HOW TO BE SMART: LEVERAGING DIGITAL FDI TO ADDRESS RISK THROUGH GROWING CAPACITY AND COMPETITIVENESS

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ABSTRACT:

Rapid digital transformation underway represents both a risk and an opportunity for both policymakers and firms. The can address this risk and seize the opportunity by leveraging FDI to grow digital capabilities and competitiveness through a three-part strategy. First, launching Digital FDI enabling projects (DEPs) to create 'digital friendly' investment climates through enabling policies, regulations, and measures. Second, using a 'SMART' test as a heuristic before a full-fledged DEP is launched, which benchmarks their economy's digital Skills, Market functioning, Access through connectivity, Restrictions, and Trust, and provides tools to tackle limiting factors. Third, reviewing FDI trends in six sectors that are important to grow the digital economy (two of which are proposed as essential, namely Communications and Software & IT services), with graphical evidence that can guide policymakers to prioritize policy reforms and investment promotion where they are relatively weak. Throughout, particular attention should be paid to growing the digital capacity of SMEs. A Sustainable Technology Board – modelled after the Financial Stability Board but oriented to cooperation over new technologies – could further help address techno-competition and other concerns over Digital FDI.

KEYWORDS:

1. Digital transformation
2. Digital economy
3. Foreign direct investment
4. Public-private collaboration
5. Competitiveness
6. Regulatory reform

7. G20

MAIN BODY:

Introduction

The rapid digital transformation underway exemplifies the old adage that in every crisis there is an opportunity. The pandemic-induced crisis was a loud wake-up call for the importance of digital capacity and competitiveness for both firms and economies, like a bucket of cold water splashed on a sleepy recruit's face, and the drill sergeant looming over yelling 'digital or perish'. Yet there is an opportunity to heed the digital wake-up call, get up, and get into motion to grow digital capacity and competitiveness.

This chapter will suggest that one way is through Digital FDI, or cross-border investment in the digital economy. Digital FDI can help firms adapt and innovate business models to both grow today and build future resilience. Ultimately, Digital FDI can help address all three types of risk: operational risk through firms realizing that the purely non-digital mode of operating is defunct; strategic risk by positioning a firm and economy for long-term growth and resilience; and systemic risk by increasing and improving understanding and collaboration on digital relations to identify and address digital fissures between economies before they become digital fault lines.

The World Economic Forum's 2021 Global Risks Report provides hard evidence of the digital risk and opportunity currently faced. The annual survey, completed by over 650 leaders, found risks related to digital transformation to be among the top five facing the world across the short-, medium-, and long-term. In the short-term (0-2 years), these included 'cybersecurity failure' and 'digital inequality'[1]; in the medium-term (3-5 years), 'IT infrastructure breakdown' was the second highest risk to the world[2]; and in the long-term (5-10 years), 'Adverse tech advances' was the fourth highest risk.[3]

The need for digital capacity and competitiveness – undergirded by sound digital frameworks – are therefore risks to business and economies across the short-, medium-, and long-term horizons. Private and public actors must therefore work together to address these risks and turn them into opportunities. For instance, turning 'cybersecurity failure' into cybersecurity *success*; turning 'digital inequality' into digital *equality*; turning 'IT infrastructure breakdown' to IT infrastructure *strength*; and turning 'adverse tech advances' to *beneficial* tech advances. But how? This chapter proposes a three-part solution: (1) launching Digital FDI Enabling Projects (DEPs) to create 'digital friendly' investment climates; (2) using a 'SMART' test and tools to identify and tackle Digital FDI limiting factors; and (3) targeting and facilitating FDI into sectors that are digital enablers. The G20 can play an important role in supporting this agenda given that G20 economies are both the most important sources and destinations of Digital FDI flows.

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[1] The top five short-term risks were: (1) Infectious diseases; (2) Livelihood crises; (3) Extreme weather events; (4) Cybersecurity failure; and (5) Digital inequality. World Economic Forum, "The Global Risks Report 2021", 19 January 2021, http://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

[2] The other top five medium-term risks all related to economic factors: (1) Asset bubble burst; (2) IT infrastructure breakdown; (3) Price instability; (4) Commodity shocks; and (5) Debt crises. *Op cit*., footnote 1.

[3] To put this in context and the gravity of the risks envisaged, the top five long-term risks were: (1) Weapons of mass destruction; (2) State collapse; (3) Biodiversity loss; (4) Adverse tech advances; and (5) Natural resource crisis. *Op cit*., footnote 1.

Challenge

There is broad consensus that digital transformation has been brought forward by years. Since the beginning of the COVID-19 crisis, internet usage has risen by 70 percent, the use of communication apps has doubled, and some video streaming services have seen daily usage rise 20-fold.[4] Digitalization is gradually permeating all economic sectors and functions, and is key to COVID-19 economic recovery.[5]

Yet even before COVID-19, the world was splitting into 'digital natives' and 'digital laggards'. The former are firms that started early with digital transformation, while the latter those that were slower to pivot to the new normal. This is creating a growing digital divide, with digital natives experiencing twice the revenue growth of digital laggards.[6]

Firms realize they need to invest in digital capacity or risk losing market share or even go out of business (Srinivasan and Eden, 2021).

Countries also are splitting into digital natives and digital laggards and policymakers also recognize that they need to help their economies stay digitally competitive or risk falling behind.

Attracting foreign direct investment (FDI) to grow the digital economy (referred to as 'Digital FDI'[7]) is one route to increasing capacity and competitiveness, especially for small and medium-sized enterprises (SMEs).[8] Digital FDI not only brings capital but also embedded digital knowledge and technology, while creating jobs and boosting productivity.[9]

While some digital service suppliers are relatively "asset-lite" (i.e. they do not require significant FDI to service a market), other digital service suppliers display a similar international asset footprint to traditional multinational enterprises (MNEs). For instance, e-commerce firms (e.g. internet retailers), digital content providers (e.g. those providing digital media, games, information and data) and telecoms firms have virtually an equivalent ratio of foreign assets to foreign revenue when compared to traditional MNEs, indicating that FDI is essential to their business models. [10] At the same time, some

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[4] World Economic Forum, "Digital Transformation: Powering the Great Reset", July 2020, http://www3.weforum.org/docs/WEF_Digital_Transformation_Powering_the_Great_Reset_2020.pdf

[5] McKinsey Digital, 14 May 2020, "The COVID-19 recovery will be digital: A plan for the first 90 days", https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-covid-19-recovery-will-be-digital-a-plan-for-the-first-90-days

[6] Accenture, "Full Value. Full Stop." 2019, https://www.accenture.com/_acnmedia//Thought-Leadership-Assets/PDF/Accenture-Future-Systems-Report.p

[7] Matthew Stephenson. "Digital FDI: Policies, regulations and measures to attract FDI in the digital economy." *World Economic Forum*. September 2020. https://www.weforum.org/whitepapers/digital-fdi-policies-regulations-and-measures-to-attract-fdi-in-the-digital-economy

[8] Dan Ciuriak and Maria Ptashkina, 2019, "A Global South Strategy to Leverage the Digital Transformation for Development", https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3405330. Also see Lorraine Eden, 2016, "Multinationals and foreign investment policies in a digital world." *The E15 Initiative: Strengthening the Global Trade and Investment System for Sustainable* Development, World Economic Forum and the International Centre for Trade and Sustainable Development (ICTSD), http://e15initiative.org/publications/multinationals-and-foreign-investment-policies-in-a-digital-world/

[9] World Bank Group (WBG). *World Development Report 2016: Digital Dividends*. World Bank Publications, 2016, pp. 104-120. https://www.worldbank.org/en/publication/wdr2016; Roberto Echandi, Jana Krajcovicova and Christine Zhenwei Qiang, October 2015, "The Impact of Investment Policy in a Changing Global Economy A Review of the Literature", Policy Research Working Paper 7437, Trade and Competitiveness Global Practice Group, World Bank Group, http://documents1.worldbank.org/curated/en/664491467994693599/pdf/WPS7437.pdf

[10] The relative importance of FDI for a firm can be calculated through the ratio of the share of foreign sales to the share of foreign assets. In other words, does a firm need to undertake significant FDI to generate foreign sales or can it do so without the need for FDI? Traditional MNEs have on average a ratio of 1 between foreign sales and foreign assets. If the ratio is lower than 1, then this indicates that FDI is even more important to that type of firm than an average MNE; if more

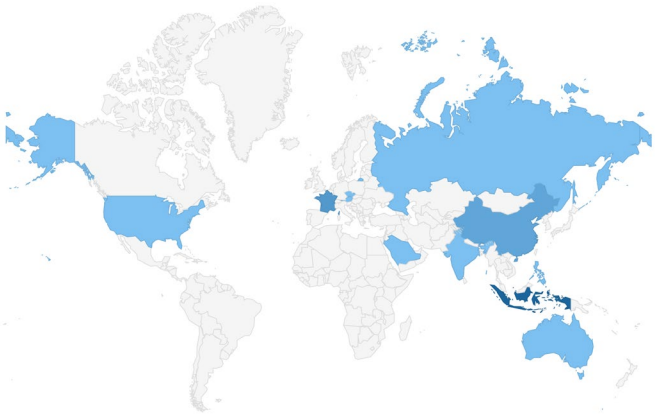
of the fastest growing and most highly valued firms in the world are in technology sectors, creating a huge pool of capital and opportunities for investment that are win-win between these firms and recipient economies.[11]

However, attracting Digital FDI requires specific policies, regulations, and measures. These investments are based on business models that differ from traditional brick-and-mortar businesses. These business activities rely heavily on data and know-how, often involve platform economies and leverage non-traditional assets.[12]

At the same time, growing techno-nationalism[13] is making Digital FDI more difficult, both inward and outward: policymakers may be reluctant for their firms to offshore too much technology and simultaneously reluctant to accept mergers and acquisitions (M&A) in high-tech sectors.

G20 economies have been very active in adopting measures related to Digital FDI, but are these the right measures? (see Figure 1 for a visual display, and Appendix 1 for a list of the measures).

Figure 1. G20 adoption of 33 Digital FDI measures (1/1/2020 to 1/5/2021)



Source: Global Trade Alert, Digital Policy Alert, https://www.globaltradealert.org/digital_policy

Where should policymakers focus their attention and efforts to help their firms be digital natives and not digital laggards? What are the policies, regulations, and measures needed to create 'digital friendly' investment climates to attract Digital FDI, especially in an era of techno-nationalism? What are the sectors that are digital enablers but where economies have so far received relatively low levels of FDI? What are some tests to know where to start, and some tools to do so?

This chapter will aim to answer these questions through proposing a three-part strategy.

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than 1, that FDI is relatively less important. According to UNCTAD's research, internet platforms (e.g. search engines, social networks) have a ratio of 2.6; digital solutions providers (e.g. electronic payments) have a ratio of 1.9; IT firms (e.g. software and services, devices and components) have a ratio of 1.8; digital content providers (e.g. digital media, games, info and data) have a ratio of 1.1; e-commerce firms (e.g. internet retailers) have a ratio of 1.1; and telecom firms have a ratio of 0.9, which reflects the significant investment they must undertake in physical infrastructure. However, it is worth underlining that this ratio captures *relative* importance: a digital firm that has very significant foreign sales and thus a high ratio could still have undertaken significant FDI in absolute terms. For detailed information, see UNCTAD (2017), p. 171.

[11] PwC, "Global Top 100 companies by market capitalisation", May 2020, https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-2020.pdf

[12] While UNCTAD (2017) differentiates between digital MNEs and ICT MNEs, in this chapter the term "digital firms" is intended to capture all firms that invest in the digital and technology sectors.

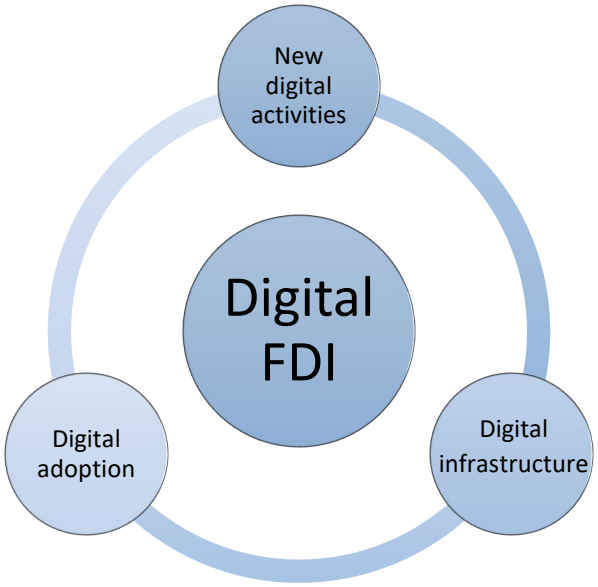
[13] Kate Lamb, "The rise of techno-nationalism - and the paradox at its core", World Economic Forum, 3 July 2019, https://www.weforum.org/agenda/2019/07/the-rise-of-techno-nationalism-and-the-paradox-at-its-core/

Proposal

I. Launch Digital FDI Enabling Projects to create 'digital friendly' investment climates

Policymakers may wish to launch Digital FDI enabling projects (DEPs) to create 'digital friendly' investment climates. Creating a 'digital friendly' investment climate requires identifying enabling policies, regulations, and measures (known together as 'elements') across three pillars: (1) new digital activities; (2) digital adoption by traditionally non-digital firms; and (3) digital infrastructure.[14] Within each of these pillars, there are specific elements that impact and enable a potential investor's decision to commit capital and other resources (see Figure 2). Once the priority elements are identified, policymakers then need to ensure they are present in their economy.

Figure 2. Digital FDI framework



Source: Stephenson (2020), elaborated from UNCTAD (2017)

Pillar 1. Elements that enable investment in new digital activities. The digital economy has generated a host of new business models, from social media and digital platforms to cloud computing and data centres. Governments can embrace such new business models and actively support such investments. To illustrate, policies, regulations and measures in South-East Asia helped encourage investment in ridesharing apps, such as the billions being invested in Gojek and Grab as they compete for the ridesharing and delivery market in South-East Asia.[15]

[14] UNCTAD, 2017, "World Investment Report: Investment and the Digital Economy", https://unctad.org/system/files/official-document/wir2017_en.pdf

[15] Yoolim Lee, "Ride-Hailing Giant Gojek Raises $1.2 Billion for Clash with Grab", Bloomberg, 17 March 2020, https://www.bloomberg.com/news/articles/2020-03-17/ride-hailing-giant-gojek-raises-1-2-billion-for-clash-with-grab and Ingrid Lunden, "SoftBank pumps $2B into Indonesia through Grab investment, putting it head to head with Gojek", TechCrunch, 29 July 2019, https://techcrunch.com/2019/07/29/softbank-pumps-2b-into-indonesia-through-new-grab-investment-putting-it-head-to-head-with-gojek/?guccounter=1

Why is this a priority? New digital activities, to be successful, require digital content oriented to the local market, creating opportunities for SMEs to produce such content and link up with foreign multinationals, with all the positive benefits that digital linkages can bring.

Pillar 2. Elements that enable digital adoption by traditionally non-digital firms. Beyond new business models, the digital economy has the potential to change traditional ways of conducting business. Certain policies, regulations and measures can enable the adoption of new digital approaches by incumbent firms, for instance, through telemedicine, mobile banking and online sales.[16] To illustrate, Polish telemedicine firm MedApp invested in the Baltic states, allowing cardiovascular diagnostics to be provided via telemedicine.[17]

Why is this a priority? Brick-and-mortar firms, both domestic and multinational, view digitalizing their value chains and supply chains as an economic imperative (Srinivasan and Eden, 2021). Digital adoption by domestic firms can help SMEs grow their business by becoming either first- or second-tier suppliers to larger domestic firms. From there, it is a short step for SMEs to start supplying the "going digital" MNEs that are now requiring their first and second tier suppliers to also engage in digital upgrading.

Pillar 3. Elements that enable investment in digital infrastructure, which includes both a physical dimension and a regulatory dimension. Robust and reliable physical infrastructure is key for the development and growth of the digital economy. Attracting FDI in digital infrastructure requires a conducive regulatory framework, for instance, policies and regulations that encourage investment in payment processors. Importantly, infrastructure should aim to connect pieces and grow the size of the market (at the national, regional, and global level) as investors are often attracted to larger markets.[18] Success in attracting FDI in digital infrastructure will also depend on the level of existing infrastructure. To illustrate, Visa invested in Nigeria's Interswitch, a payment switch and processing company, making Interswitch a unicorn overnight.[19]

Why is this a priority? Digital infrastructure is important to help SMEs connect with global market opportunities described above by plugging into global supply chains and growing e-commerce exports, both of goods and digital services.

So what are the elements that need to be considered in each of the three pillars?

A recent survey of investors provides the first evidence for how to attract Digital FDI. A total of 314 firms were surveyed across the Canada, China, Estonia, India, Japan, United Kingdom, and the United States. They were asked five principal questions: (1) a big-picture question to understand the relative importance of different elements at the highest level; (2) a question on new digital activities; (3) a question on digital adoption; (4) a question on the physical dimension of digital infrastructure; and (5)

[16] It is worth noting that certain elements can also enable digital adoption by the public sector, which in turn will promote digital adoption by firms and individuals, for instance through exposure, new habits, ensuring skills development, etc. Estonia is a good example of this complementary channel that works through secondary effects, though for the purpose of this chapter, the focus is on direct adoption by firms. See IMF, "E-stonia Takes Off", *Finance & Development*, March 2018, Vol. 55, No. 1, https://www.imf.org/external/pubs/ft/fandd/2018/03/trenches.htm

[17] PMR Healthcare, "Telemedicine: MedApp enters foreign markets" 2 April 2019, https://healthcaremarketexperts.com/en/news/telemedicine-medapp-enters-foreign-markets/

[18] In the Digital FDI survey, investors reported that international connectivity, national connectivity, and urban connectivity where the three most important physical considerations when investing abroad in digital infrastructure. See Stephenson (2020), p. 14, *op cit.*, footnote 5.

[19] Jake Bright, "Nigeria's Interswitch confirms $1B valuation after Visa investment", TechCrunch, 12 November 2019, https://techcrunch.com/2019/11/11/nigerias-interswitch-confirms-1b-valuation-after-visa-investment/

a question on the regulatory dimension of digital infrastructure. Full survey results can be found in a white paper. [20]

The survey found that investors care most about skills and regulations. In terms of the big-picture questions, the top three elements that investors care about when making decisions to invest in the digital economy are: (1) the level of digital skills in the economy; (2) regulatory stability and predictability; and (3) the regulatory framework. This confirms the importance of getting the regulatory framework right if economies are to attract Digital FDI.

Yet Digital FDI enabling projects need to be tailored to individual economies through country-specific analysis and reforms. Individual economies will be at a different starting point in terms of policies, regulations and measures, as well as priority areas for digital development. In addition, investors may be interested in different markets for different reasons, whether because of size, income level, skills, resources, geographic location, etc.

Digital FDI enabling projects can thus be rolled out in four steps (see Figure 3).

First, a diagnostic step to understand (a) the state of play of relevant policies, regulations and measures, (b) how these are benchmarked against the elements identified as important in the global survey, and (c) the specific digital development goals of the economy.

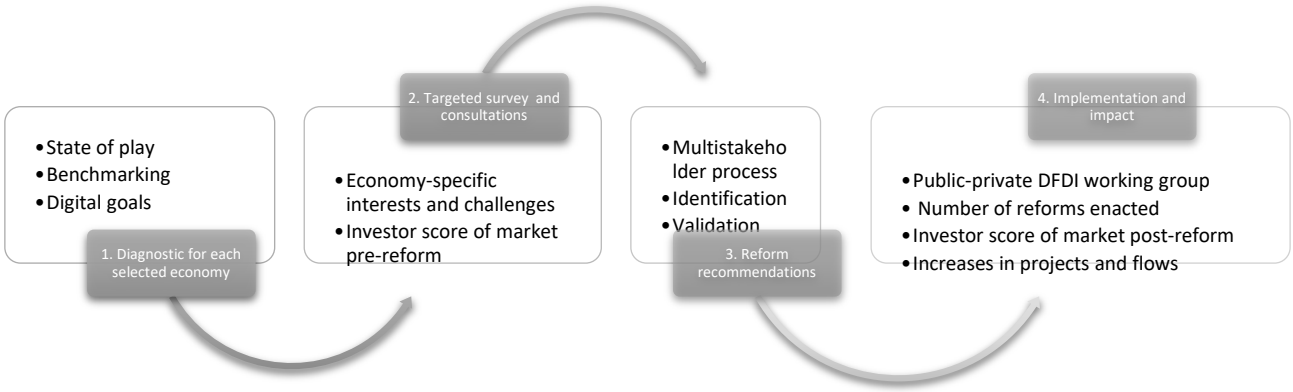
Second, a targeted survey of and consultations with investors interested in that market, asking them for (a) a perception score of the digital FDI investment climate *pre*-reform, and (b) the question, "What do you need to see in *this* country to invest in its digital economy?"

