers, servers, data centers, satellites, wireless base stations, mobile telephone towers, antennas, routers, modems, range extenders and other equipment that brings connectivity to our homes, offices and devices.

2. Services
   - Information, communications and computing services;
   - Comprises everything from banking to retail to booking and paying for travel and accommodation, to finding and booking someone to clean your apartment and someone else to take you to your next appointment.

3. Platforms & Ecosystems
   - The result of multi-device connectivity, meaning we now connect to the internet with two or more devices and expect seamless operability;
   - Results in a winner-take-all competitive dynamic where the economics of network effects plays a very important role.

4. Devices
   - Traditionally desktops or laptops
   - Mobile telephones are portable super-computers capable of almost any functionality;
   - Wearables (watches headphones) becoming more prominent,
   - Trend moving towards connected homes, connected cars, connected factories, IoT and the Internet of Everything (ubiquitous and comprehensive connectivity).

What?

- Few large equipment vendors working with carriers;
- 1000s of smaller players manufacturing and selling individual components.

Who?

- Telcos who invest in build, operate and lease access to their networks;
- Millions of other providers from Citibank to Uber and across many other sectors.
- Google and Android versus Apple and iOS;
- WeChat and Alibaba in China;
- Amazon, Microsoft.
- The future belongs to those who can make all of the devices users want;
- And connect them seamlessly with ecosystems that they either own or control.
The Digital Economy and Economic Growth

- Manufacturing and selling equipment;
- Procurement and purchasing (credit financing);
- Installation work, (drilling, ducting, laying cable);
- Installation work
- Testing and certification;

Building the Network

- Level 1

Providing Services

- Level 2

Combination of technological advancements in ICT, digitization and online connectivity allow for the conceptualization and supply of many high-value services such as:
  - Telecommunications;
  - Internet service;
  - E-commerce
  - Cloud computing;
  - Travel services;
  - Ride-sharing;
  - Distribution of digital media
  - Ad infinitum
Investing in Connectivity Infrastructure

The Four Segments of Connectivity Infrastructure

01 First Mile
The installations and equipment that link national networks to the World Wide Web

02 Middle Mile
The national backbone infrastructure that comprises fixed-line networks (backhaul), fiber-optic cables or copper wires, data centers, mobile base stations and other equipment

03 Last Mile
Or “local loop” comprises the final leg of a telecommunications network that typically terminates in the home or in a building where end users live or work

04 Invisible Mile
Consists mainly of spectrum and other invisible elements
Living in an Ideal World

Characteristics of an Optimal Trade and Investment Regime

**Market Access**
- Have an open and non-discriminatory trade and investment regime.
- Limit investment reviews to only the most clearly strategic assets.
- Limit the use of the nation security exception to the most clear-cut cases.

**National Treatment**
- Treat foreign economic operators and investors the same as domestic actors in all areas of policy, regulation and legislation.
- Allow foreign operators and investors to join local business associations.

**Partnership**
- When contemplating far-reaching changes to the trade, investment or business climate consult first with business and the private sector.
- Work together with the private sector in enacting and implementing policy and regulatory reforms.

Cross-cutting issues
- Skills
- Infrastructure and logistics
- Predictability of the trading and investment climate | Ease of doing business | Rule of law