

Attracting foreign direct investment in cultivating digital economy

Strategic policies enabling nation's unique core strengths are fundamental



Foreign direct investment (FDI) is a catalyst for digital economy development. With competition increasing as countries announce various FDI-attractive policies, policy makers must think strategically, not tactically. Nations should actively direct investments into targeted digital services with a focused approach. Investment policies, incentives, and the investor pitch must resonate with the country's unique strengths – human capital, business ecosystem, or technological capabilities.

First step: recognizing digital archetype

Digitalization of economies delivers numerous benefits, driving innovation, fueling job opportunities, and boosting economic growth. It enables cost and time savings, industry growth and productivity, and better safety and well-being. Fostering a national digital economy, however, is an arduous task. Properly allocating scarce resources and finite funds in accordance to a country's specific context is crucial in building a vibrant digital ecosystem.

To support policy makers in shaping their strategic focus, we have identified seven digital economy archetypes: Innovation Hub, Efficient Prosumer, Service Powerhouse, Global Factory, Business Hub, ICT Patron, and ICT Novice (see figure below). Each differs in presence or dominance across the ICT value chain. Although archetypes are not limited to specific steps in the value chain, their positioning marks a nation's focal domain. Other underlying characteristics (e.g., economic status, population) garner further differentiation. Archetypes are not mutually exclusive, and countries/regions can present characteristics of a secondary archetype.

Seven digital economy archetypes across the value chain



Note *ICT Patrons can both produce and consume
Source: Arthur D. Little analysis

Innovation Hubs and **Efficient Prosumers** are dominant in technology design and product development. Innovation Hubs (e.g., US, China) are leaders in developing and commercializing innovative technology solutions, whereas Efficient Prosumers are niche players that innovate and deploy solutions for dominant local industries (e.g., Germany in manufacturing). **Service Powerhouses** and **Global Factories** are in the production value chain step. Service Powerhouses are recognized for their formidable positions in the global supply of ICT services (e.g., India), while Global Factories lead in ICT manufacturing and tend to have large surpluses of labor force (e.g., Vietnam).

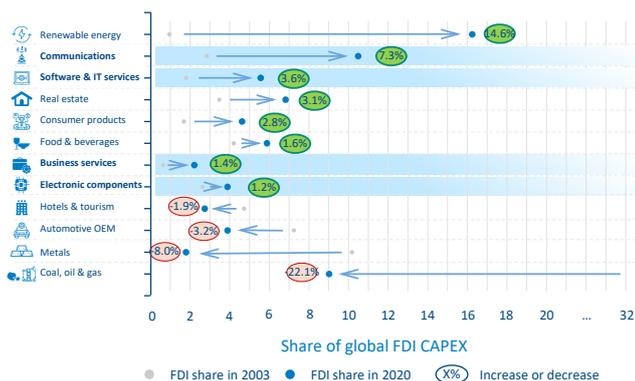
Moving across the value chain, **Business Hubs** are trading business centers for a region, attracting talent and companies from different locations. **ICT Patrons** exhibit high consumption of ICT goods and services; however, their contribution to the global ICT value chain is low. Finally, **ICT Novices** are beginners in ICT adoption and value creation.

Recognizing country archetype is the first critical step for policy makers in developing a structured digital strategy that can subsequently guide policy priorities.

FDI catapults digital competitiveness

Policy makers know they must enhance their national digital competitiveness – or be left behind. Digital FDI offers a significant push, enabling the unlocking of potential benefits to an economy that complements local digital development efforts. While COVID-19 brought on an impetus for higher-quality FDI flowing into the digital economy, there was already a fundamental shift in FDI toward the intangible economy over recent decades. As shown in the figure below, the software and IT services sector accounted for 1.7% of total FDI in 2003; by 2020, it increased to 5.3%. ICT investment jumped from 2.7% in 2003 to 10% in 2020 globally. Increases in ICT FDI has captured almost two-thirds of the decrease in FDI in natural resources. FDI is a clear catalyst for industry growth; it not only brings in capital but also creates a positive ripple of effects (e.g., improving technology access).