Third, developing reform recommendations through a multistakeholder process to help connect the supply of a digital-friendly investment climate by policymakers to the demand for such an investment climate by firms.

Fourth, implementing these reforms and tracking impact through the number of reforms carried out, improvement in perception score of the digital FDI investment climate *post*-reform, and increases in actual digital FDI flows investment projects and capital flows.

[20] Stephenson (2020), *op cit*., footnote 5.

Figure 3. Digital FDI enabling project (DEP) methodology



Source: Stephenson (2020)

The G20 may wish to create a Sustainable Technology Board (STB) to foster cooperation rather than competition over new technologies, and thus help address potential concerns over Digital FDI. Some countries may be reluctant to welcome too much Digital FDI given growing competition in a new 'digital tech' race. These concerns have in fact led to FDI screening of technology-related investments to have shot up in recent years.[21] One solution is for the G20 to create an STB, modelled after the Financial Stability Board.[22]

The STB could have three specific functions that together could help address potential concerns over Digital FDI. First, provide a platform where policymakers, firms, experts, and civil society would together to identify needs, share both concerns and opportunities over new technologies and their potential contribution to sustainable development, and transparently chart out ways to integrate these in both regulatory frameworks and corporate strategies. Second, generate analysis on developments in new technologies, risks and opportunities that these generate, and good practices for how authorities and firms have addressed risks and seized opportunities. Third, develop standards and guidelines on new technologies to facilitate their sustainable adoption. While countries will undoubtedly continue to jockey over technology and in some cases remain wary of Digital FDI, an STB creates a mechanism for finding common ground and collaboration where it is feasible, including over inward and outward Digital FDI flows.

So if an individual economy wishes to increase Digital FDI, where should it start?

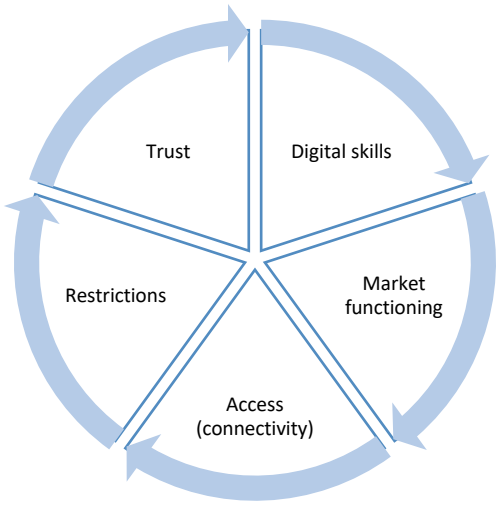
[21] OECD, "Freedom of Investment Process: Investment policy developments in 62 economies between 16 October 2020 and 15 March 2021", May 2021, https://www.oecd.org/daf/inv/investment-policy/Investment-policy-monitoring-March-2021-ENG.pdf

[22] The proposal for the G20 to create a Sustainable Technology Board is elaborated in a T20 Policy Brief for the G20. See Matthew Stephenson, Iza Lejarraga, Kira Matus, Yacob Mulugetta, Masaru Yarime, and James Zhan. "SusTech Solutions: Enabling new technologies to drive sustainable development through value chains", *T20 Policy Brief*, Task Force on Digital Transformation, forthcoming.

II. Use 'SMART' test and tools

Until a Digital FDI enabling project (DEP) can be launched, policymakers can use a SMART test and tools to identify and tackle Digital FDI limiting factors. Ideally an economy launches a Digital FDI enabling project to increase such investment, following the methodology outlined in Section I. However, as a 'first-response' approach, it can use a 'SMART' test to quickly identify where there might be relative weaknesses in key areas holding back Digital FDI. Each of the letters in SMART represents a key building block to a 'digital friendly' investment climate: Skills, Markets, Access, Restrictions, and Trust (see Figure 4). Within each of the five building blocks, certain indicators can pinpoint where the problem may lie, and certain tools can help address it.

Figure 4. Five Dimensions of the SMART test



Skills

Digital skills can be the most important building block to Digital FDI. Surveys of firms reveal that digital skills are often the most important factor holding back Digital FDI.[23] What matters in terms of digital skills is not whether a person has a certain diploma or certification, but whether that person has the requisite skills in practice. As such, the best indicator is a perception measure by existing or potential investors.

Suggested indicator: Digital skills among active population

Since 2017, the World Economic Forum's Global Competitiveness Index has asked a question on digital skills, namely, "In your country, to what extent does the active population possess sufficient digital skills (e.g., computer skills, basic coding, digital reading)?" Unfortunately, the perception of businesses of digital skills have, on average, decreased by 3.4 percent among advanced economies and increased by a feeble 1.8 percent among emerging and developing economies.[24]

What can policymakers do?

[23] When asked "How important are the following for investing abroad in the digital economy?", the option 'Level of digital skills in the economy' received the top score, 8.05 out of a maximum of 10. See Stephenson (2020), p. 11.
[24] The range is 1='not at all' to 7='to a great extent', with a score reported from 0 to 100. Schwab and Sahidi (2020), p. 23.

The first step may be to identify needed skills through dialogue with industry. Academic-Business Cooperation on Digital (ABCD) partnerships can then be set up with universities and institutes to provide the skills identified by business. Such ABCD Partnerships and the related digital skills can be supported through very targeted incentives, subsidies, or requirements. In addition, 'right-skilling' programs need to be launched for those already in the work force. Quarterly check-ins between the public, private, and academic groups on progress to 'right-skilling' would keep political attention and support on this vital area.

Market functioning

Perhaps even more basic than skills are well-functioning digital markets. This can range from addressing market failure, providing market facilitation, or helping create new markets for Digital FDI. In essence, the incentives, information, and opportunities need to be there for such investment to take place. In addition, concerns related to competition need to be addressed because of market concentration and natural monopolies inherent in platform economies and other digital activities. These considerations are difficult to capture in an indicator. One possible proxy can be the degree to which companies and consumers actually use goods and services related to new technologies.

Suggested indicators: Consumer uptake of new technologies & Herfindahl-Hirschman Index

The Global Competitiveness Index has an indicator on the uptake of new technologies, which can help determine whether a market is working well for Digital FDI to take place on a scale of 1 to 4.[25] In addition, the Herfindahl–Hirschman Index (HHI) provides a measure of market concentration through relating the size of firms to the size of the industry, and can be a starting point to determine the need for stronger competition policy.

What can policymakers do?

If an economy receives a low score, there are number of tools that can help create well-functioning digital markets. Information on opportunities and matchmaking between investors and projects can take place through databases and platforms. Incubators and linkage programs can help develop domestic firm capacity to link up with foreign investors, which can be supported through behavioural incentives (especially where there may be spillovers, such as in investment into advanced technologies) and the creation of clusters. Throughout risk-management mechanisms, such as guarantees or first-loss equity, can smooth out market functioning.

Access

Underpinning well-functioning markets is access to the digital economy through connectivity. Communications infrastructure and services make it possible both for investment in new digital activities and in digital adoption by incumbent firms (see Section I). Without broadband internet and broad mobile network coverage, digital activities cannot take off, as they provide access to data, the 'lifeblood of technology systems'.[26]

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[25] This indicator captures companies/consumers using products and services based on 3D, 4D printing and modelling technology, biotechnology and DNA technology, clean energy (generation, storage, transmission) technology, distributed ledger technology/ blockchain technology, energy efficiency of buildings technology, information processing (artificial intelligence, big data, virtual reality, augmented reality) technology, internet of things and cloud computing technology, network security and encryption protocols technology, new agriculture and food technologies, new materials and composites technology, Quantum computing, robots (air, factory, land, underwater) technology, satellites (data, connectivity) and space technology, smart and energy-efficient transport technology and water, waste and air management technology. See Schwab and Zahidi (2020), p. 71.

[26] Stephenson et al. (forthcoming), p. 5, *op cit*., footnote 20.

Suggested indicator: Going digital access

The OECD's Going Digital Toolkit has a policy dimension focused on access, which includes seven different indicators.[27] Some of these indicators may be relatively more important for certain economies, depending on their particular geographic, economic, and societal constellations. But it usefully provides policymakers with a metric to see on which part of connectivity their economy may be relatively weaker, and to take commensurate action.

What can policymakers do?

Where they have a low score, policymakers may wish to pay particular attention at supporting Digital FDI into that type of infrastructure. This can take place through the gamut of promotion, facilitation, and policy reform. Specific tools can include adopting certain standards regarding infrastructure, which helps connectivity and interoperability between markets, increasing investor interest. Policymakers may even wish to provide free connectivity as an input into digital growth, as a number of cities have done with complementary Wi-Fi. Concerns over Digital FDI into some infrastructure, such as 5G networks, can in part be assuaged and addressed through cooperation at a proposed Sustainable Technology Board.[28] Finally, a future WTO Investment Facilitation for Development Agreement (IFDA) could be designed – and implemented – to facilitate Digital FDI given its importance both to short-term recovery and long-term growth. While the IFDA is designed to apply horizontally across sectors, measures can be oriented to providing targeted facilitation to priority investments, including Digital FDI. How the WTO IFDA can help 'build back better' is addressed in a T20 policy brief for the G20.[29]

Restrictions

In addition, Digital FDI is less likely to flow into an economy if market entry restrictions are in place, or if operational regulations are heavy handed. The regulatory framework can be thought of in two ways: restrictions on market entry, and regulations on operations once an investor has entered and established a commercial presence. The focus should be on removing market entry restrictions and selecting operating regulations that achieve policy objectives with the lightest regulatory load consistent with those policy objectives, for instance through adopting performance-based regulation.[30]

Importantly, investors are likely to prefer a clear, stable, and well-enforced framework that may include some restrictions rather than an unpredictable, 'Wild West' approach.[31] While some large economies may be able to maintain high operating regulations and still enjoy investor interest given their market-seeking motive, most economies do not have this luxury. The presence of heavy-handed

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[27] These include (a) fixed broadband subscription per 100 inhabitants, (b) SIM cards per 100 inhabitants, (c) mobile broadband subscriptions per 100 inhabitants, (d) share of households with broadband connections, (e) share of businesses with broadband contracted speed of 30 Mbps or more, (f) share of population covered by at least a 4G mobile network, and (g) disparity in broadband uptake between urban and rural households. See OECD *Going Digital Toolkit*, "Access". http://goingdigital.oecd.org/dimension/access

[28] Stephenson et al. (forthcoming), *op cit*., footnote 20.

[29] Axel Berger, Manjiao Chi, Bernard Hoekman, Makane Moïse Mbengue, Karl P. Sauvant, and Matthew Stephenson, "Facilitating Sustainable Investment to Build Back Better", T20 Policy Brief, Task Force on Trade, Investment and Growth, forthcoming.

[30] See Stephenson et al. (forthcoming), section II 'Barriers and solutions to SusTech adoption', *op cit*., footnote 20.

[31] In a Digital FDI survey, investors reported that the second and third most important overall considerations to investing abroad in the digital economy were 'Regulatory stability and predictability' and 'Regulatory framework (national and local)', providing hard evidence for the importance of getting the regulatory framework right. See Stephenson (2020), p. 11, *op cit*., footnote 5.

restrictions will chill investor interest and their lightening heat it, while maintaining a stable, predictable and effective framework. These restrictions matter not only regarding FDI in Digital FDI enabling sectors, but also to digital services trade, given that Digital FDI may be motivated by the provision or export of digital services.

Suggested indicator: Restrictiveness Indexes

The OECD has two indexes that can be used to measure regulatory restrictions that may impinge on Digital FDI: first, the FDI Regulatory Restrictiveness Index and the Digital Services Trade Restrictiveness Index. The former includes restrictions on enabling sectors considered in Section III (Electric, Electronics and other instruments; Communications; and Business Services).[32] The latter includes restrictions that will limit digital activities.[33]

What can policymakers do?

Where there are relatively high restrictions in place that will impinge on Digital FDI, policymakers may wish to consider reviewing and, as needed, removing them. Restrictions may be outdated and no longer fit-for-purpose. Even if still relevant, it is important to consider and balance trade-offs, for instance national security concerns and communications: it may be that national security may only apply in some parts of communications, and in others, an lifting certain regulations may kickstart digital growth, for instance by allowing firms to determine the technology that matches the market.

Trust

Underlying all these building blocks must be trust through a fit-for-purpose and effective legal framework. There is core legislation for e-commerce to function well, including e-transactions, consumer protection, data protection and privacy, and cybersecurity.[34] In the Digital FDI survey, investors reported that 'data security regulations' and 'data privacy regulations' were the first and third most important consideration when investing abroad in new digital activities, and therefore should be a priority to build trust.[35] However, beyond adopting legislation, what matters is how it is applied and enforced in practice. As a result, a perception index can help policymakers realize whether investors see the legal framework as creating trust in the digital economy, and thus stimulating Digital FDI.

Suggested indicator: E-Commerce Legislation and Legal Framework's Adaptability to Digital Business Models

A further indicator in the Global Competitiveness Index takes the pulse of whether executives feel the legal framework is fit for purpose vis-à-vis the digital economy. They are asked, "In your country, how fast is the legal framework of your country adapting to digital business models (e.g. e-commerce, sharing economy, fintech, etc.)?"[36] This supplements a review of the *de jure* regulatory framework with a sense of how it is being experienced *de facto*.

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[32] OECD, FDI Regulatory Restrictiveness Index, https://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX

[33] These include: (a) infrastructure and connectivity, as discussed earlier in the section, (b) electronic transactions, to be discussed next, (c) payment systems, (d) intellectual property rights, and (e) other barriers affecting trade in digitally enabled services. See OECD, Digital Services Trade Restrictiveness Index, https://stats.oecd.org/Index.aspx?DataSetCode=STRI_DIGITAL#

[34] UNCTAD, "Summary of Adoption of E-Commerce Legislation Worldwide", https://unctad.org/topic/ecommerce-and-digital-economy/ecommerce-law-reform/summary-adoption-e-commerce-legislation-worldwide

[35] See Stephenson (2020), p. 12, *op cit*., footnote 5.

[36] The range is 1='not fast at all' to 7='very fast'.

What can policymakers do?

Policymakers can first ensure that core legislation to enable e-commerce is in place. After that, they can use the indicator to get a sense of investors' perception of how the regulatory framework is effective – or not – in practice. If they receive a low score, then they can 'peel back the onion' to ask investors where policymakers may need to strengthen implementation (see Table 1).

Table 1. Summary of SMART test and tools

BUILDING BLOCKS	SAMPLE INDICATOR(S)	POTENTIAL TOOLS
Skills	Digital skills among active population	• ABCD Partnerships • Targeted incentives, subsidies, or requirements • 'Right-skilling' programs • Quarterly check-ins on right-skilling progress
Market functioning	Consumer uptake of new technologies; Herfindahl–Hirschman Index (HHI)	• Databases and platforms for information and matchmaking • Incubators and linkage programs • Behavioural incentives • Creation of cluster • Risk-management mechanisms (e.g. guarantees)
Access	Going digital access	• Support FDI into connectivity infrastructure with low access score • Measures to promote and facilitate FDI into infrastructure with low access score • Policy reforms regarding FDI with low access score • International standards • Free connectivity (e.g. city Wi-Fi)
Restrictions	FDI Regulatory Restrictiveness Index; Digital Services Trade Restrictiveness Index	• Review restrictions where they are high • Ensure restrictions are fit for purpose • Consider trade-offs between restrictions and liberalization • Consider whether policy goals can be achieved with fewer restrictions
Trust	E-Commerce Legislation; Legal Framework's Adaptability to Digital Business Models	• Adopt core legislation to enable e-commerce • Identify where e-commerce framework is receiving a low score in practice

		• Work with investors to strengthen trust

III. Target FDI in sectors that are digital enablers

In addition to enabling *elements*, there are enabling *sectors* to grow the digital economy.

Policymakers may wish to ensure their countries are receiving sufficient FDI in sectors that are digital enablers across the economy. While Digital FDI can take place in any sector – as digital adoption by incumbent firms can take place in any sector – certain sectors can act as digital enablers horizontally across the economy. It may therebefore be particularly important to target investment policy reforms, promotion, and facilitation to these sectors.

Two sectors can be considered 'structural' digital enablers, and four more 'supportive' digital enablers. (1) Communications and (2) Software & IT services can be seen as structural enablers, while (3) Business machines and equipment, (4) Consumer electronics, (5) Electronic components, and (6) Semiconductors are more supportive enablers.[37] Structural enablers are services, and therefore often require a physical presence. Even if they do not (e.g. outsourced IT services), having them produced locally can lead to positive externalities and spillovers into other sectors. Supportive digital enablers are goods, and therefore easily imported. However, having them produced locally is again likely to lead to positive externalities. Within the supportive digital enablers, the data will show that (5) Electronic components, and (6) Semiconductors may be relatively more important in terms of attracting Digital FDI.

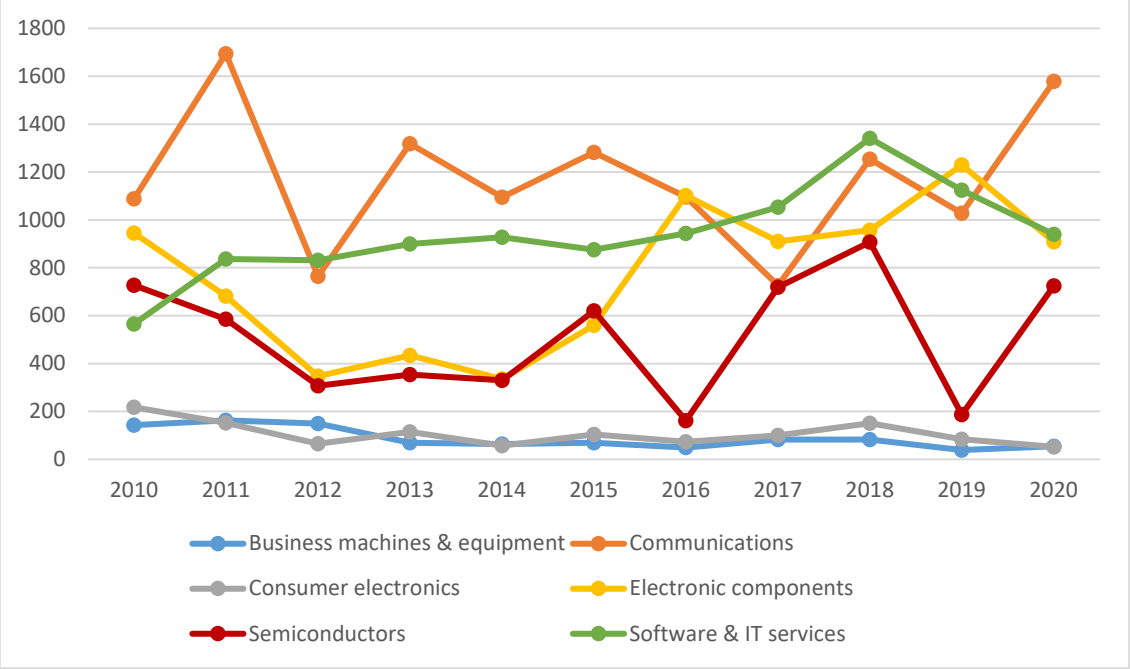
If an economy is receiving relatively low levels of FDI in an enabling sector, it may wish to adopt targeted policies, regulations, and measures. In each of the graphs below, the G20 average is presented for the level of inward FDI for each of the six enabling sectors between 2010 and 2020 (see Figures 5-8).[38] The information is shown both in terms of capital flows and number of projects – as well as the relative share of each. It is important to consider the number of projects, and not just the value of capital, given that some types of investment may not require as large capital expenditures (e.g. those in Software & IT services) compared to others (e.g. those in Communications). Both capital flows and the number of projects therefore need to be taken together to reach a complete picture.

In Appendix 2, the same information is provided for each individual G20 economy. Policymakers can therefore benchmark how they are doing relative to other G20 economies as well as relative to G20 averages. They can then consider adopting targeted policies, regulations and measures to increase FDI in the sectors that they wish to strengthen.

