INVESTMENT 2017

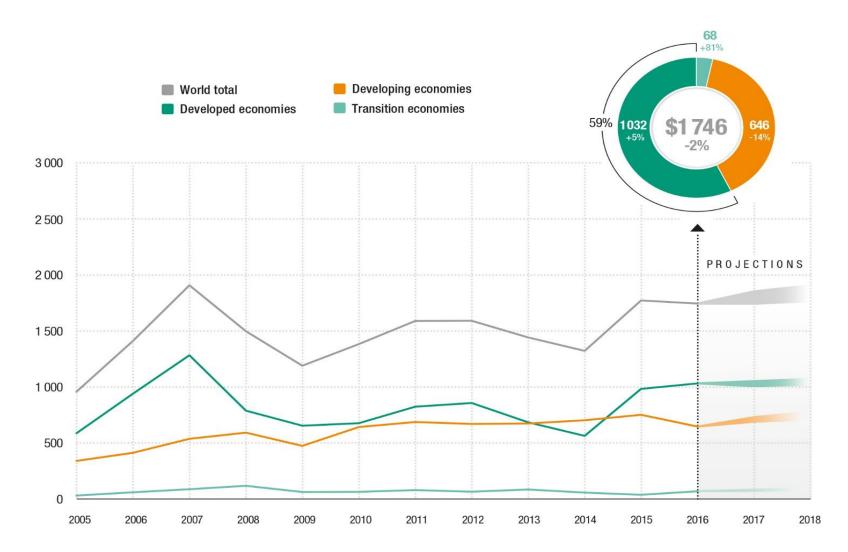
INVESTMENT AND THE DIGITAL ECONOMY

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Global FDI down 2% in 2016, but forward projections cautiously optimistic

FDI inflows, global and by group of economies, 2005–2016, and projections, 2017–2018 (Billions of dollars and per cent)

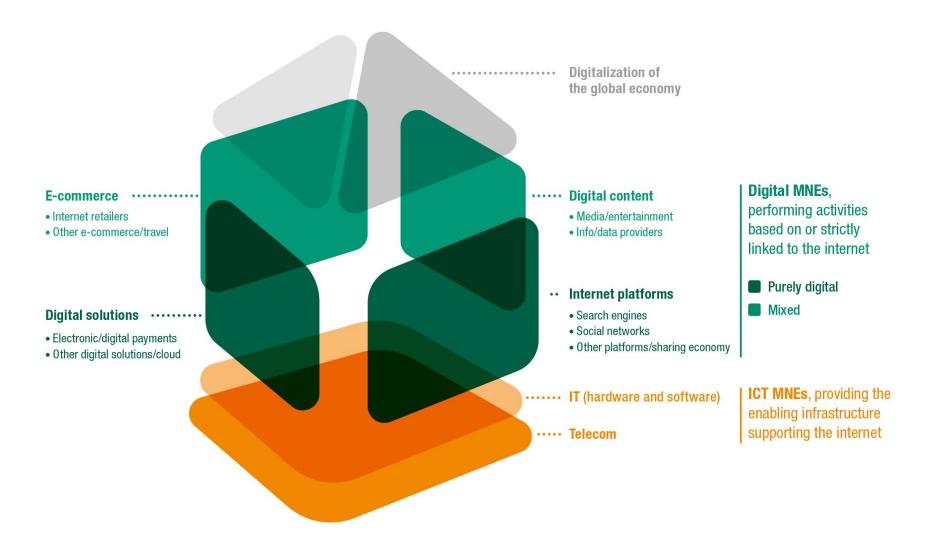


Contents

- How do digital technologies affect global investment?
- How can investment policy support digital development?
- An investment policy framework for the digital economy...

UNCTAD has launched a new *Top 100 of Digital MNEs*

The architecture of the digital economy



Digital technologies will change international production in all industries, across global supply chains