FDI's increasingly key role in digital economy



Source: fDi Markets, selection of top 10 sectors with largest change in global share of FDI between 2003 and 2020

Globally, there is a strong correlation between FDI and the ICT sector, resulting in an average job-to-investment multiple of 3.23 (based on linear regression analysis of 90 countries, 2010-2020), indicating that for every US \$1 million FDI inflow, three ICT jobs were created; indeed, between 2010 and 2020, total ICT FDI inflow into China was about \$137 billion, with 422,000 ICT new jobs. (Source: fDi Markets) Strong FDI inflow offers a significant push in digitally emerging markets, stimulating digital economy growth. Digitally mature nations, especially those with high-quality digital infrastructures, continue to attract more FDIs.

Tailoring policies to digital archetype enhances FDI

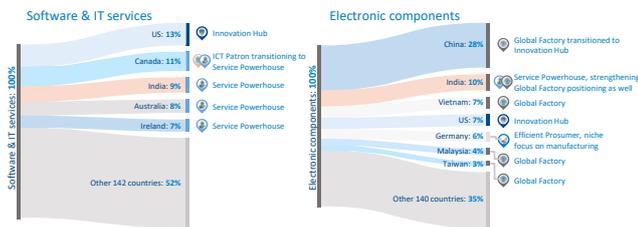
When nations target investment policies/incentives in domains aligned to digital strengths and priorities, they achieve high success in attracting FDI. Of top five countries attracting nearly 50% FDI into software and IT services, 2010-2020, four were Service Powerhouses effectively leveraging capabilities to direct FDI to strengthen position in the ICT services value chain (see figure, next page). Similarly, of top seven countries attracting roughly 65% FDI in electronic components, 2010-2020, five were Global Factories. These nations had FDI policies/incentives conducive for multinational companies to set up ICT manufacturing facilities.



Case study: India – Service Powerhouse

India has persistently attracted significant FDI in ICT, positioning digital as critical in its economic development. India has successfully steered investments from global companies to its rapidly growing local digital ecosystem, with many local/regional digital champions, particularly in e-commerce. Its share of global greenfield FDI inflows in ICT has been 5%+, while share of FDI in ICT of overall FDI has exceeded 20% on average in the last five years. India is among very few countries where FDI inflows were not adversely impacted by COVID-19. Its wide availability of skilled computer professionals was the key driver behind FDI into the software industry which, on average, accounted for more than 54% of FDI in ICT from FY2016 to FY2020. (Source: fDi Markets) India also continues to invest in digital mobile and fixed connectivity. Digital India, a \$20 billion program, aims to bolster mobile connectivity. The country's success attributes to its investments in strengthening ICT skills and open FDI policies: it spends \$1.6 billion annually on digital skills development and FDI policies/regulations have been evolving since 1991. In most industries, 100% FDI under automatic route is permitted within the broader ICT sector. (Source: UNCTAD)

Greenfield FDI, top countries



Source: Arthur D. Little analysis based on FDI Markets data covering 145 countries, selection of top countries with their share of FDI, 2010-2020

A comprehensive approach to stimulate FDI should enact policies across three layers that define digital economy:

- 1. Traditional ICT industry** – telco infrastructure, ICT manufacturing, and ICT services. Typical multinational enterprises (MNEs) that invest in this area are telecoms, software and services providers, as well as device and components manufacturers.
- 2. New digital services** – purely digital activities and solutions. MNE examples include search engines, ride-sharing apps, and e-commerce platforms, among others.
- 3. Digitalized industries** – sectors traditionally not digital but those transformed by the adoption of digital technologies. Relevant players offer digital solutions (e.g., e-health).

Case study: Mexico – Global Factory

Mexico is among largest recipients of FDI in Latin America, despite contraction in FDI for the past five years. Mexico has positioned itself as a Global Factory due to relatively strong positioning in ICT manufacturing, low-cost labor and skilled workforce, proximity to US, and being the country with the most free trade agreements. Its ICT goods exports are 14.8% of total goods exports, with most exports going to US, China, and Japan (Source: UNCTAD). Mexico also accounts for 3.8% of the global share of electronic exports, with most manufacturing facilities located on US border. While it attracted \$33 billion FDI inflow in 2019, mainly in manufacturing, financial services, and wholesale, Mexico has been unable to attract considerable FDI in the digital sector due to gaps in digital competitiveness. Its IPA (ProMexico), capturing 40% of FDI between 2013 and 2018, was disbanded in 2019. The government left FDI responsibility in the hands of the Ministry of Foreign Affairs and Mexican embassies. To attract higher FDI in ICT goods manufacturing, Mexico must focus on closing existing gaps and dedicating additional resources to align current digital initiatives to its archetype and then must reorient its FDI investment focus toward ICT manufacturing.