Figure 5. G20 average IFDI capital received per digitally enabling sector (USD million)

[37] These six were drawn from fDi Markets database out of a total of 37 sectors. fDi Markets was used as a database as it captures greenfield FDI which is likely to produce the most benefits for the host economy. The six were selected as they fit the digital economy architecture proposed in UNCTAD (2017). The exception was 'Media/Entertainment', which is part of UNCTAD's proposed architecture and also featured in fDi Markets, but was not included in this chapter as in fDi Markets the category was focused on theme parks, gambling, and museums, and therefore lacked a strong digital dimension.

[38] In calculating the G20 average, the EU was not included given the challenge of extracting data for each individual EU economy, but the three EU economies that are members of the G20 in their own right were included, namely France, Germany, and Italy, in addition to the United Kingdom, a former EU member.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2017
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2019
2020
Business machines & equipment
Communications
Consumer electronics
Electronic components
Semiconductors
Software & IT services

Figure 6. G20 average share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)

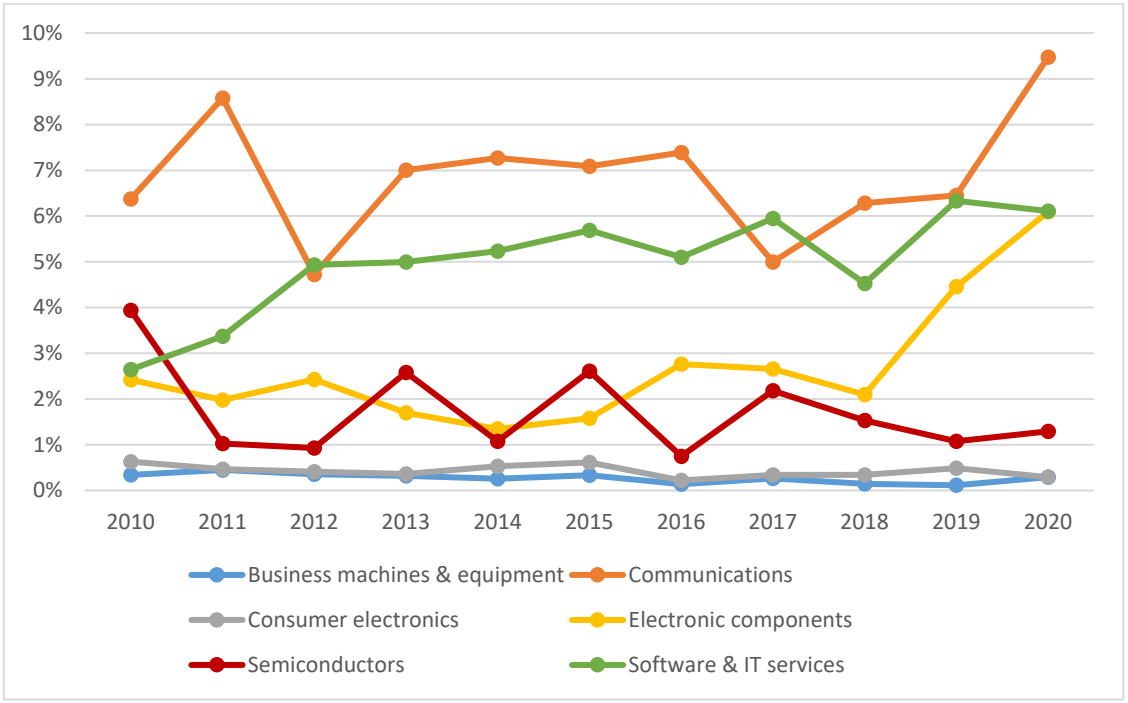


Figure 7. G20 average number of IFDI projects per digitally enabling sector

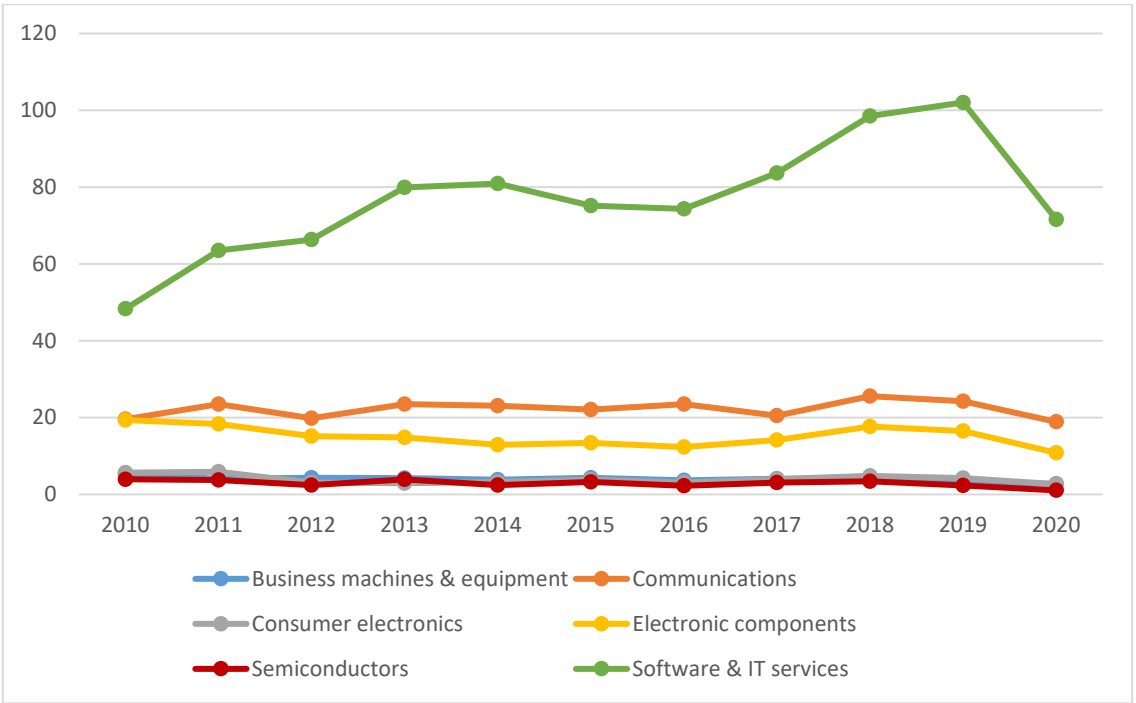
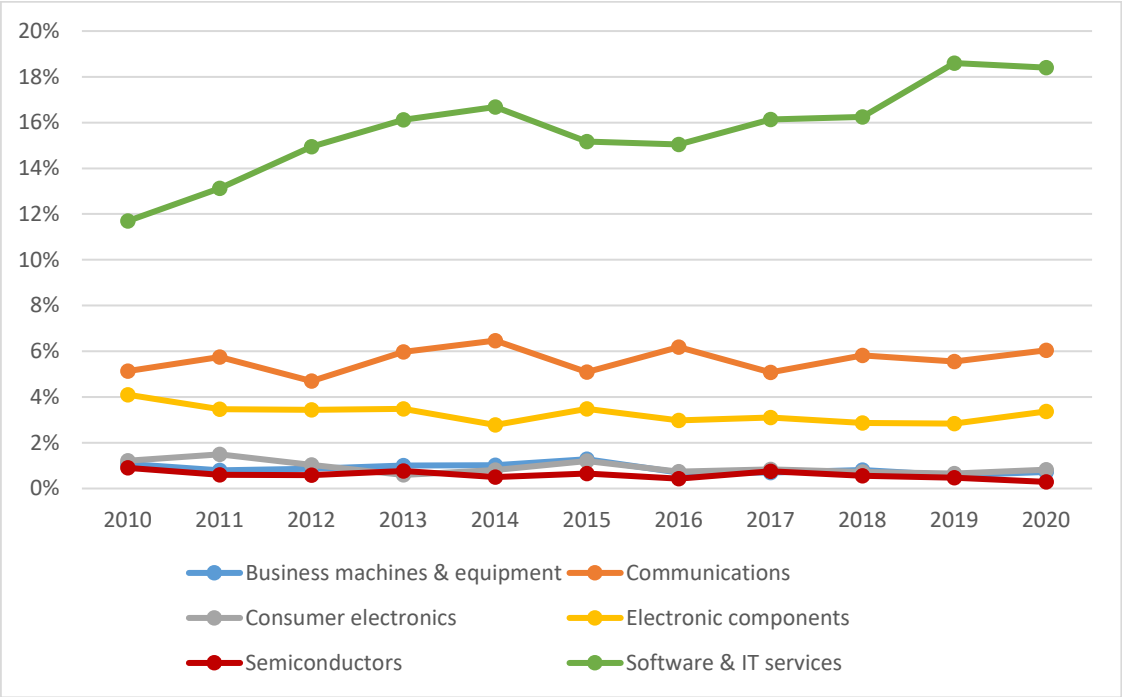


Figure 8. G20 average share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)



How should the graphs be read? First, it is worth noting that the two sectors proposed as structural digital enablers (Communications and Software & IT services) dominate across both capital flows and projects, both looking at the G20 average and across most of the component economies. Since these are 'core' rather than 'nice to have', this is a good sign, especially the strong trend towards more FDI in Software & IT services. On the flip side, a couple sectors proposed as supportive digital enablers do not receive must FDI at all, especially Business machines & equipment and Consumer electronics (except for small amounts in China, Mexico, Turkey, and Saudi Arabia). The conclusion may be that these two sectors are relatively less important for FDI as they can be easily acquired through trade, and may therefore not be a priority in a digital FDI enabling project. As previewed above, within the supportive digital enablers, it seems that (5) Electronic components, and (6) Semiconductors may be relatively more important in terms of attracting Digital FDI.

Semiconductors are worth singling out, given a global shortage and their strategic import in the modern economy. China has received significant FDI into this sector, as have the Republic of Korea and Japan, though Japanese levels have fallen significantly in recent years. The US recently boosted its level of FDI in semiconductors, but other economies have not, prompting some industry leaders to call for greater FDI in semiconductors in Europe.[39]

What kinds of policy implications might these data reveal? Specific recommendations are beyond the scope of this chapter, but we hope our work can serve as a starting point for deeper country-specific analysis. Some tentative observations for a few economies can illustrate how policymakers may wish to use this information. For instance, the data show that China may wish to adopt policies and measures to grow FDI into Software & IT services and move away from (what may be) an overreliance on FDI in manufacturing. Indonesia may also wish to develop a targeted strategy to

[39] Pat Gelsinger, "The EU must play a long game for semiconductor success", *Financial Times*, 28 April 2021, https://www.ft.com/content/34b07427-6bca-431d-8406-62762fc46941. The author is CEO of Intel.

attract FDI in Software & IT services, something it may have already begun with recent reforms.[40] Italy appears to be doing well, but could perhaps use a little more focus on attracting FDI into Software & IT services. India, in contrast may wish to diversify away from what appears to be an overreliance on Digital FDI in Software & IT services. Russia may wish to do the same for Communications, as FDI in this sector has collapsed. Canada, Germany, and Saudi Arabia appear to be doing quite well, and may wish to continue with their approaches.

Having a relatively low level of Digital FDI compared to other countries does not automatically mean the country has a problem, but may serve as a red flag or at least warrant further investigation. Perhaps the relative lack of Digital FDI reflects underlying economic weakness in that sector or could be due to other causes such as national security concerns or domestic policy objectives that cause an economy to limit FDI in an enabling sector. For instance, 21 percent of economies have inward FDI restrictions in communications, the fourth-highest sector.[41] The adoption of new tax policies for the digital economy (e.g., the OECD Pillar One Amount A proposal, the new UN 12B withholding tax on automated digital services, and the digital sales/services taxes being introduced by many countries) should also be examined for their short- and long-term impacts on Digital FDI. Since FDI restrictions normally lead to lower FDI and potentially reduced competitiveness in a sector, there is a necessary trade-off to consider. If an economy is aiming to catch up or strengthen its digital capacity and competitiveness, it may wish to carefully consider such restrictions (see Section II, *Restrictions*).

Conclusion

Digital transformation is happening apace. The question then, is how can policymakers and firms ride this wave to higher levels of capacity and competitiveness, rather than being crushed by it? This chapter has proposed a three-part strategy.

First, launch a Digital FDI enabling project (DEP) to identify and implement enabling policies, regulations, and measures to create a digital friendly investment climate. To carry out such projects, policymakers can draw from a Digital FDI framework, methodology, and extant survey data. They can also orient DEPs to boosting the digital capacity of SMEs.

Second, until a DEP can be launched, a SMART test can be used to see where there might be limiting factors holding back Digital FDI. Indicators can pinpoint problems, and tools their resolution.

Third, target FDI reform, promotion, and facilitation to sectors that are digital enablers across the economy. Six sectors have been proposed, two of which are suggested to be as structurally important (Communications and Software & IT services), and two that are supportive but relatively important (Electronic components and Semiconductors).

Each country will be at a different starting point in terms of FDI received across these sectors, and so the chapter has presented G20 economies with the evidence they need to benchmark their performance and thus prioritize reforms (see Appendix 2).

Why should the G20 act? G20 economies represent both the main source of outward Digital FDI and the main destination of inward Digital FDI, and so have an interest in facilitating and promoting these flows. In addition, since targeting Digital FDI is a new concept, G20 economies can play a leadership

[40] Herbert Smith Freehills, "Indonesia's New Investment List Increases FDI Opportunities for Foreign Investors", 5 March 2021, https://hsfnotes.com/indonesia/2021/03/05/indonesias-new-investment-list-increases-fdi-opportunities-for-foreign-investors/

[41] UNCTAD (2017), p. 187.

role in developing the elements to do so, and thereby accelerate both their recovery and global recovery following COVID-19.

Appendix 1

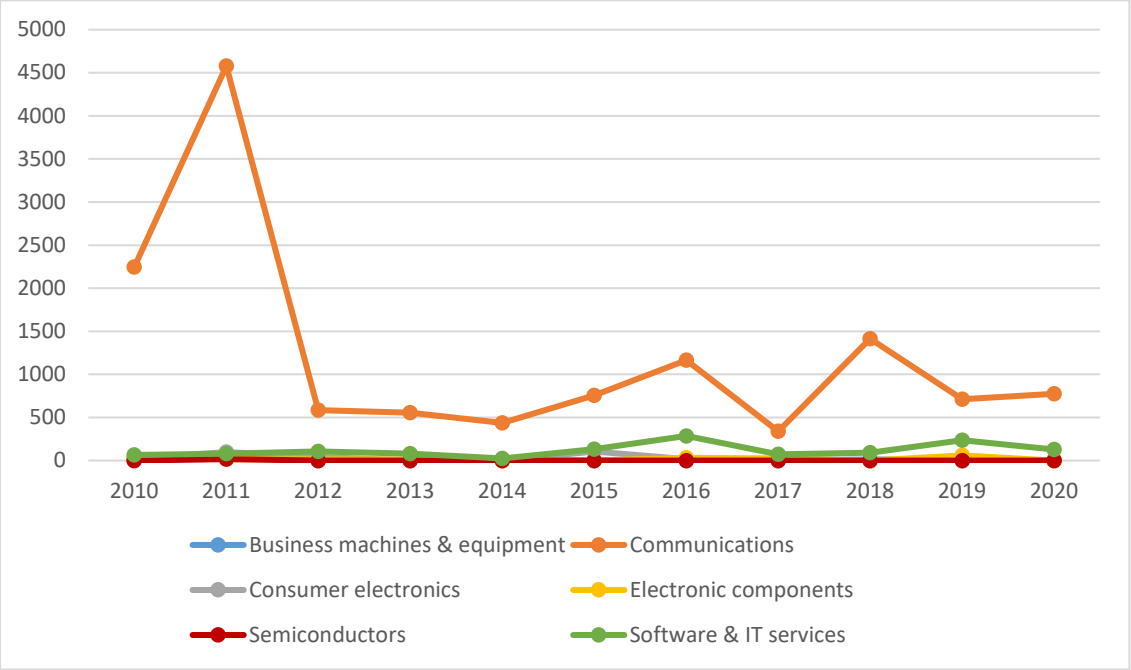
Implementing country	Event	Event date	Regulated economic activity
United States of America	U.S. tightens the review of ICT or services transactions from certain countries	2021-03-22	infrastructure provider, other service provider
Indonesia	Removal of FDI ban relating to telecommunication towers	2021-03-04	infrastructure provider
Indonesia	FDI liberalisation for investment in e-commerce providers	2021-03-04	e-commerce provider
Indonesia	FDI liberalistion for telecom and internet service providers	2021-03-04	infrastructure provider, other service provider
Indonesia	FDI liberalisation for broadcasting and related services	2021-03-04	other service provider
China	Scope of foreign investments subject to `National Security Review` expanded	2021-01-18	infrastructure provider
Australia	Government modifies the FDI regime	2021-01-01	infrastructure provider, other service provider
United States of America	FCC Report and Order regarding license applications involving foreign ownership in telecommunications sector	2020-12-28	infrastructure provider
China	Release of Encouraged Foreign Investment Catalogue - 2020 Edition: expands promoted sectors by 10%	2020-12-27	digital payment provider, ML and AI development provider
Philippines	Foreign ownership cap for digital banking providers	2020-12-23	digital payment provider
Philippines	Local operations requirement for digital banking providers	2020-12-23	digital payment provider
France	Government temporarily lowers control thresholds for FDI authorisations for the second time in a year	2020-12-18	infrastructure provider, other service provider
United States of America	Presidential Document by the Executive Office of the President Regarding the Acquisition of Musical.ly by ByteDance Ltd.	2020-11-12	platform provider
Austria	Changes to FDI screening regime introduced	2020-07-25	infrastructure provider, other service provider
United States of America	Executive Order 13913 Establishing the Committee for the Assessment of Foreign Participation in the United States Telecommunications Services Sector	2020-04-20	infrastructure provider
France	Government adds new sectors to the FDI screening mechanism and lowers the triggering threshold	2020-04-01	infrastructure provider, other service provider
United States of America	U.S. Department of Treasury releases CFIUS Regulations Implementing FDI screening	2020-01-17	infrastructure provider, other service provider

Source: Global Trade Alert, "Digital Policy Alert", https://www.globaltradealert.org/digital_policy (accessed 1 May 2021)