Level of maturity
High Low End-to-end processes Upstream/ Internal production Downstream/ and governance supplier relations processes customer relations Disintermediation in product delivery Transparency and traceability and E-auctions, with open or closed systems Digitally enabled automation of factory and distribution models; monitoring of provenance of goods with digital operations Supplier- or vendor-managed inventory product use by end user quality and compliance systems Digital twins enabling replication, with Collaborative product or Digital Digitally enabled product customization Big-data-driven predictive supply production closer to point of production-process design transformations chains consumption Mass connectivity between customers Use of new data management Advanced digitally enabled and suppliers manufacturing technologies (e.g. providers and system integrators 3D printing, continuous processing) Discrete assembly industries (e.g. Production-asset-intense industries Media, financial services (e.g. insurance) Regulated industries requiring automotive, aerospace, maritime) benefiting from automation to support conformance (e.g. pharmaceuticals, ▶ Sharing economy (e.g. Airbnb, Uber) volume and variant flexibility Consumer electronics where component ▶ E-commerce B2C firms, retailers, Industries complexity requires automated sourcing For 3D printing products: Through-life product servicing (e.g. fast-moving consumer goods with where prevalent inventory-heavy industries depending aerospace), intelligent white goods last-mile distribution, health care on small-scale items and spares (e.g. "smart" refrigerators) solutions For continuous flow: batch process Enterprise data system providers (e.g. industries seeking volume flexibility "watch towers")

International production implications

- Democratizing vs. exclusive effects on suppliers
- Closeness to (B2B) clients, suppliers following clients abroad
- New entry modes into GVCs and international production networks
- High-value jobs, net employment reduction, improved productivity – capital intensity
- New forms of controlled offshoring and outsourcing; non-equity partnerships
- Enhanced technological requirements of MNEs, partners and suppliers
- Disintermediated modes redistribute value added of local partners in host countries
- Servitization and outcome-based contracting, "Intel inside" component models for value capture
- Increased competition new entrants challenge established players

locations, driving MNE footloose behaviours
• Increased compliance requirements

Frequent reconfiguring of production

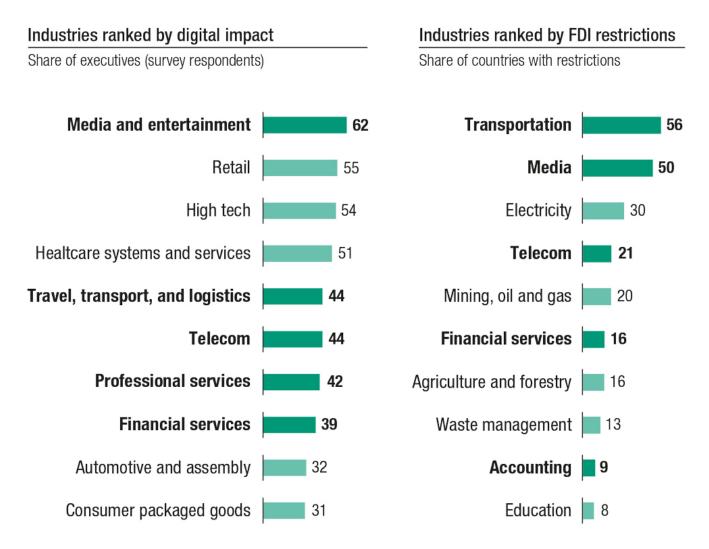
- for suppliers and users
- Openness of data flows and ownership becomes an investment determinant

challenge established players

Industries impacted by digital are often highly regulated

Top 10 industries affected by digitalization and by FDI restrictions

Per cent



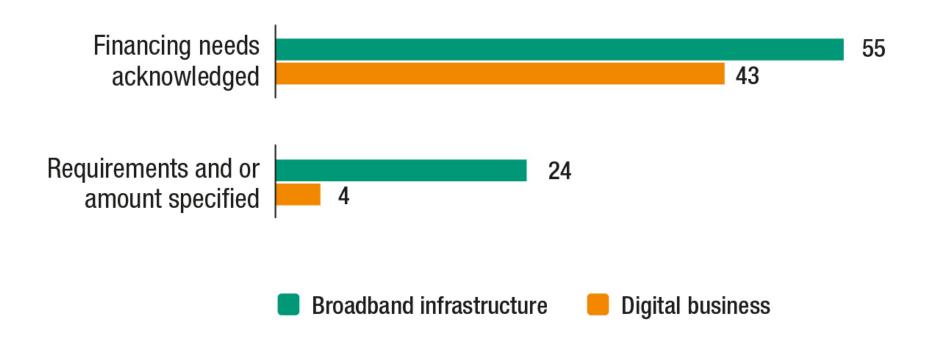
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Digital development strategies often lack an investment dimension

The investment dimension in digital development strategies, by objective

Results of survey of 102 strategies (Per cent)