Every country needs to uniquely attract investment across the three layers. The archetype model sets policy direction by promoting a structured way of thinking about policies and regulations that helps remove barriers that hinder digital investment. Each archetype benefits from taking different policy paths to make its digital playing field more attractive for MNEs. For example, Service Powerhouses, Global Factories, and Business Hubs all focus on different digital value chain steps. Their digital priorities should target attracting MNEs that reinforce their positioning.

To attract players in the traditional ICT services and manufacturing industries, it is essential that Service Powerhouses and Global Factories ensure strong, reliable digital connectivity, with open regulatory environments locally and strong international connectivity. Business Hubs, with the objective of becoming most attractive destination for MNE regional HQs need to ensure a clear 5G strategy, along with efforts to develop a local data center and cloud ecosystem. Leading Business Hub Singapore remains on track to roll out nationwide 5G services by 2025 despite economic uncertainties from the pandemic. Major technology MNEs (e.g., Google, Facebook, and Alibaba) continue to build more data centers in Singapore, making it an undisputed frontrunner – owing mainly to the country’s robust infrastructure and access to fiber, along with a zero GST tax rate for international services.

Global Factories and Business Hubs are at a slight disadvantage to motivate digital services MNEs to produce/innovate in their territories, as they may not have the right digital skills. Policy efforts need to encourage setting up sales operations. On the contrary, Service Powerhouses are in a very strong position, given their talent. To attract platform-focused MNEs, cybersecurity/data protection regulations must be robust and artificial intelligence (AI) strategies must encourage talent development that can manage client-facing services highly reliant on AI. Moreover, countries can capture market share from dominant archetype countries by developing niche areas. For example, the Philippines attracted large FDI from Indian companies into voice-based BPO services because language skills were superior in the Philippines. The country now ensures workers are trained in data analytics, machine learning, and data mining to turn AI into an opportunity and help augment its English language skills with technology.

When it comes to policies encouraging FDI in digitalizing traditional industries, Service Powerhouses, Global Factories, and Business Hubs must take different paths given priorities in the ICT value chain. Global Factories need to attract investment in smart manufacturing to make production more efficient and keep pace with demand for ICT devices/components. Industry 4.0 support becomes critical. Service Powerhouses should

encourage a strong digital ecosystem across their tertiary industry. Upskilling the workforce to handle healthcare apps, digital payments, chatbots, and so forth, becomes highly relevant. Business Hubs have closer needs to those of Service Powerhouses, with a focus on “ease of doing business” policies to streamline the setup of global HQs of rapidly growing MNEs in the digitalization space. Finally, while FDI flows are expected to bottom out in 2021 and recover some lost ground with an increase of about 10%-15% (Source: UNCTAD), uncertainty still looms. Efforts must be streamlined, particularly those in the ICT and digital sectors given that greater than 16% of global share FDI goes into the digital economy.

Prerequisites for making the most out of FDI

FDI into ICT requires alignment in several functions (e.g., labor policies, customs clearances). Policies improving general macroeconomic stability and addressing structural impediments are a prerequisite to investments. Measures addressing regulatory bottlenecks, including pro-competition policies; policies fostering deeper financial markets and broader higher education/training; bottlenecks in labor markets with regards to skills mismatch; barriers to cross-country labor movements; and adequate incentives to facilitate retention of skilled workforce are important. Nations should also rethink the role of investment promotion agencies (IPAs). In most countries, IPAs are practically non-existent when it comes to digital development. They can increase their impact by sharpening strategic focus, building a coherent institutional framework, and strengthening delivery of investor services. Specifically, IPAs should focus on a limited number of mandates and target segments, adopt institutional features common to private companies, and offer high-quality investor services across the investment lifecycle. Policy makers should facilitate collaboration with other investment institutions and provide sufficient and sustained financial resources for IPAs to successfully fulfill their mandate.

Act now to secure winning position

Attracting FDI is increasingly important to build and sustain robust digital economies. Policies, regulations, and measures that play on specific core strengths of a country, both nationally and in target key sectors, are crucial. It is high time for countries to realize that securing a winning position in attracting FDI in their digital economies requires a proactive, strategic approach. They must have a clear understanding of their digital economy archetype, followed by enacting national/international investment policies/incentives that align with their strengths and digital priorities, to make a meaningful pitch to attract FDI.

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