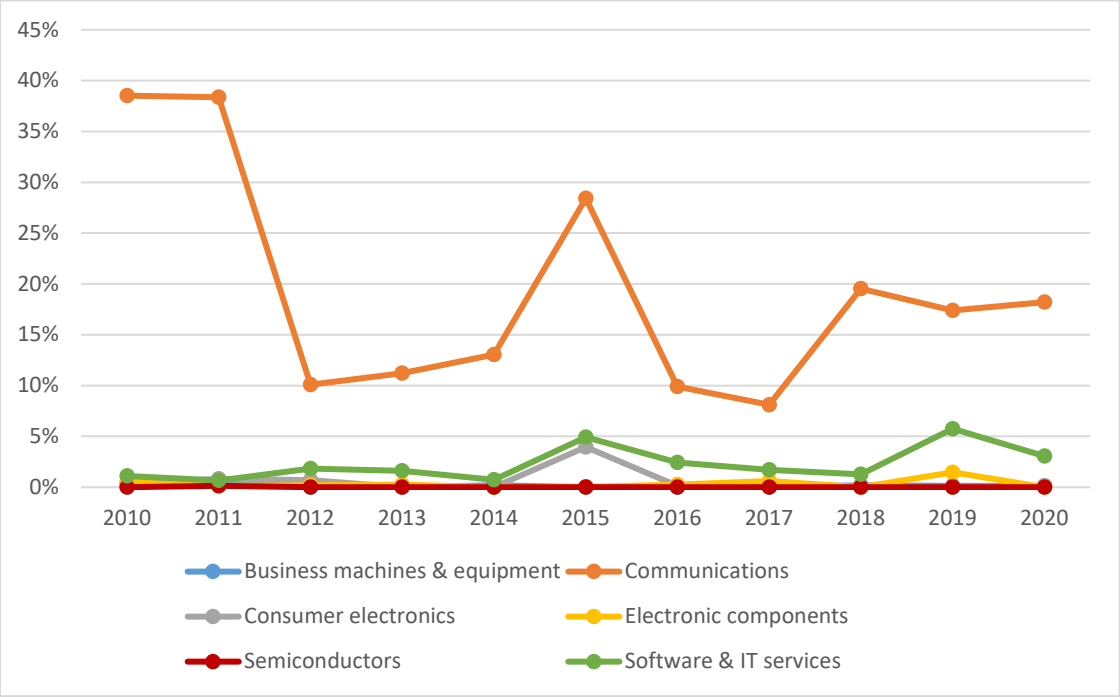
Appendix 2

Argentina

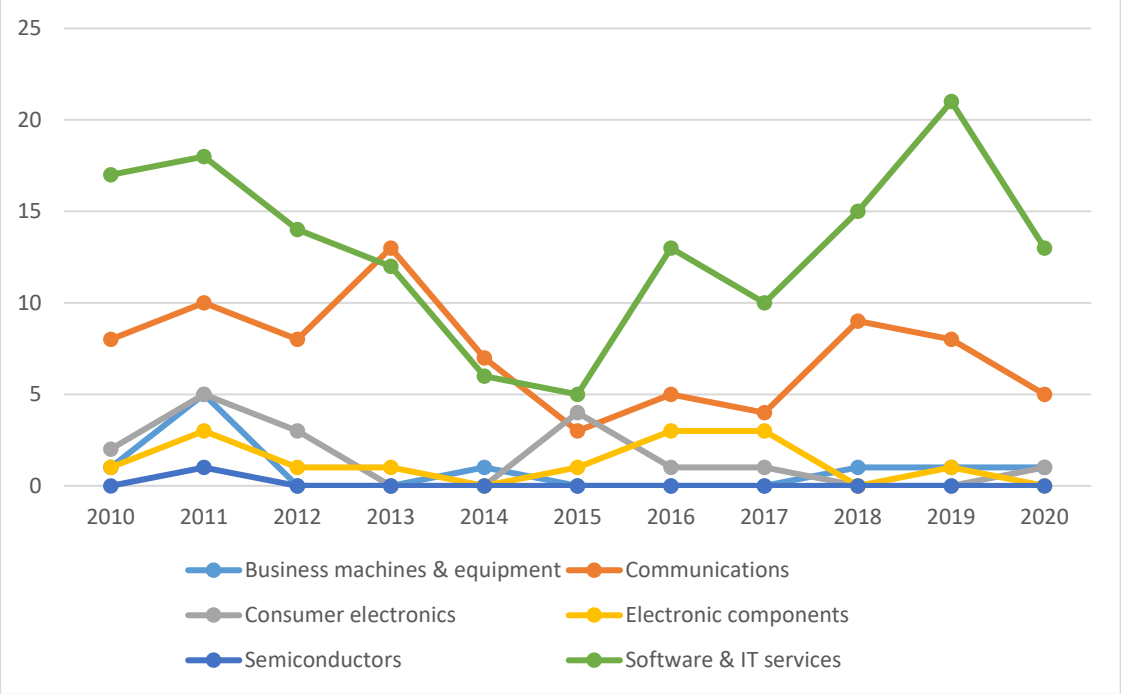
Argentina's IFDI capital received per digitally enabling sector (USD million)



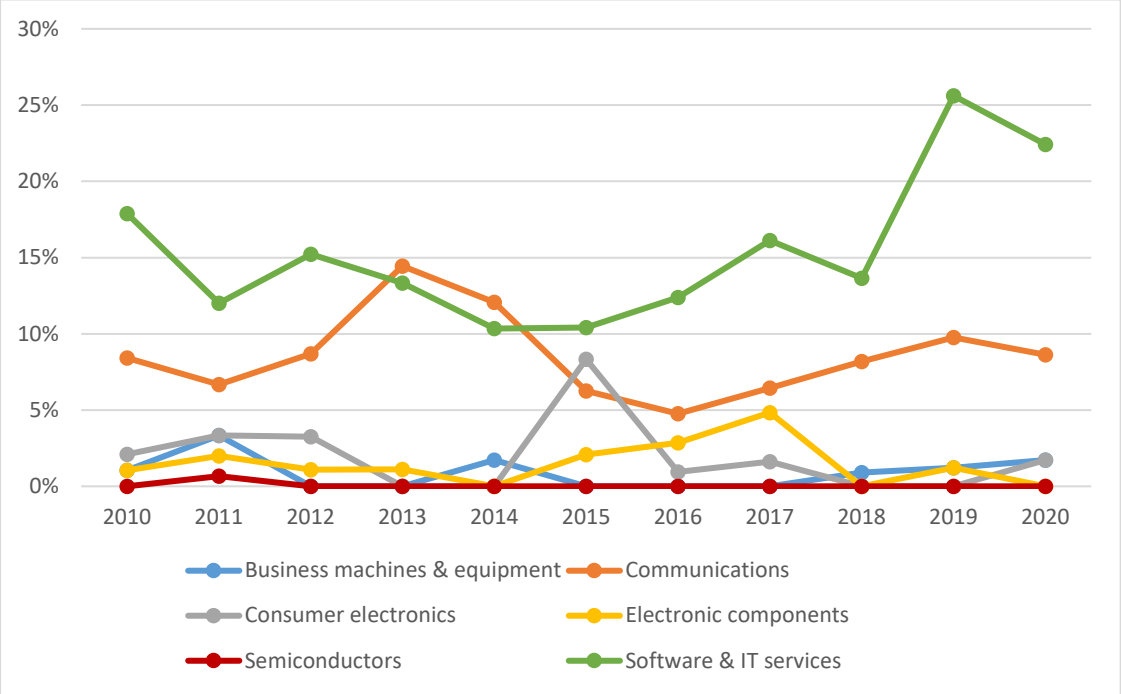
Argentina's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Argentina's number of IFDI projects per digitally enabling sector

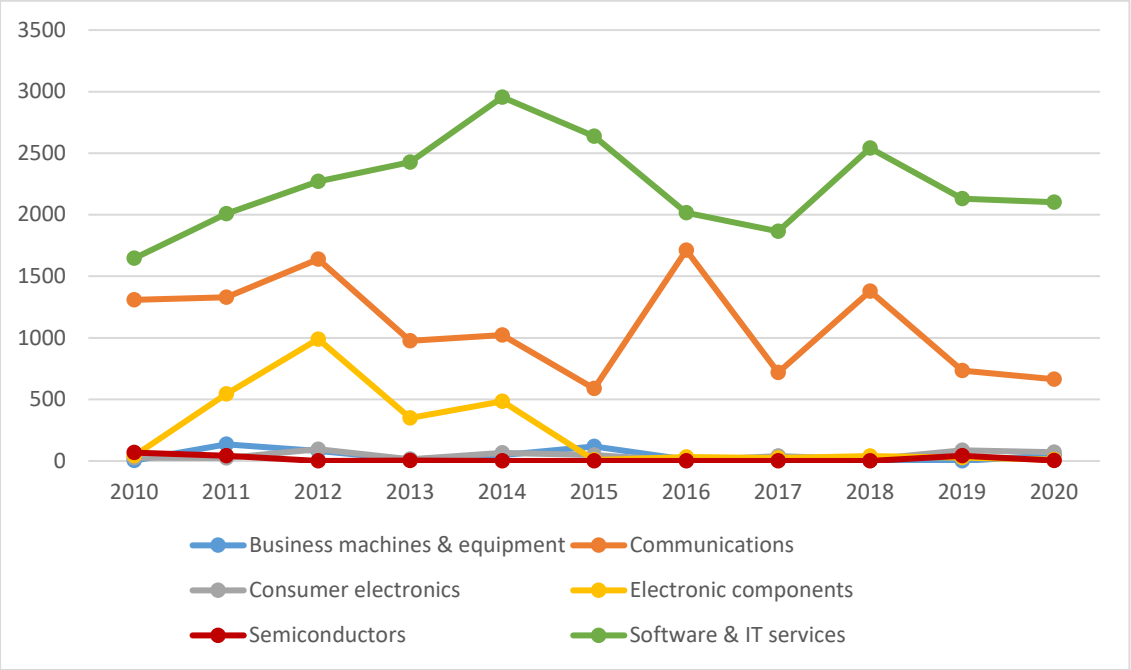


Argentina's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

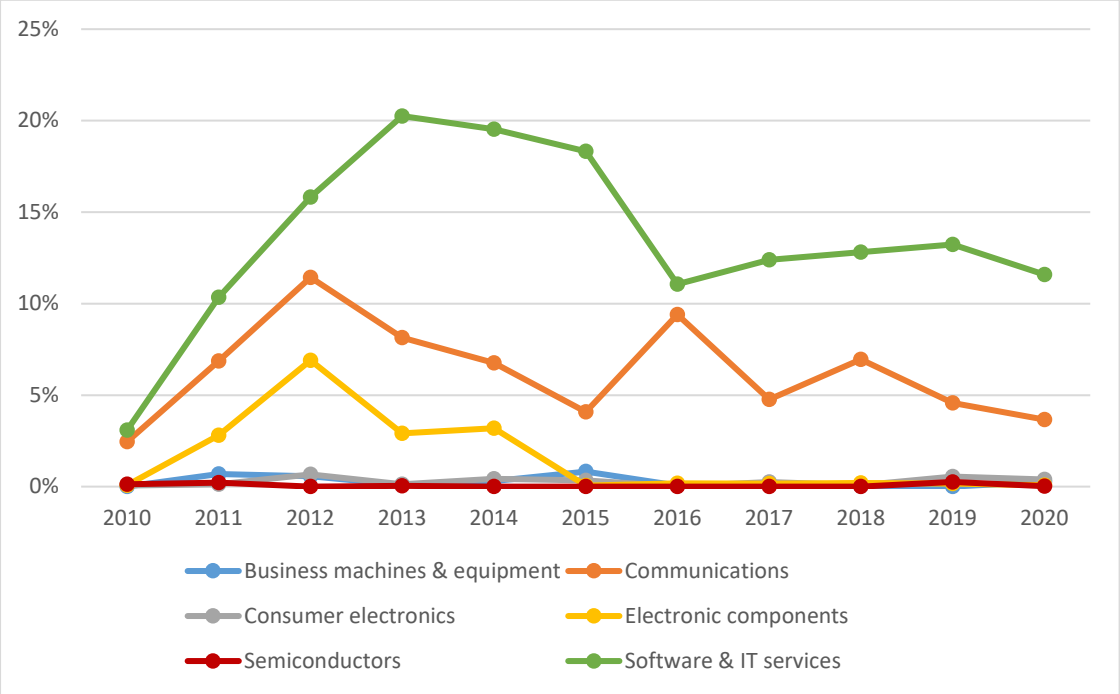


Australia

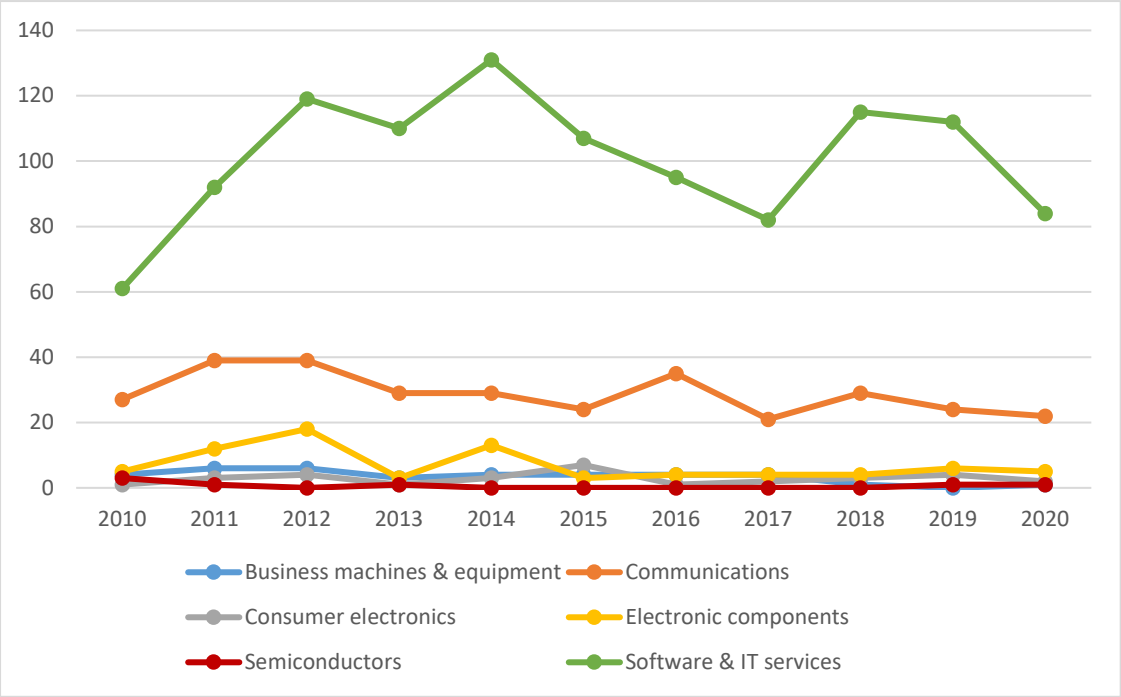
Australia's IFDI capital received per digitally enabling sector (USD million)



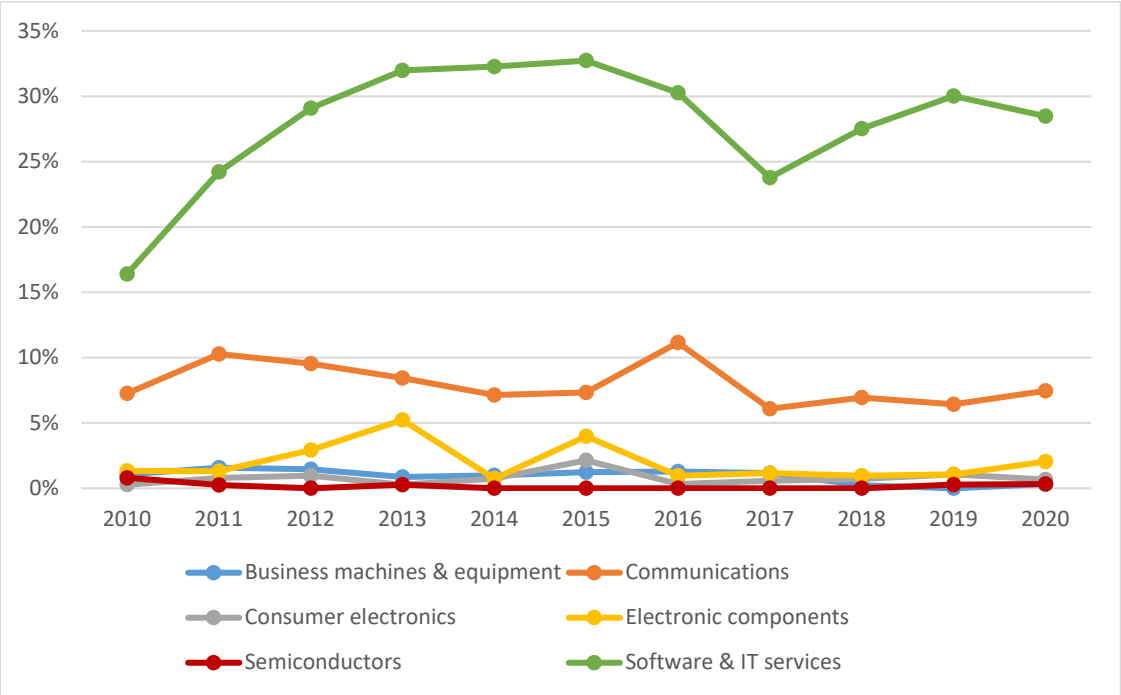
Australia's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Australia's number of IFDI projects per digitally enabling sector

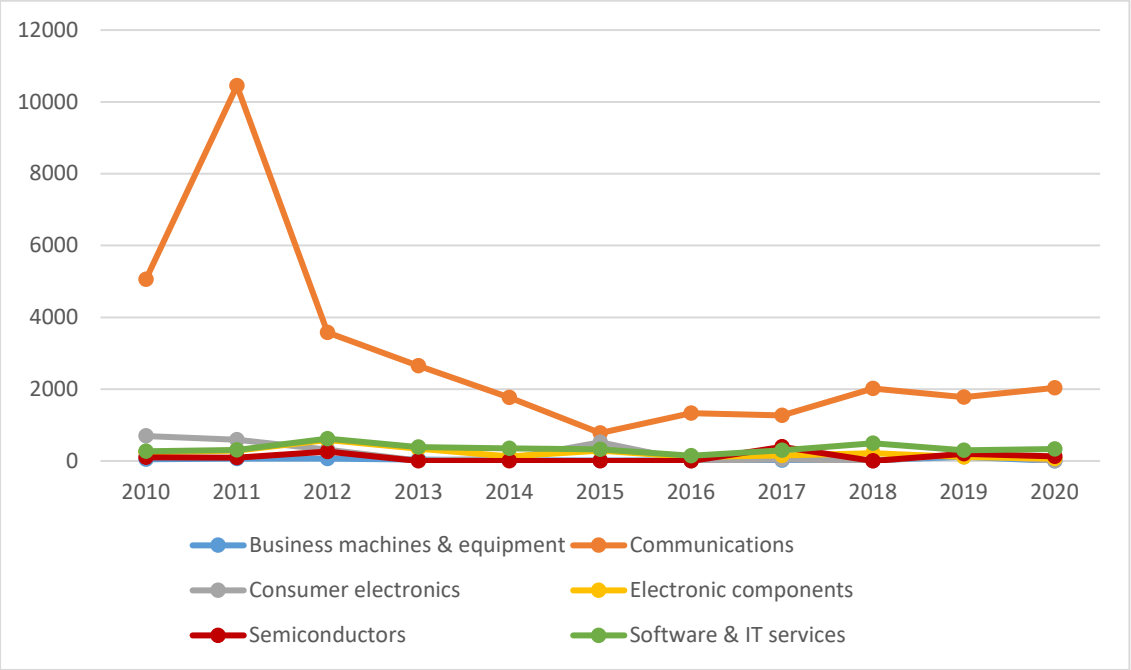


Australia's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)



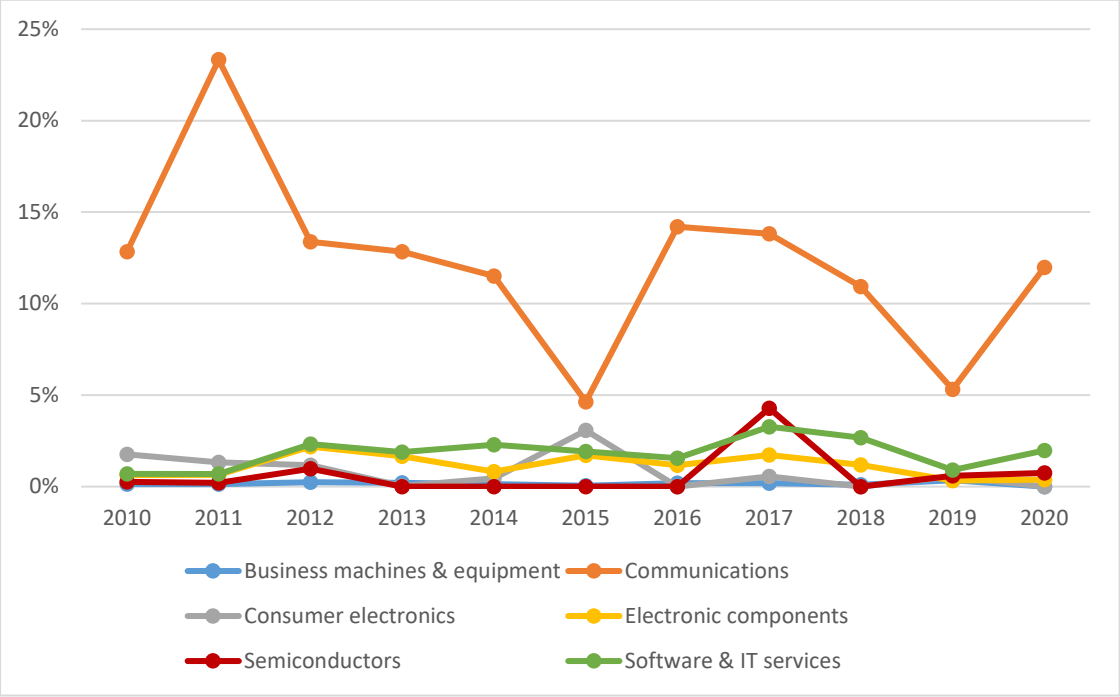
Brazil

Brazil's IFDI capital received per digitally enabling sector (USD million)