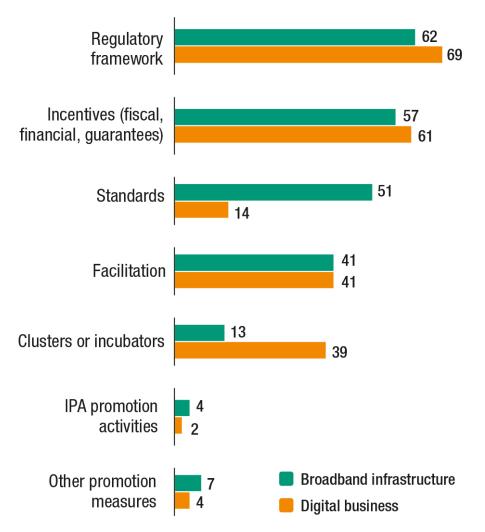


Less than a quarter of strategies contains concrete projections for infrastructure investment needs, and hardly any strategy discusses investment beyond infrastructure

To stimulate investment, most digital development strategies focus on the creation of a conducive regulatory framework

Policies to promote private investment proposed in digital development strategies, by objective

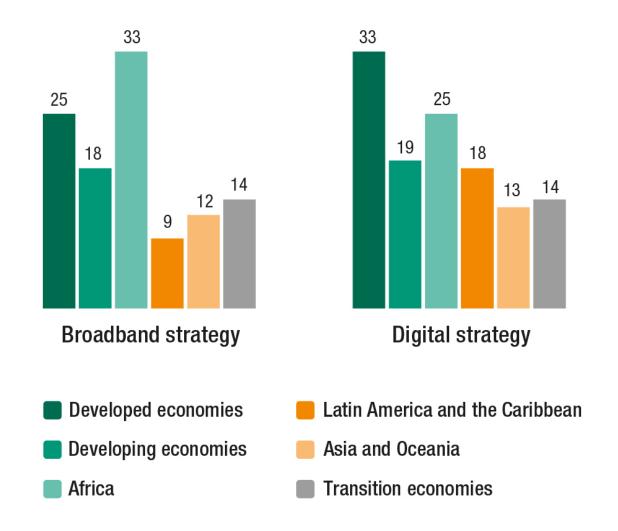
Percentage of strategies (limited to strategies that acknowledge the need for private investment)



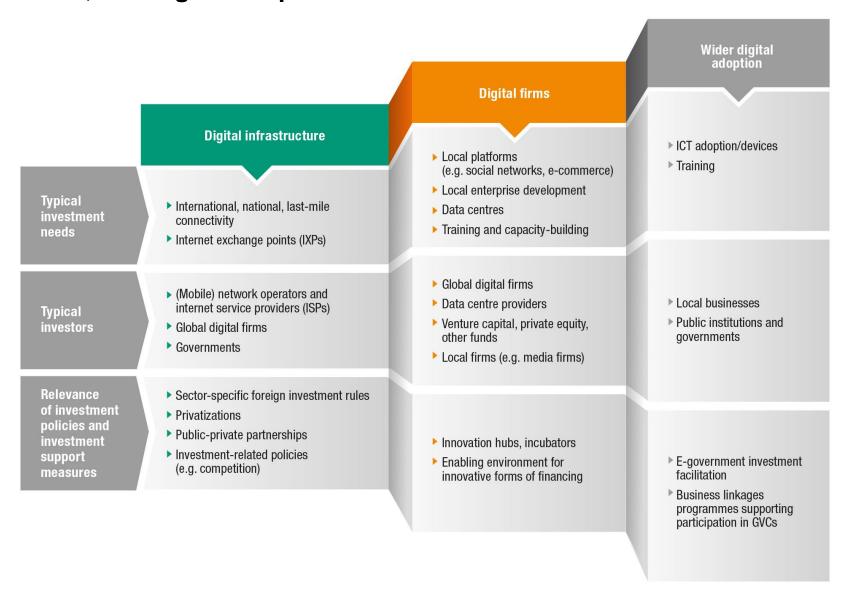
Investment Promotion Agencies are often not involved in the formulation of national digital development strategies