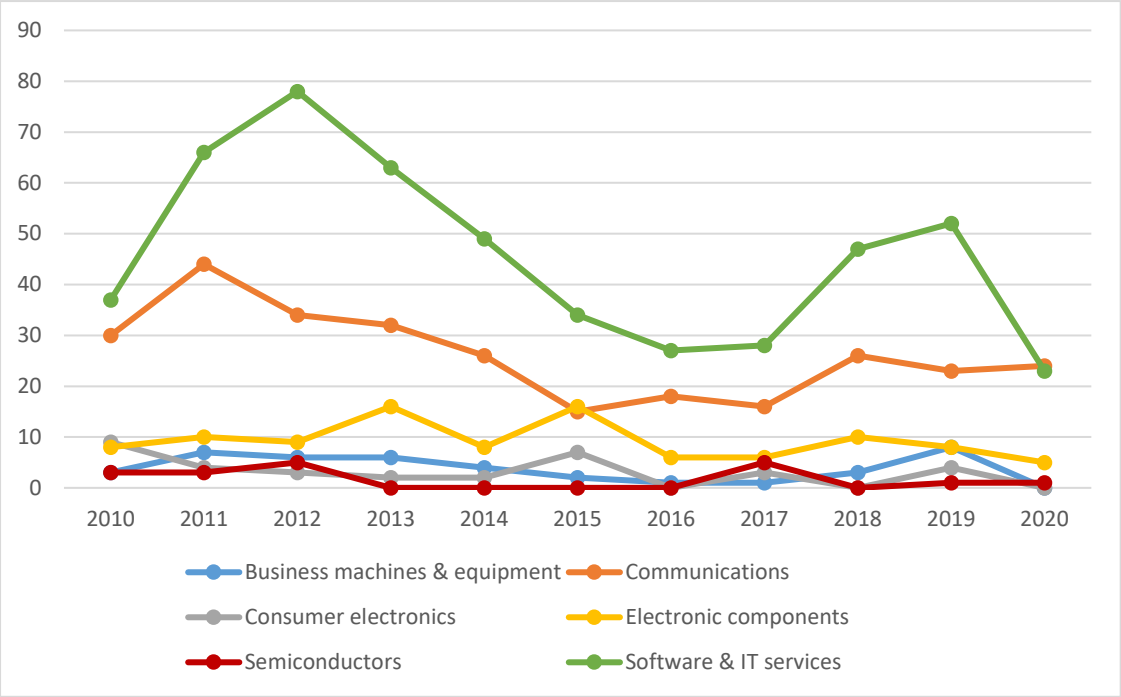


** In USD million*

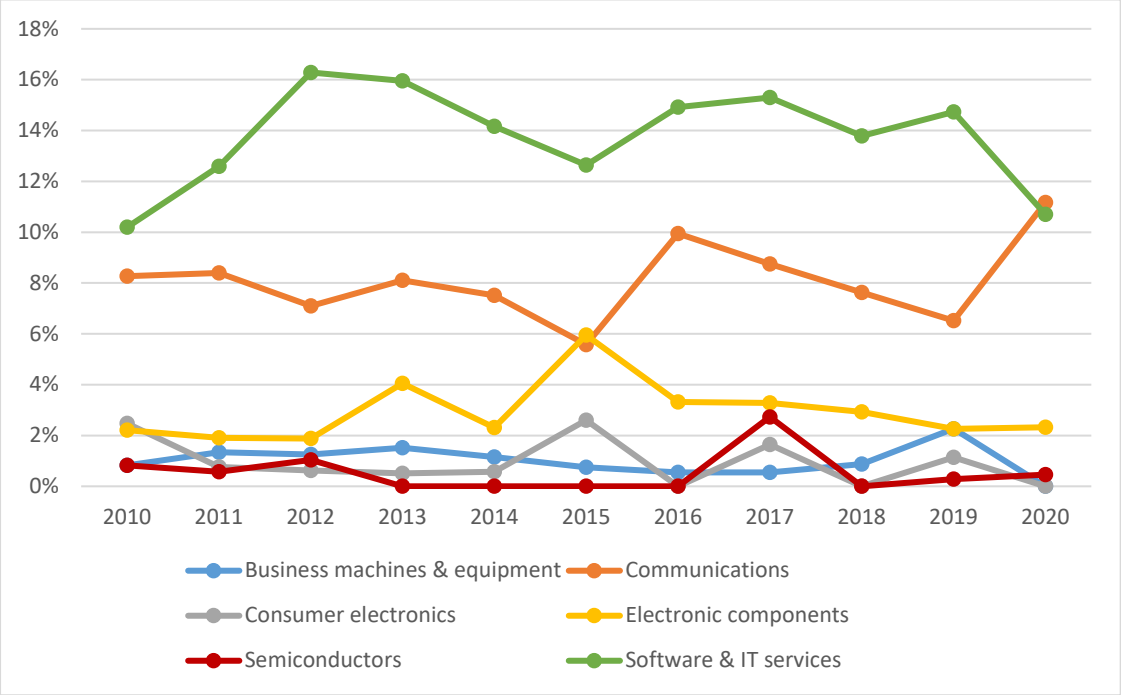
Brazil's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Brazil's number of IFDI projects per digitally enabling sector

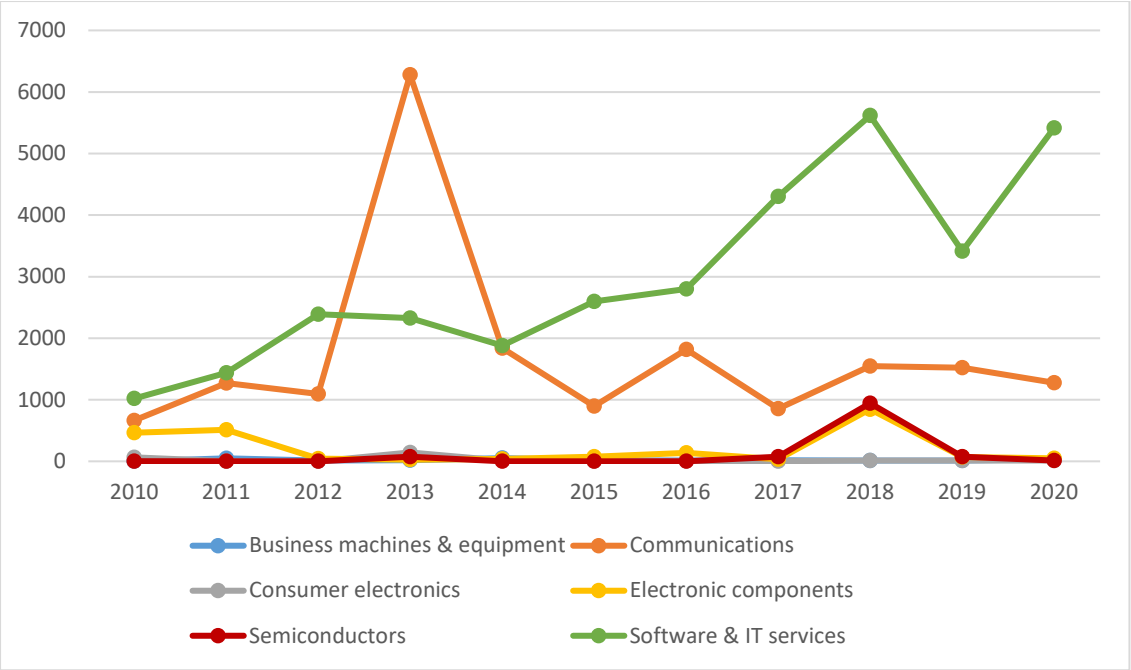


Brazil's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

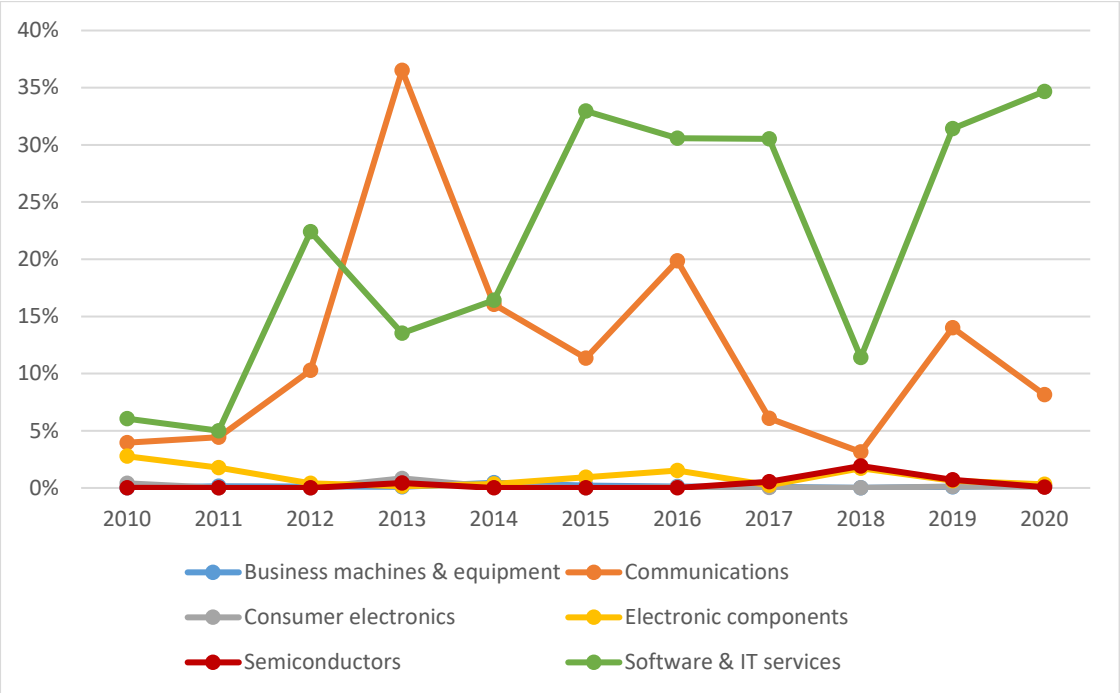


Canada

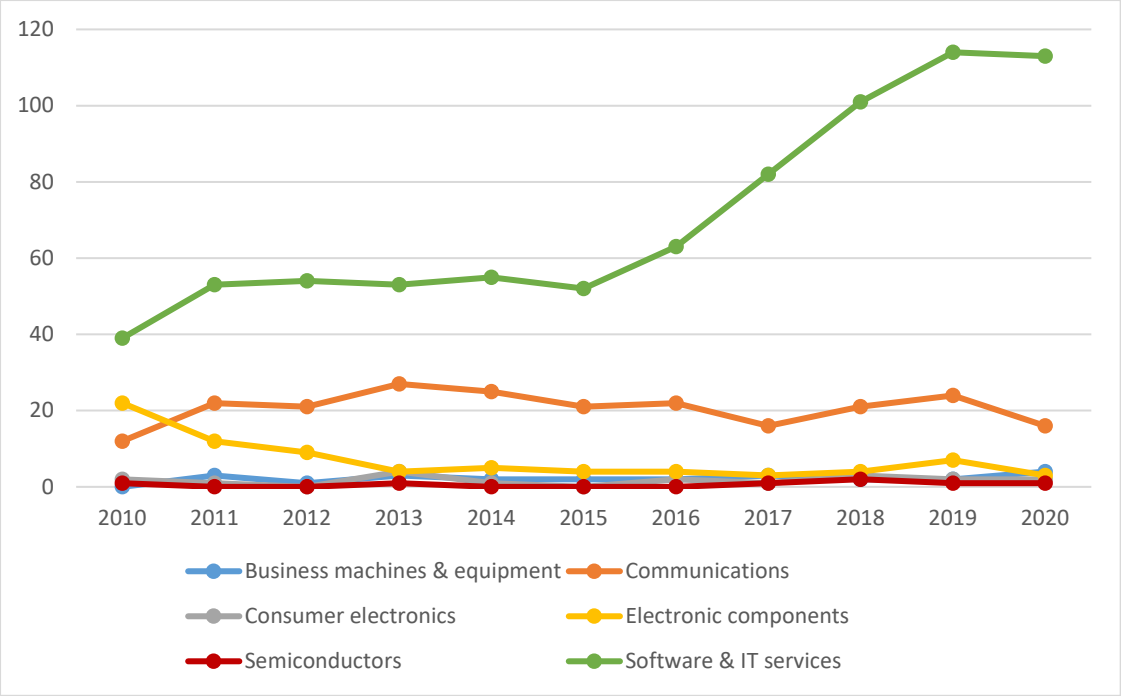
Canada's IFDI capital received per digitally enabling sector (USD million)



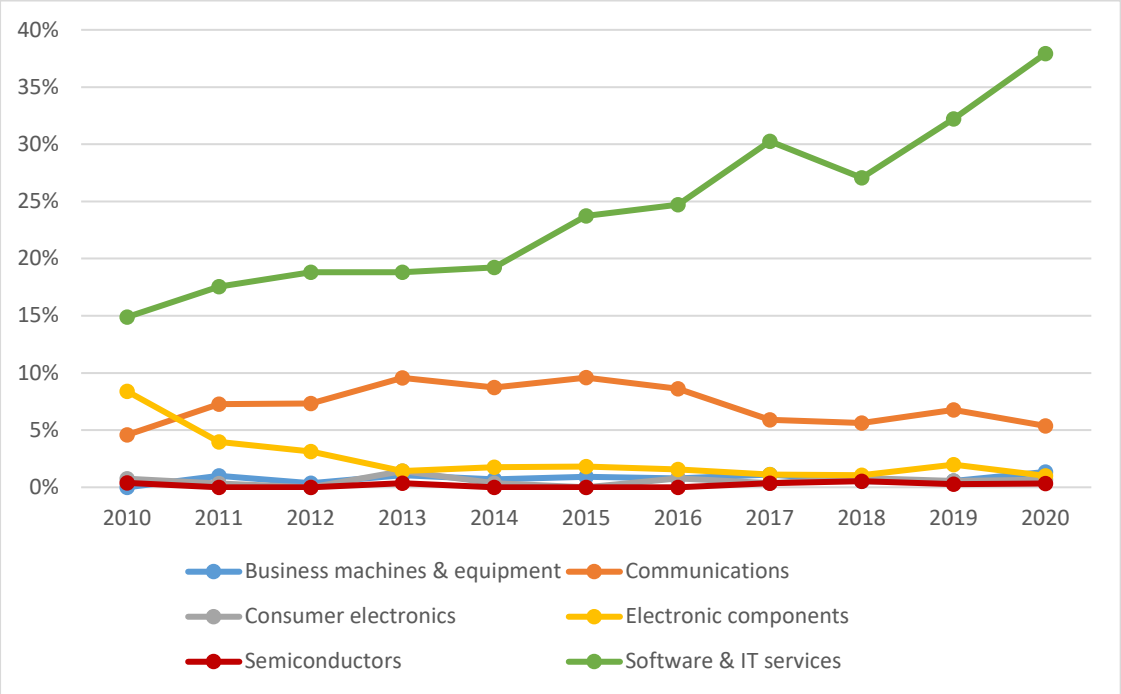
Canada's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects



Canada's number of IFDI projects per digitally enabling sector

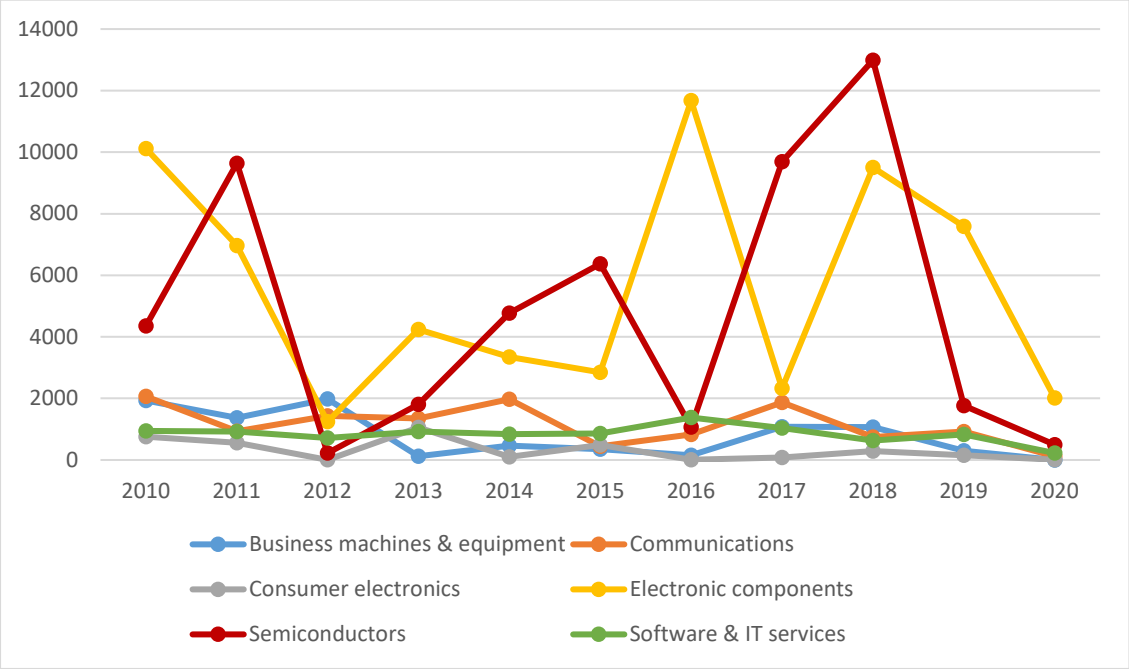


Canada's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

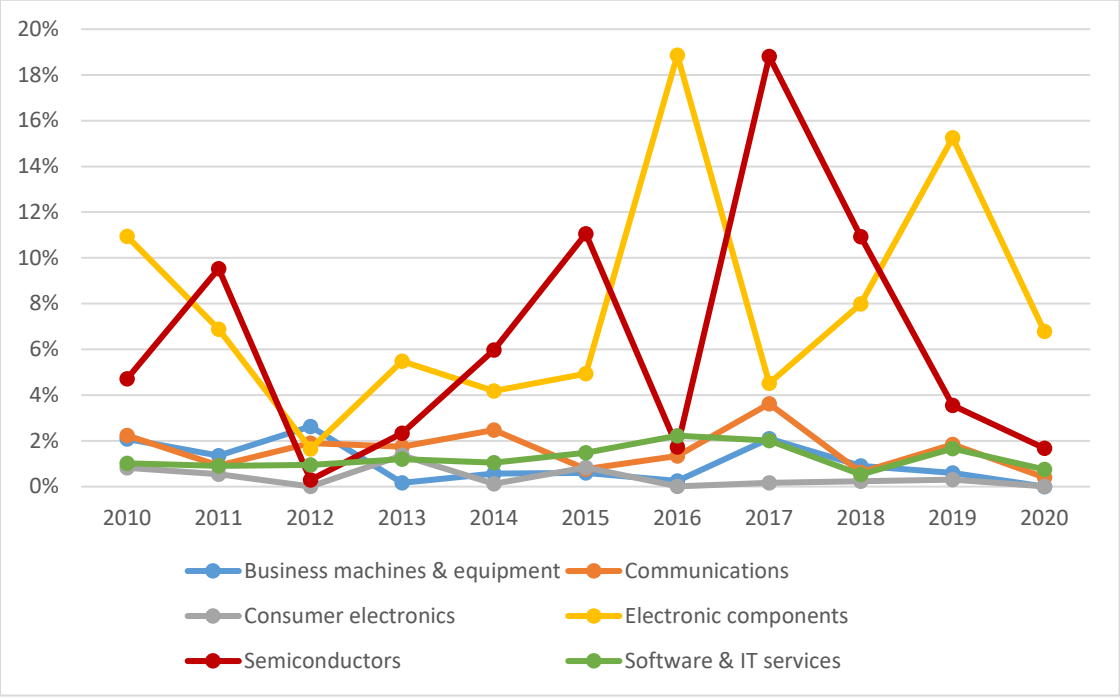


China

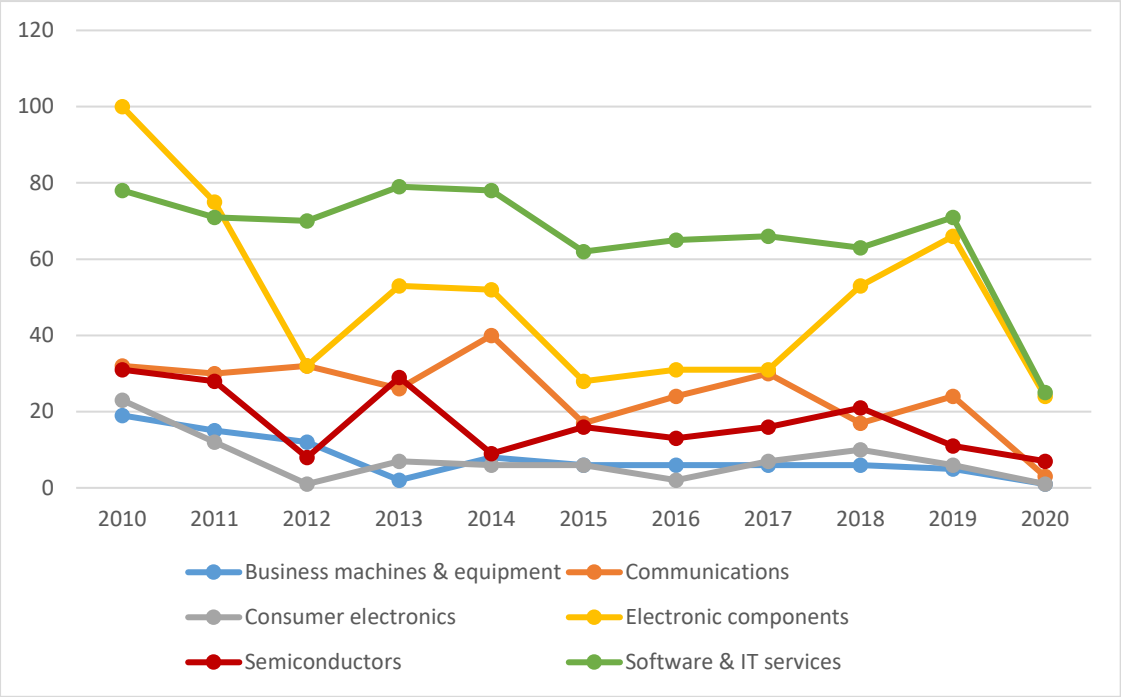
China's IFDI capital received per digitally enabling sector (USD million)



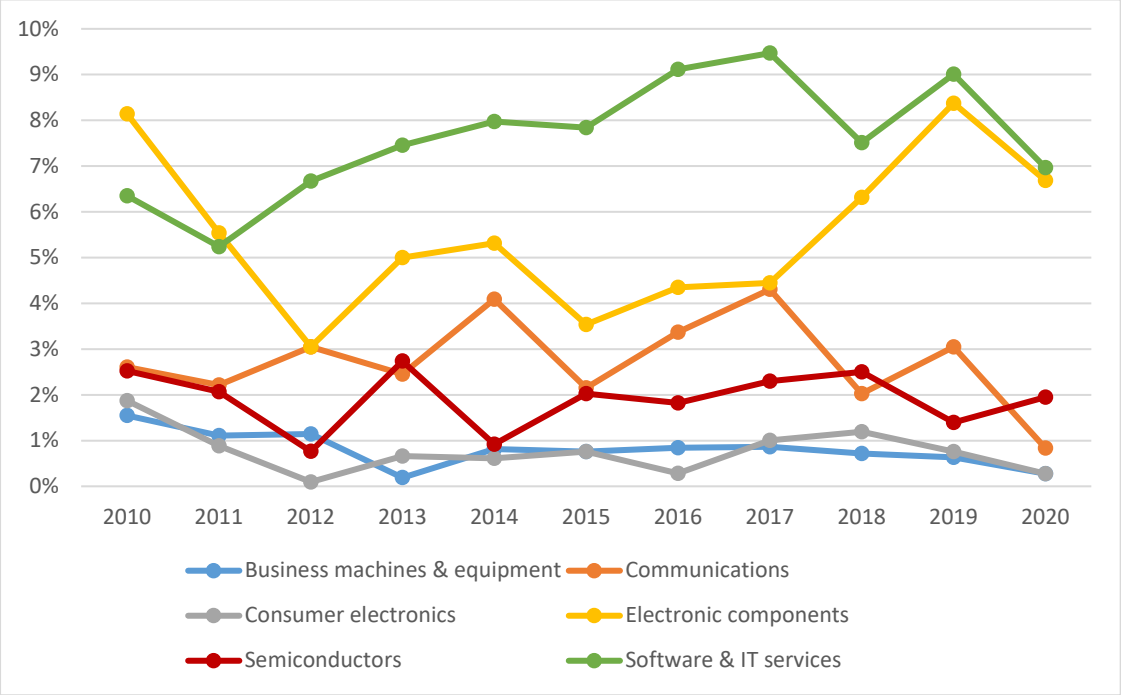
China's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



China's number of IFDI projects per digitally enabling sector

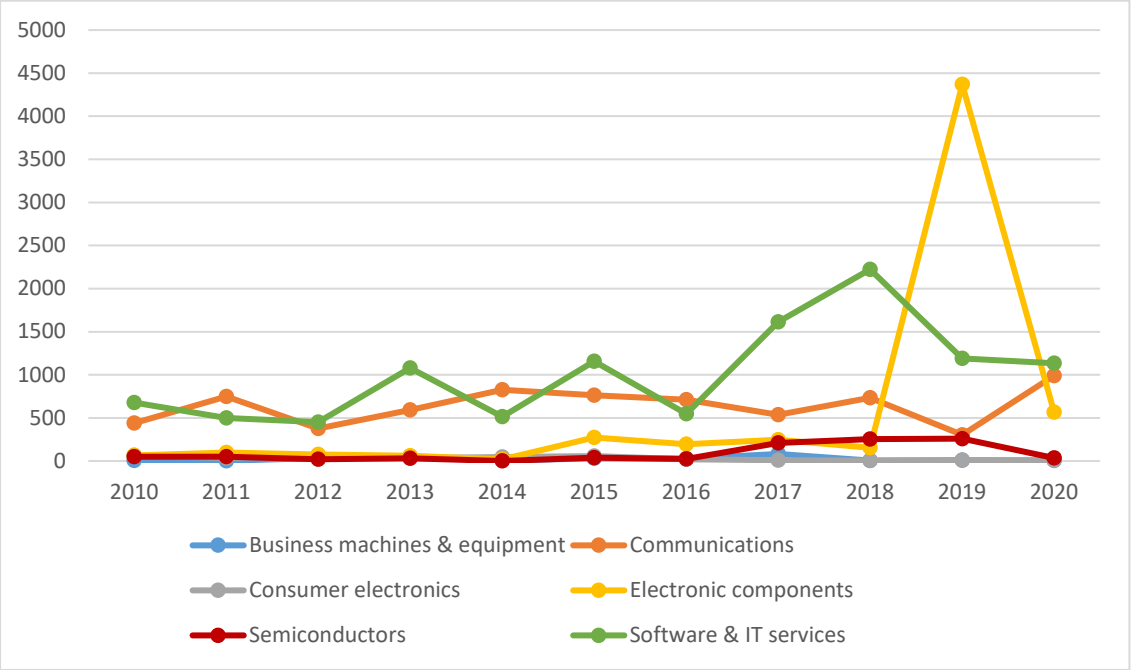


China's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

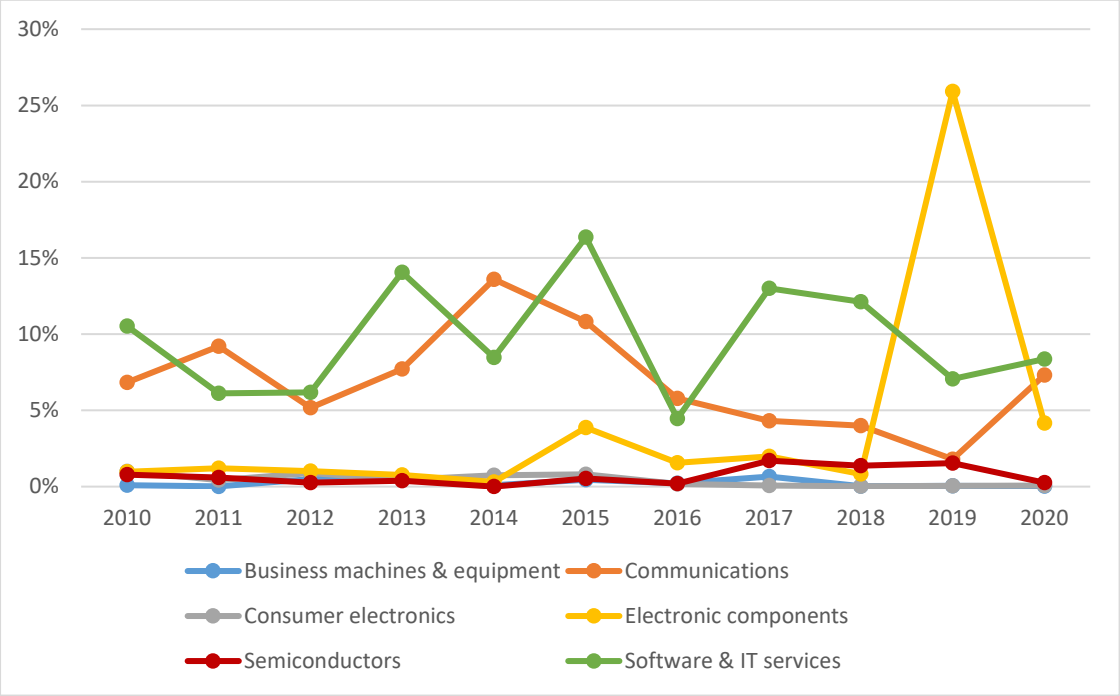


France

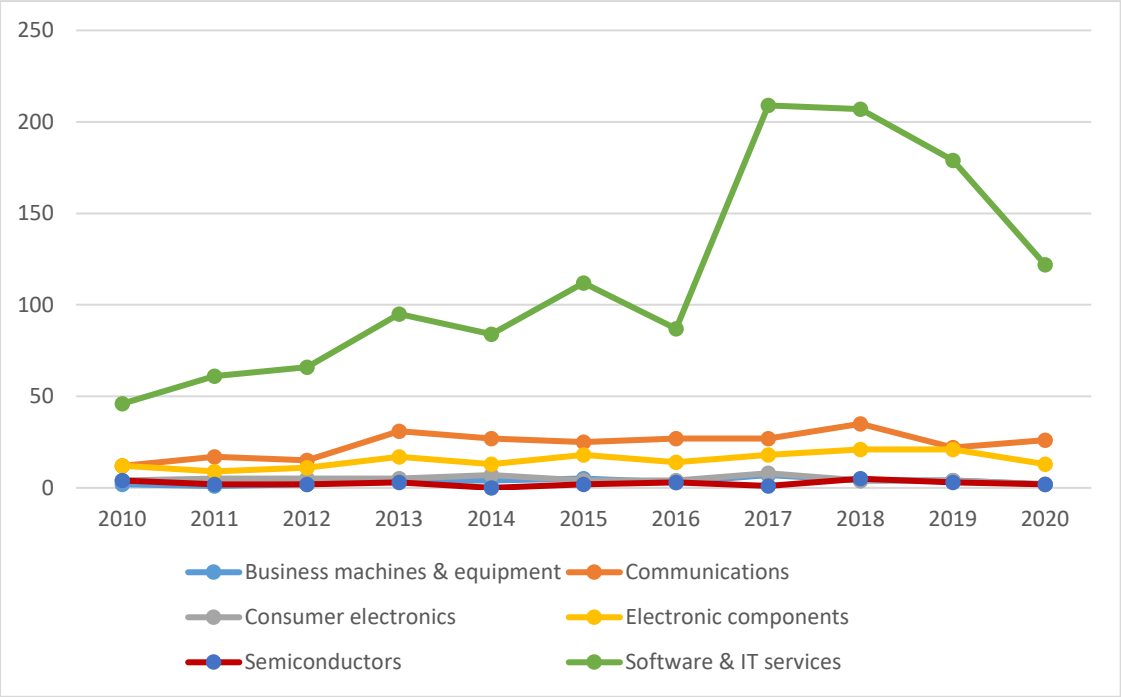
France's IFDI capital received per digitally enabling sector (USD million)



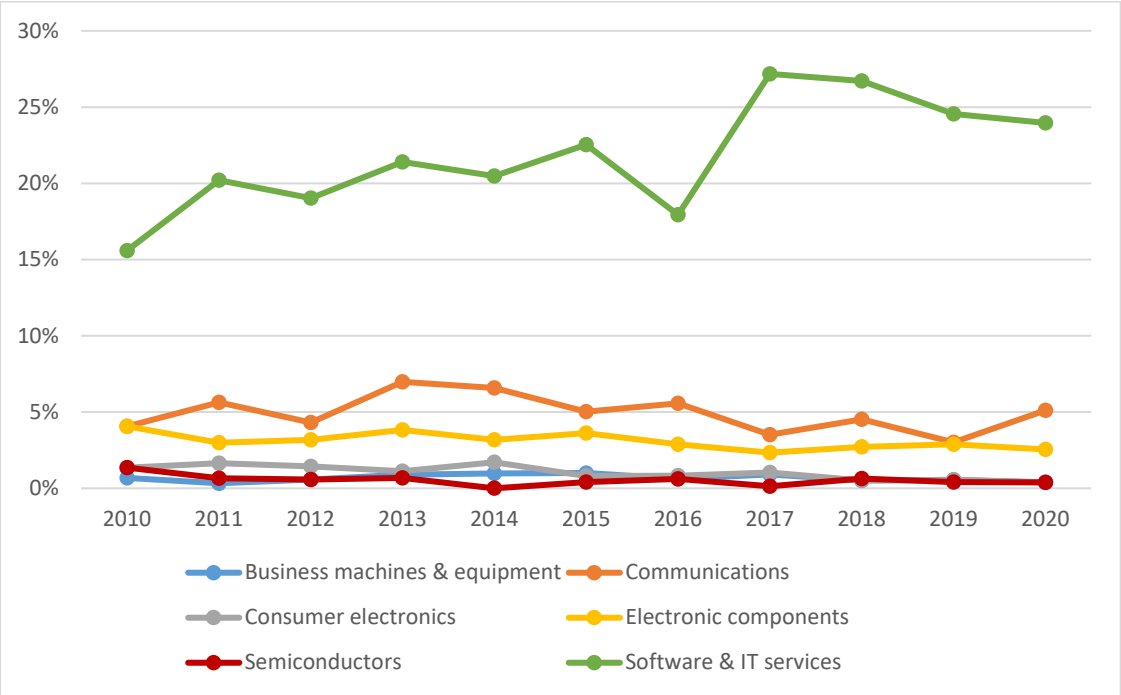
France's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



France's number of IFDI projects per digitally enabling sector

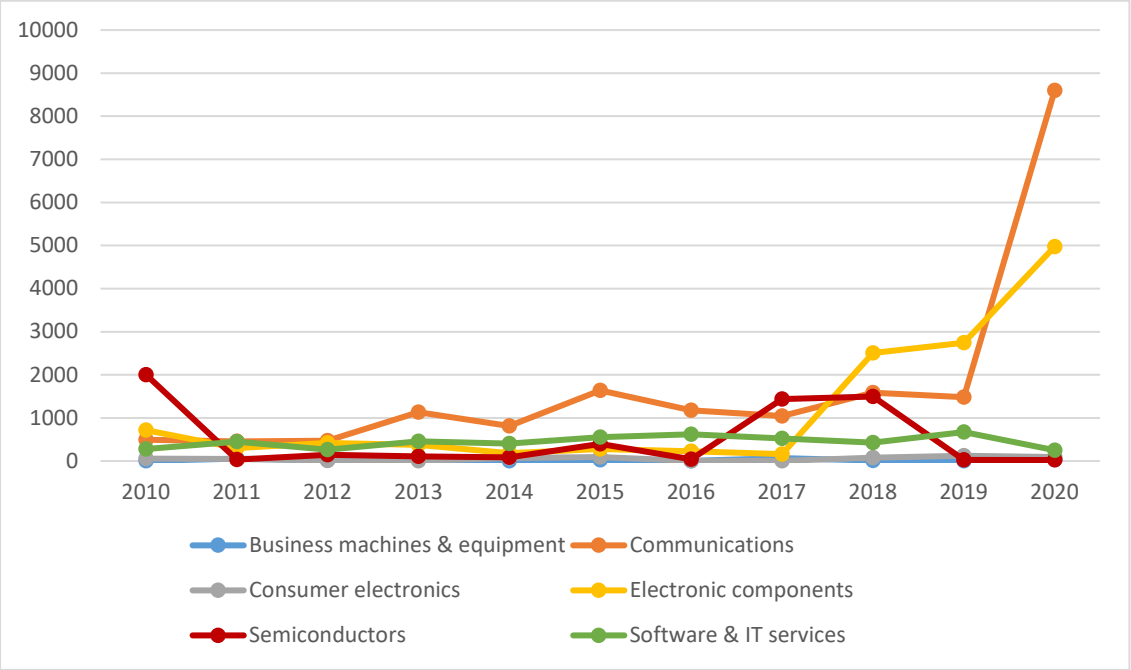


France's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

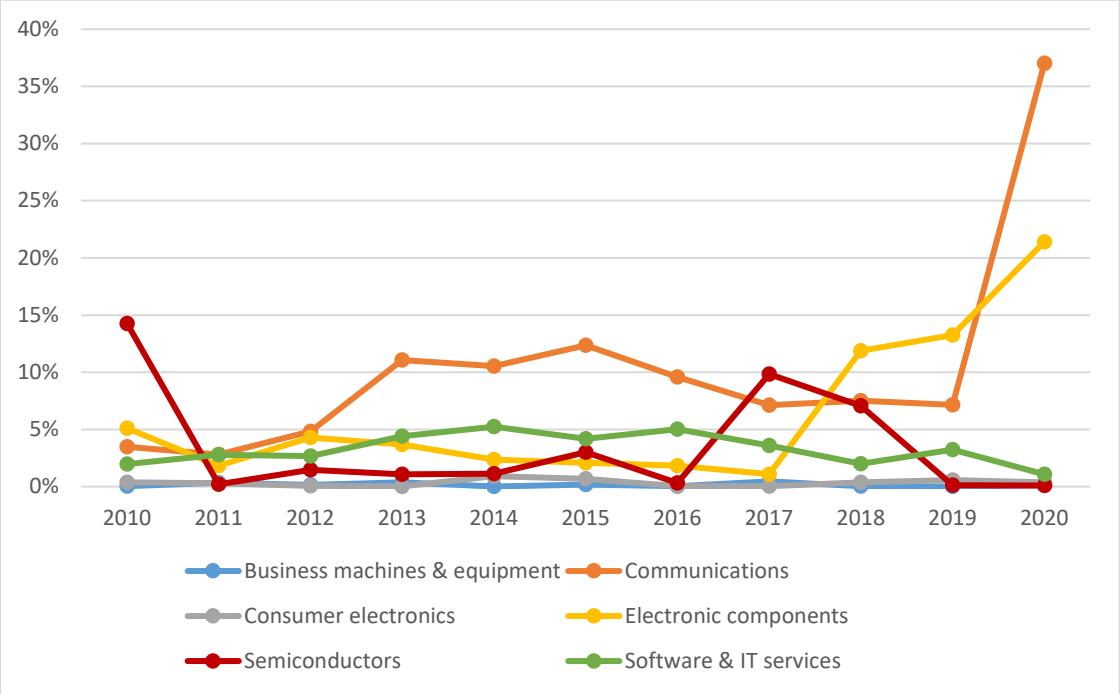


Germany

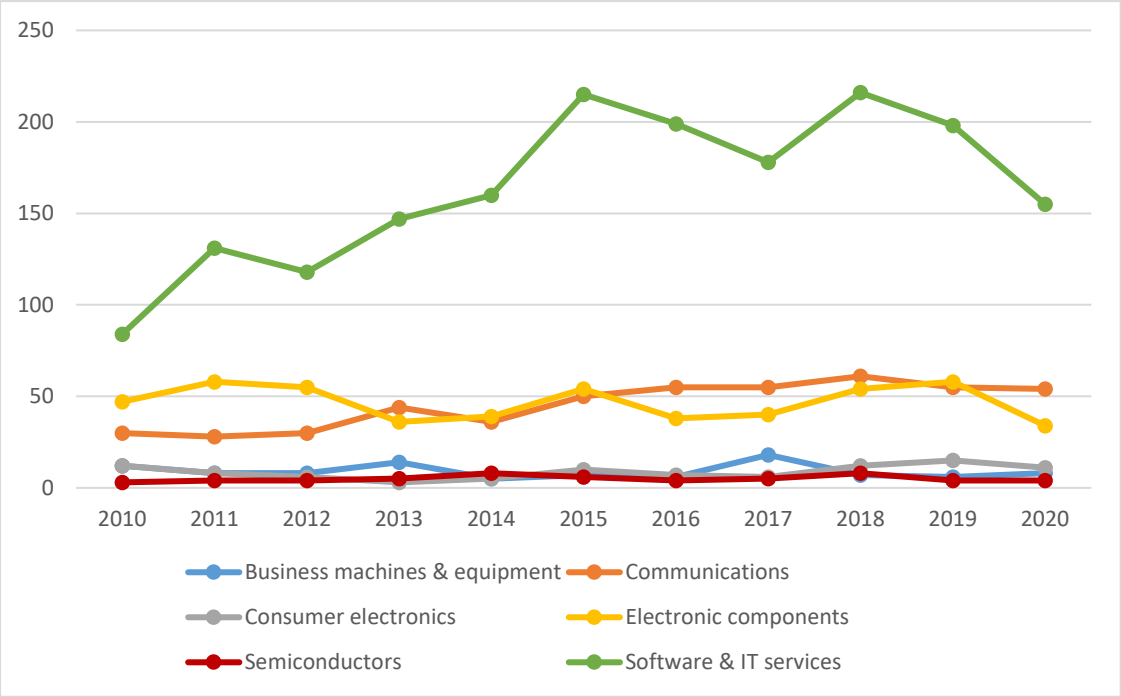
Germany's IFDI capital received per digitally enabling sector (USD million)