IPAs involved in the formulation of digital development strategies

Percentage of responses



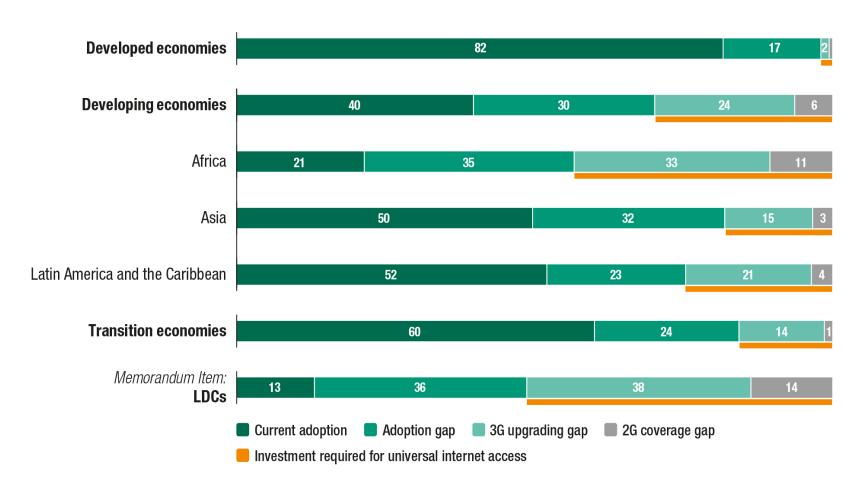
Digital development strategies should consider infrastructure, digital industries, and digital adoption across all industries



In most developing regions, infrastructure investments in basic connectivity have largely been made...

Internet adoption and connectivity gaps, by region

Percentage of population using or connected to mobile broadband

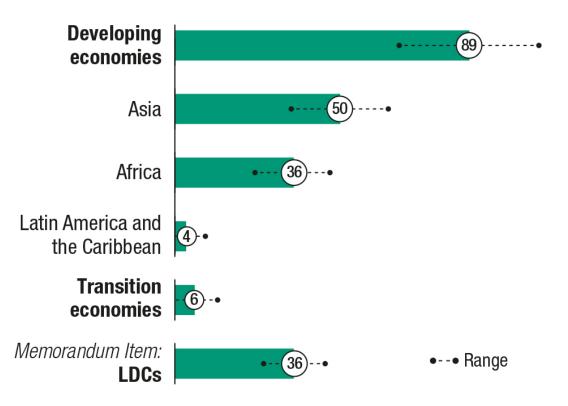


Additional investment needs are mostly for capacity upgrades

...as a result, remaining investment needs for connectivity appear limited

Estimated investment costs of universal connectivity

Range estimates (\$ billion)



Total investment requirements for universal basic 3G coverage in developing and transition economies ≈ **\$95 billion**

Investment plans in digital development strategies should look beyond infrastructure

Policy determinants for investment in digital infrastructure

SUMMARY

Key policy determinants	Practices that affect investment
Basic sector reforms and openness	 Privatization of the incumbent opens the market to investment and creates a level playing field for entrants. Liberalization enables investment in competing operators providing the affected telecommunication services. An independent regulator acts as a referee for the level playing field and can improve regulatory certainty for investors. FDI openness typically accompanies the other reforms, allowing MNEs to invest in the market.
Sector regulations	 Licensing conditions can reduce the cost of investment and allow for flexibility in the face of future market changes. Spectrum rules determine the cost of access to critical radio-frequency spectrum, as well as non the spectrum can be used as technology and business models evolve. Sector-specific taxes on devices and services can reduce demand, potentially significantly in LDCs, affecting investment returns. Universal service funds or the possibility of entering PPPs to serve otherwise uneconomical areas can help support investment. Access to rights of way can be streamlined to facilitate investment, and the ability to share infrastructure can lower costs. Local standards for equipment, and the extent to which they can be satisfied through type approvals, can influence investment costs.
Other support policies	 Streamlining import procedures and the rules for employing foreign personnel can reduce the time and cost of investment. Support for skills training of local engineers efficiently supports the deployment and operation of infrastructure investments. Regional coordination can foster economies of scale for infrastructure investments in multiple countries.



Key policy determinants	Practices that affect investment
	 Privacy and data protection can bolster users' trust and make investments in online services more attractive.
Content rules and regulations	 E-transactions and consumer protection laws help develop the e-commerce sector and support online commerce.
	 Content restrictions, ranging from filtering to internet shutdowns, can undermine opportunities in a country and fuel uncertainty for investors.
	 Copyright laws should provide clarity and balance the interests of copyright holders with those of innovators and content distributors to reduce risks for investors.
	 Intermediary liability rules impose requirements on platforms to monitor third-party content for banned or pirated content, which can increase costs and legal risks.
	 Applying traditional telecommunication or media regulations to online services can impose conditions that increase the cost of providing services.
	 Data localization laws, requiring domestic storage and processing of content, reduce economies of scale for data centres or cloud services, reducing investment.
Other regulatory areas	 Mandatory source code disclosure policies, e.g. in procurement contracts, can influence the interest of investors in participating.
	 Regulations in other sectors of the economy (often professions or non-tradable services such as taxis or real estate), and their relative openness to competition, may discourage or block investment by new digital entrants.
Support policies	 Supporting the development of innovation hubs can assist local entrepreneurs in developing new online services.
	 Development of e-government services can create demand for local developers and data centres, promoting the development of the sector.
	 Facilitating crowdfunding – particularly for equity investments – can increase international investments in the local industry.
	 Government support of venture capital investments can help build the domestic venture capital industry while promoting investment in the local content industry.
	 Entrepreneurship programmes, such as UNCTAD's Empretec programme, can help to put ICTs skills into practice and develop successful business projects.