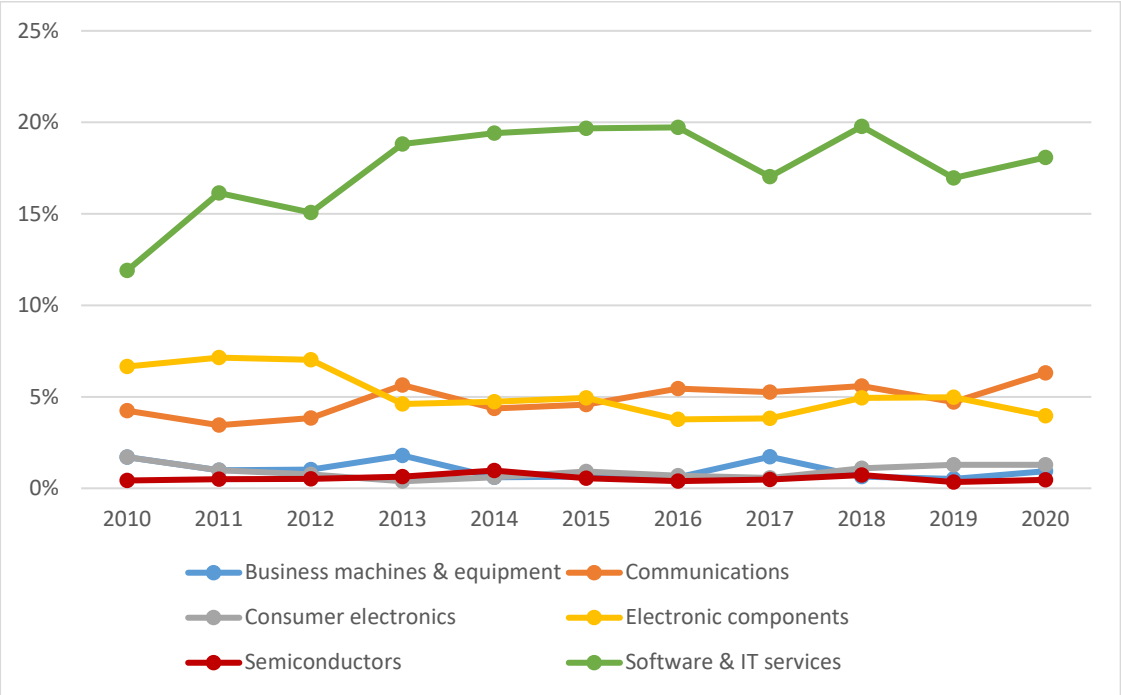
Germany's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Germany's number of IFDI projects per digitally enabling sector

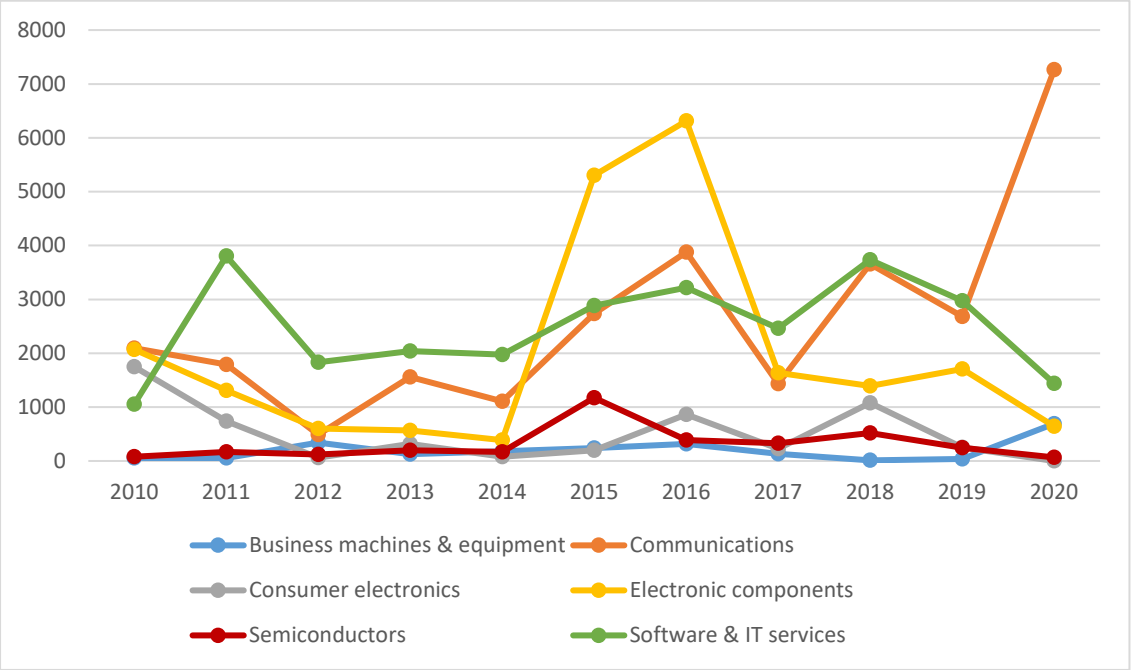


Germany's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

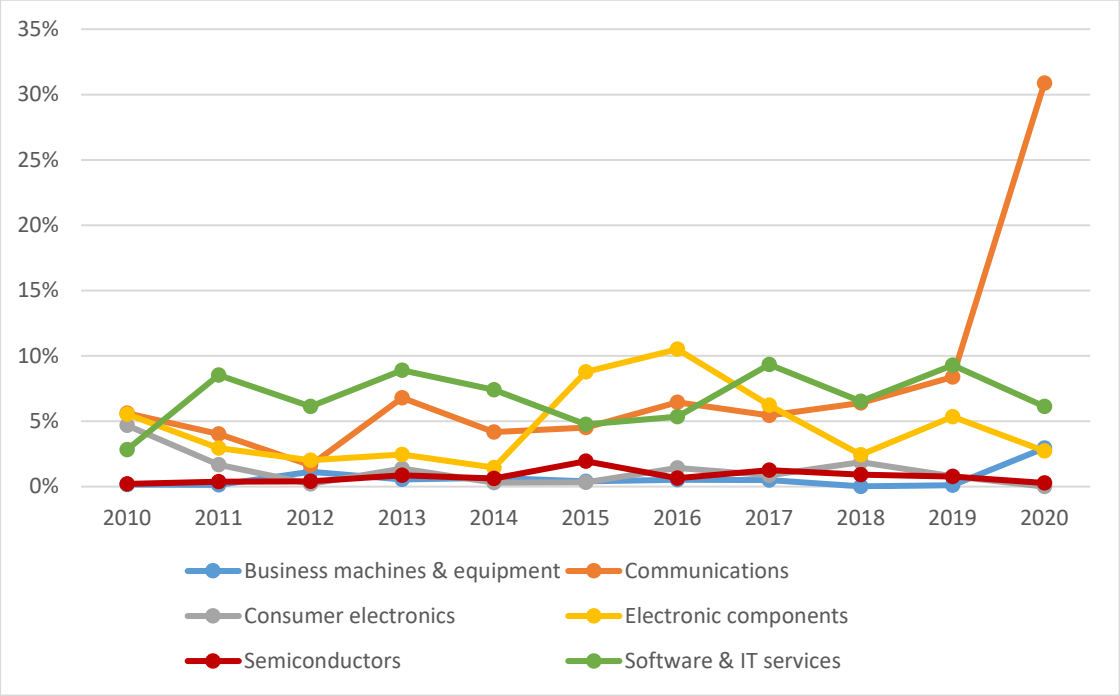


India

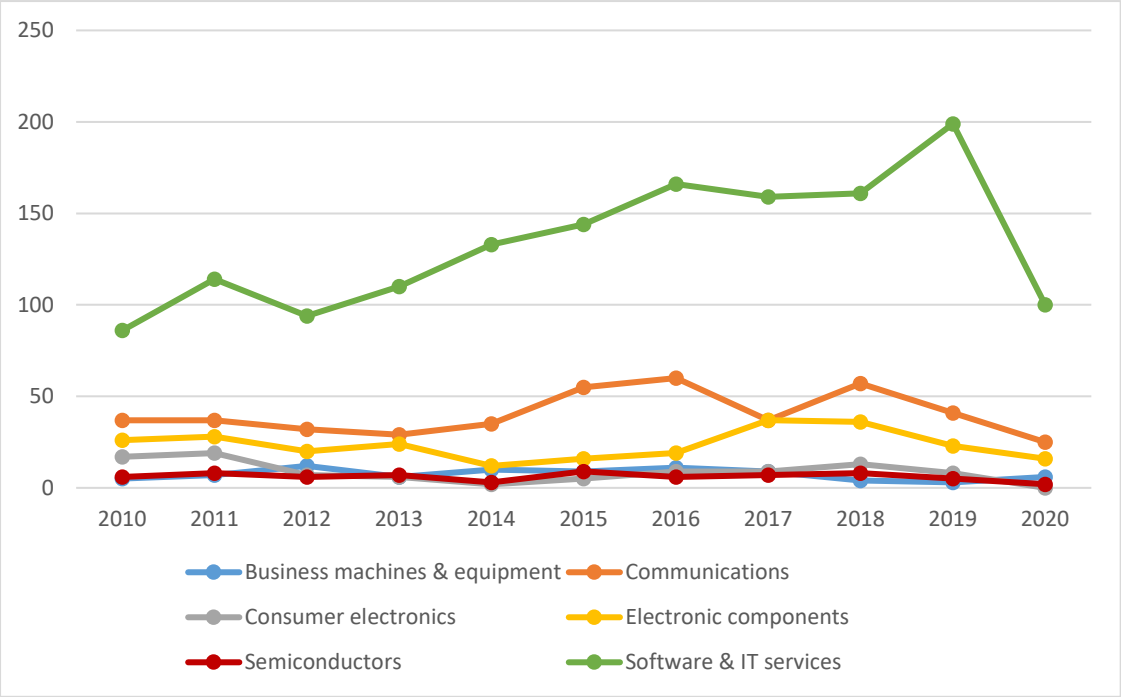
India's IFDI capital received per digitally enabling sector (USD million)



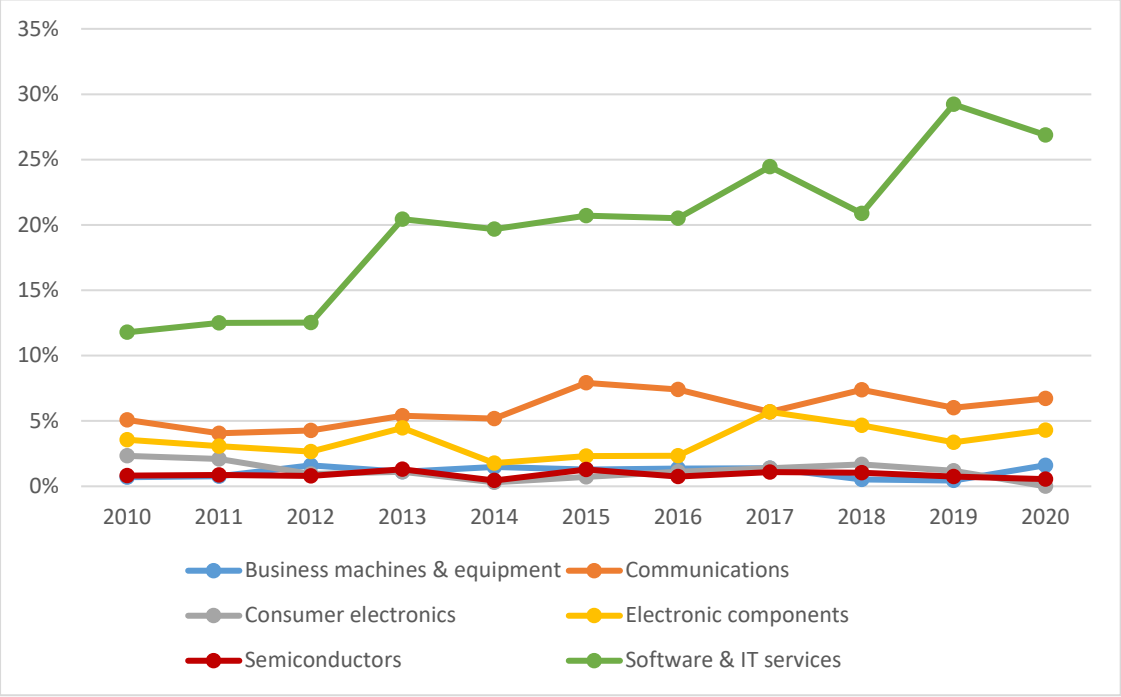
India's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



India's number of IFDI projects per digitally enabling sector

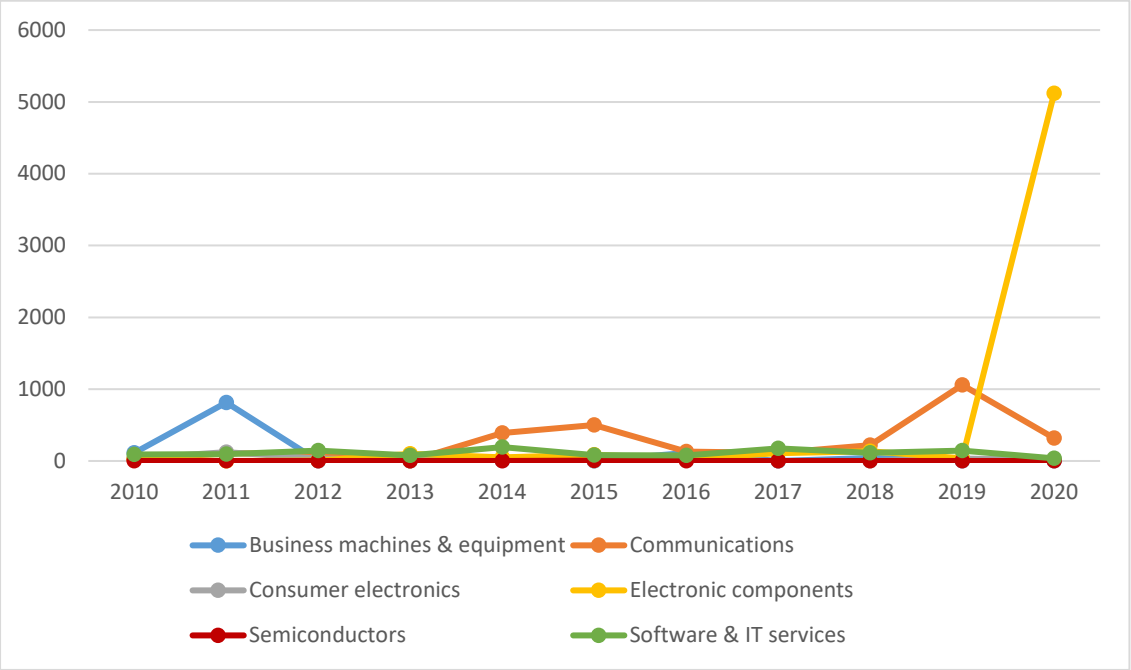


India's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

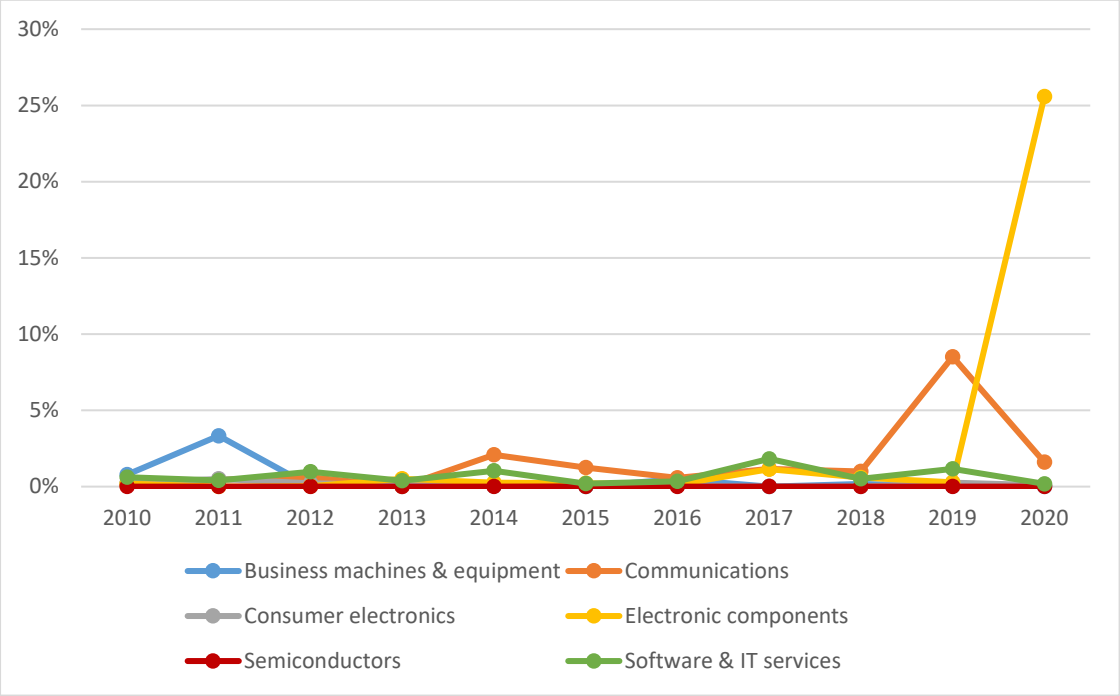


Indonesia

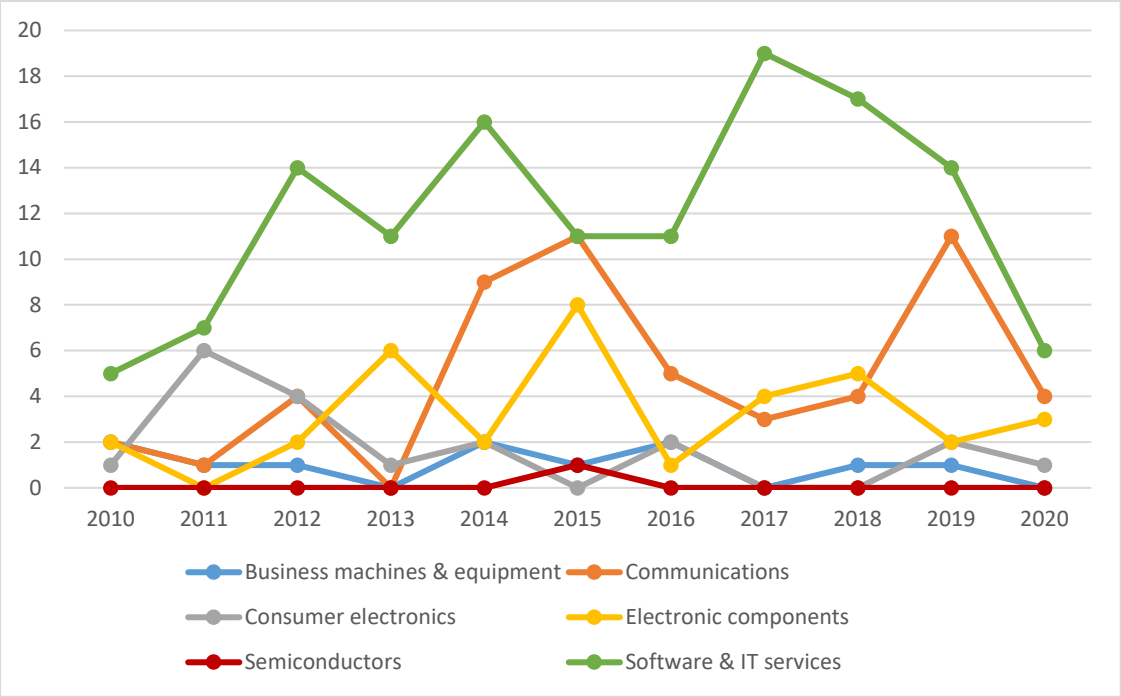
Indonesia's IFDI capital received per digitally enabling sector (USD million)