Policy determinants for investment in wider adoption of digital technologies

SUMMARY

Key policy determinants

Practices that affect investment

Competition, tax and trade policies affecting the cost of digital adoption

- Competition policies in the telecommunication sector influence the cost of data packages and devices, which affects digital adoption by firms, especially micro, small and medium-sized enterprises.
- Taxes and tariffs similarly affect on device costs, influencing digital adoption.

- Fiscal policies can reduce the effective cost of ICT-related capital investments and training expenditures by firms.
- Promoting cloud services can lower the cost of accessing online services for businesses.
- E-government services can create demand for local developers while lowering the cost to interact with government for all businesses.

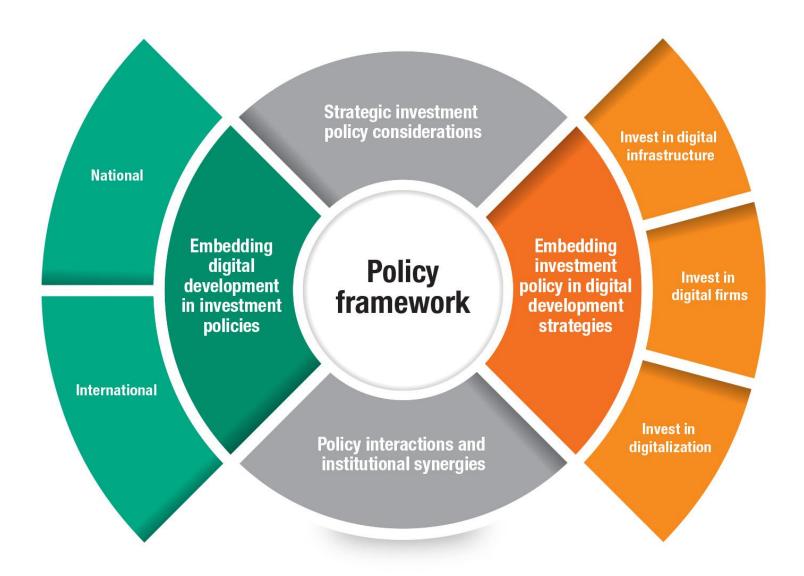
Support policies

- Partnerships with global digital MNEs help digital adoption in SMEs and the creation of digital entrepreneurs, such as app developers (including through existing programmes offered by global digital MNEs in this area); and can localize their offering (e.g. accepting local currency in their systems, facilitating payments for local firms).
- Partnerships with universities help firms adopt digital technologies (e.g. in centres of excellence) and build on skills programmes.
- Skills programmes provide companies with the ability to efficiently adopt and use internet technology and services.

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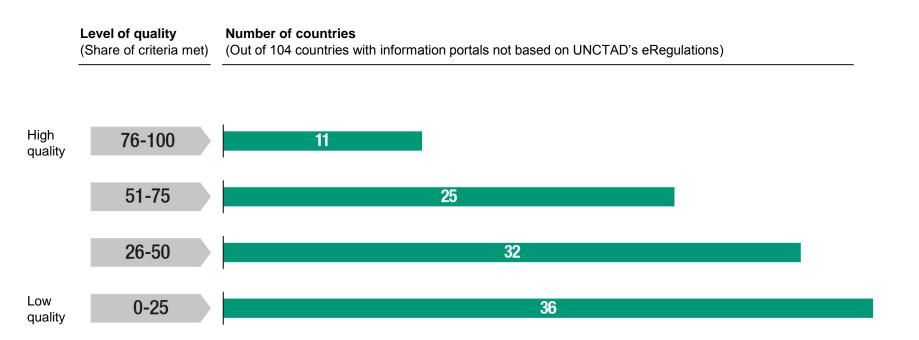
Policy framework for investment in the digital economy



Policymakers: "improve the world, start with yourself" → eGovernment

Information portals for businesses and investors, by share of quality criteria met

Per cent



Go to GER.CO to check how your country's information portal or online single window for businesses and investors are rated!

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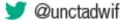
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