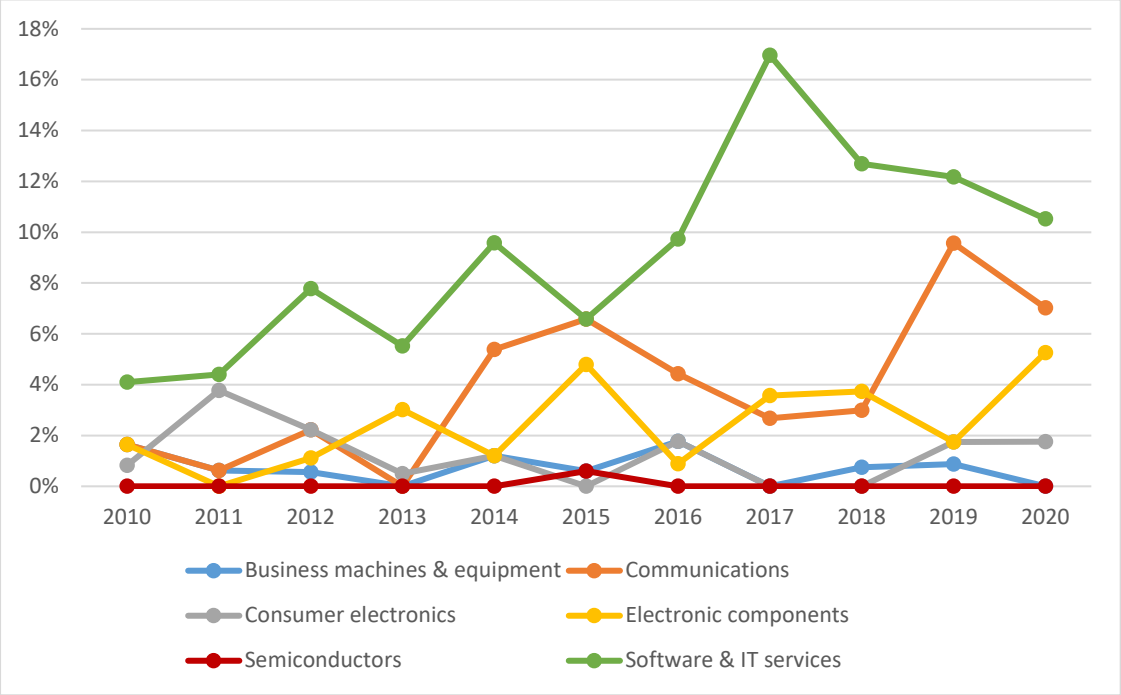
Indonesia's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Indonesia's number of IFDI projects per digitally enabling sector

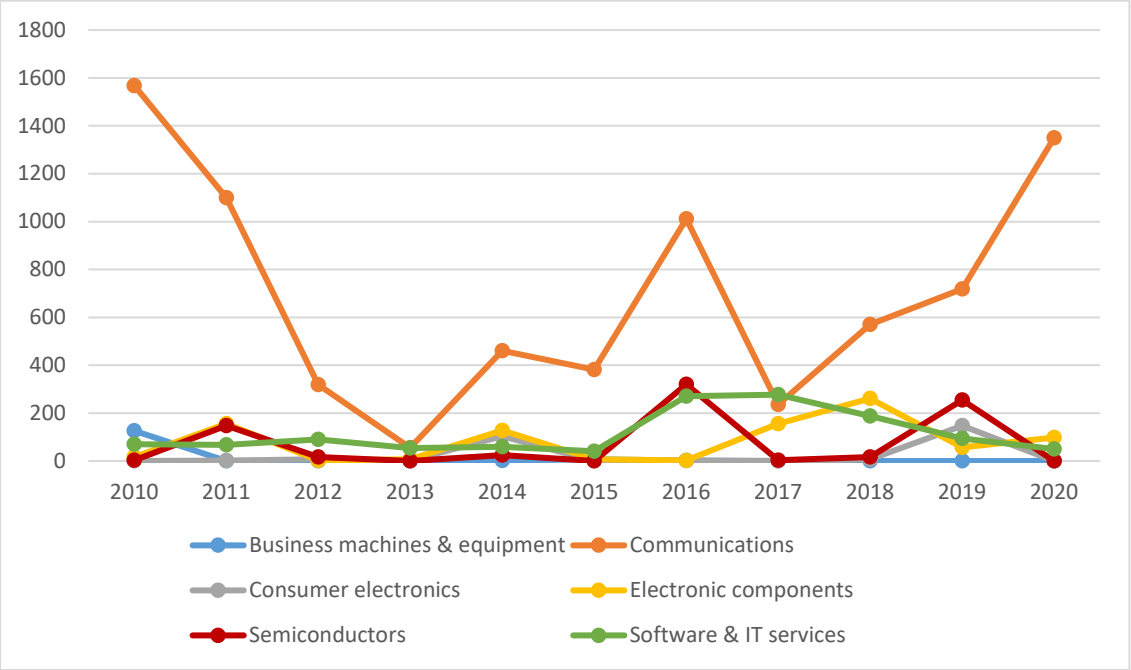


Indonesia's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

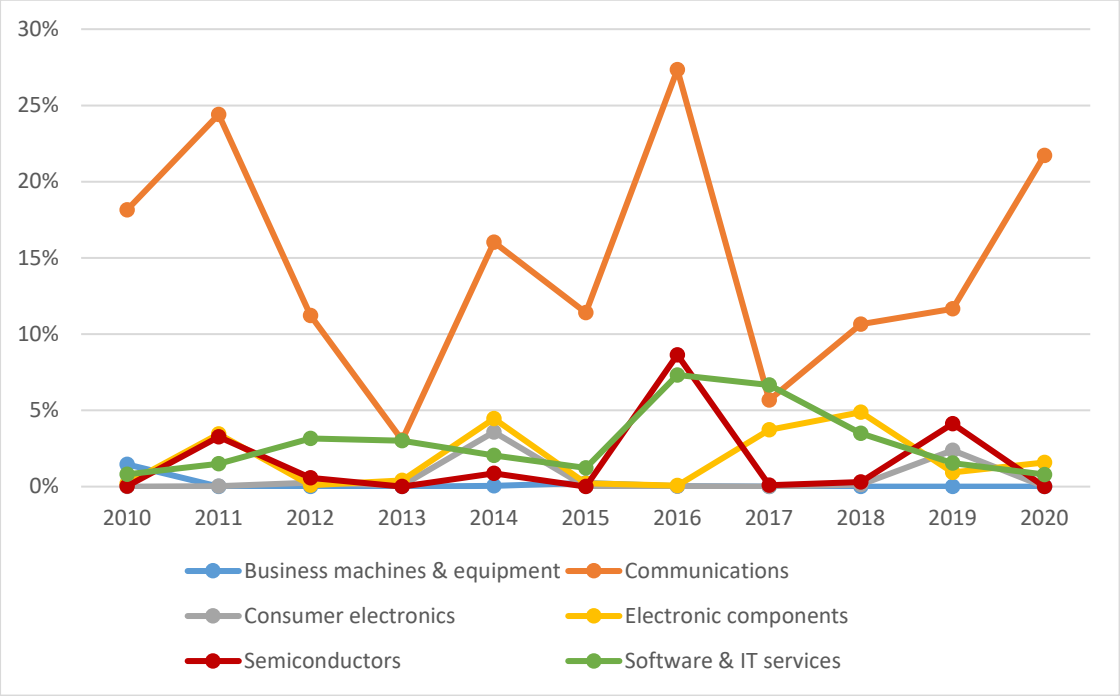


Italy

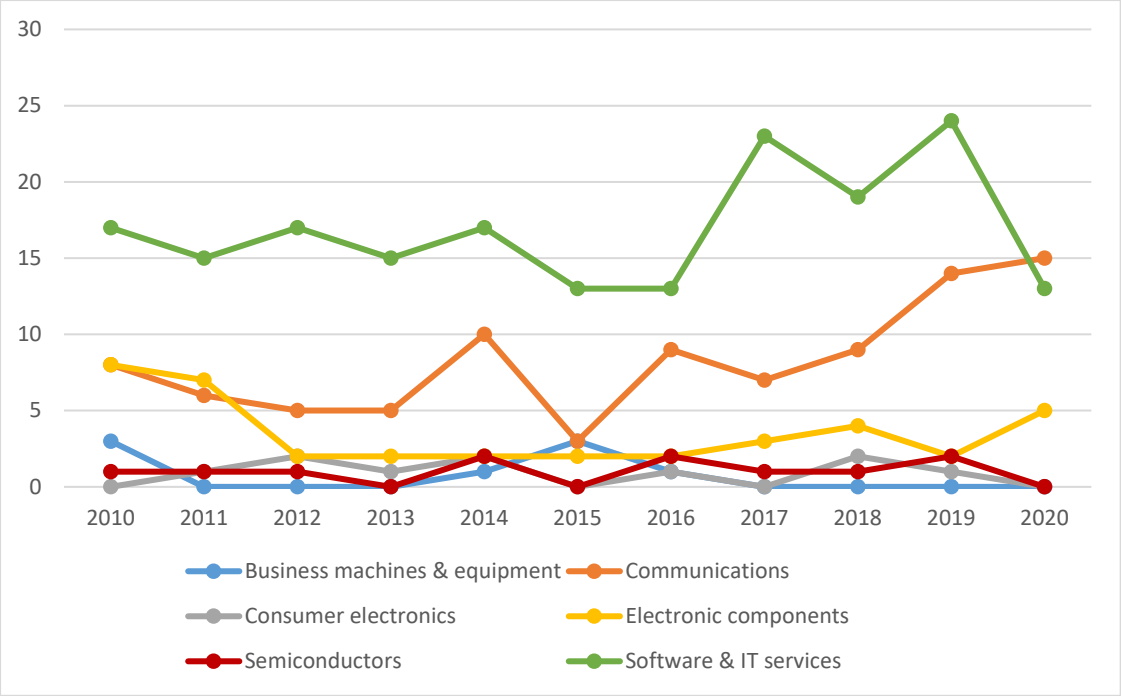
Italy's IFDI capital received per digitally enabling sector (USD million)



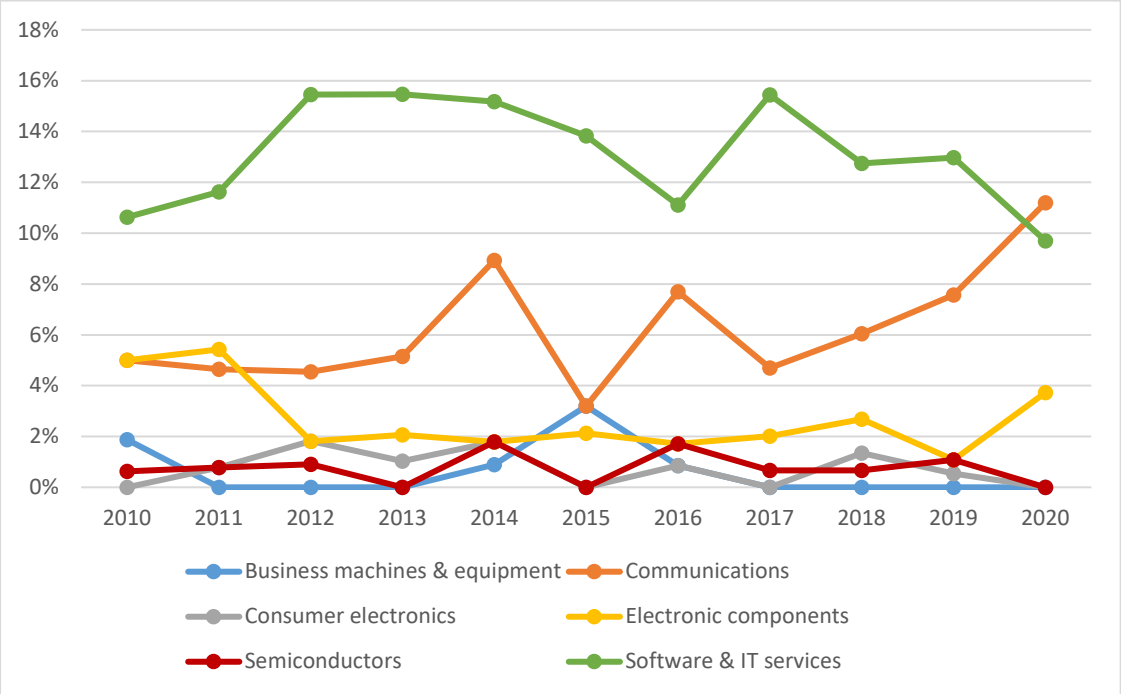
Italy's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Italy's number of IFDI projects per digitally enabling sector

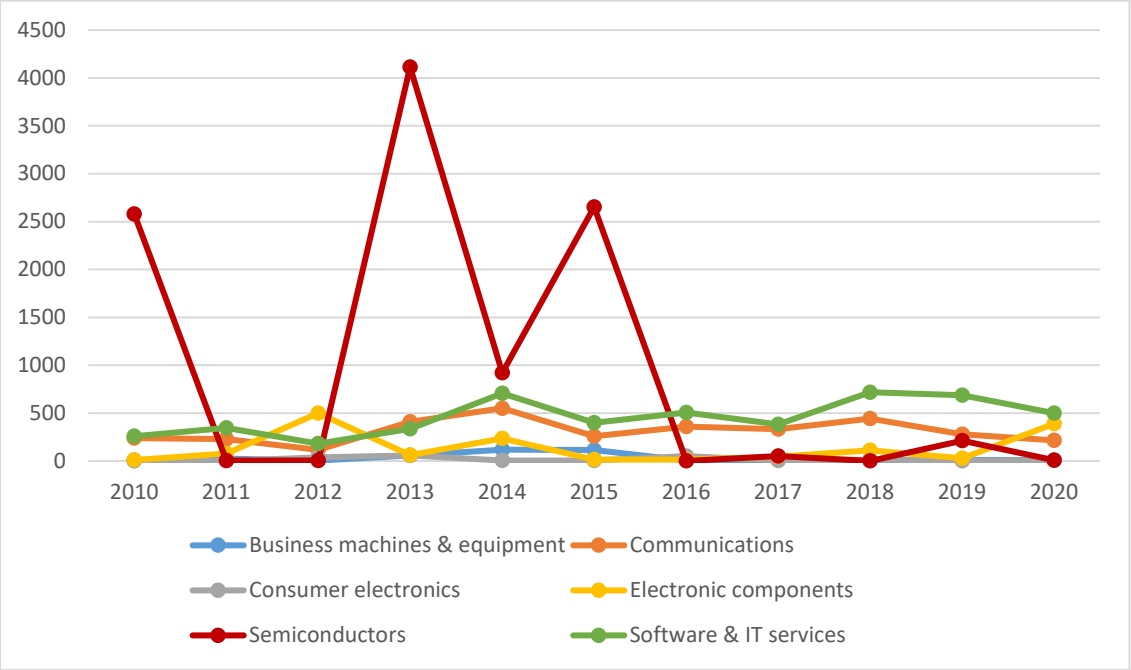


Italy's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

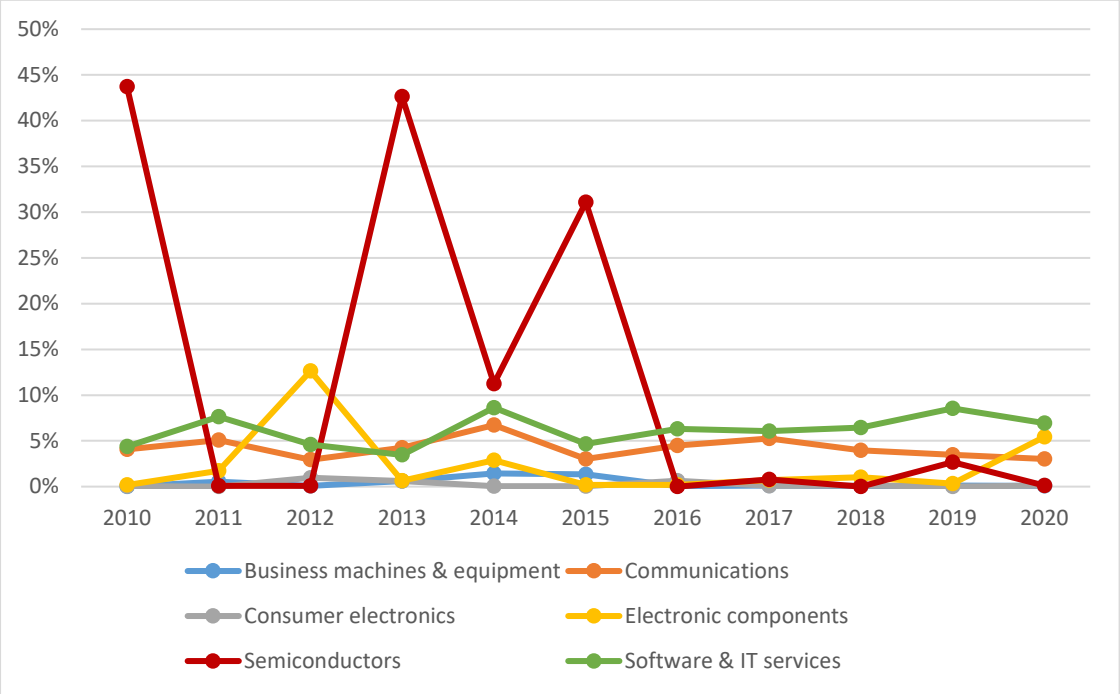


Japan

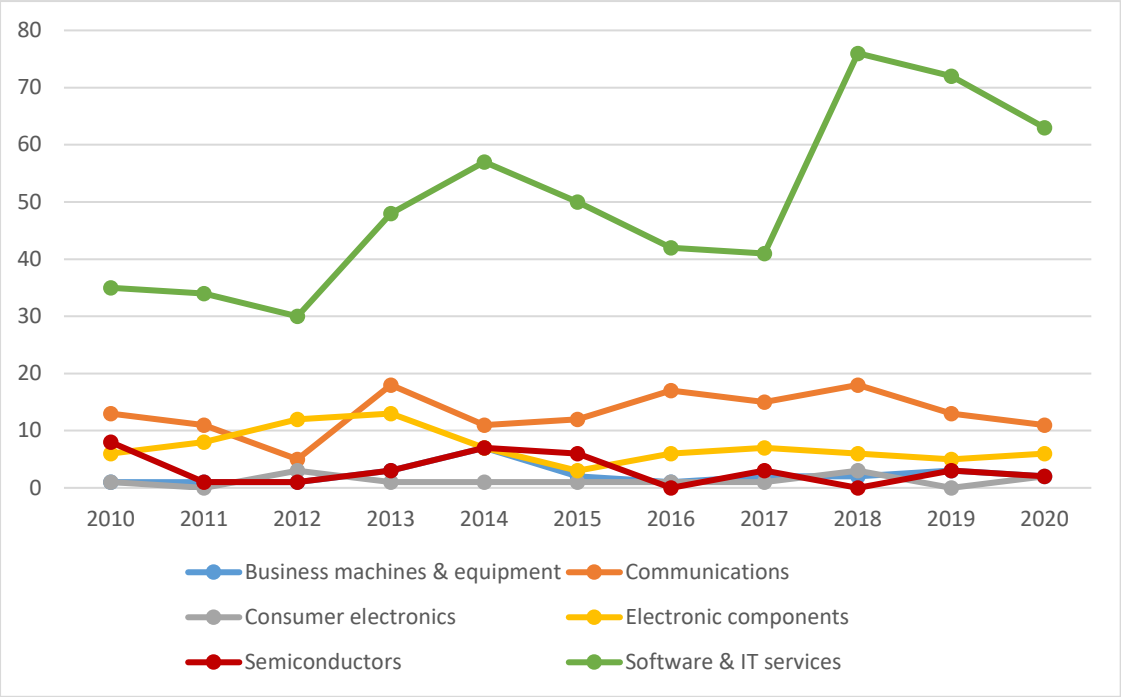
Japan's IFDI capital received per digitally enabling sector (USD million)



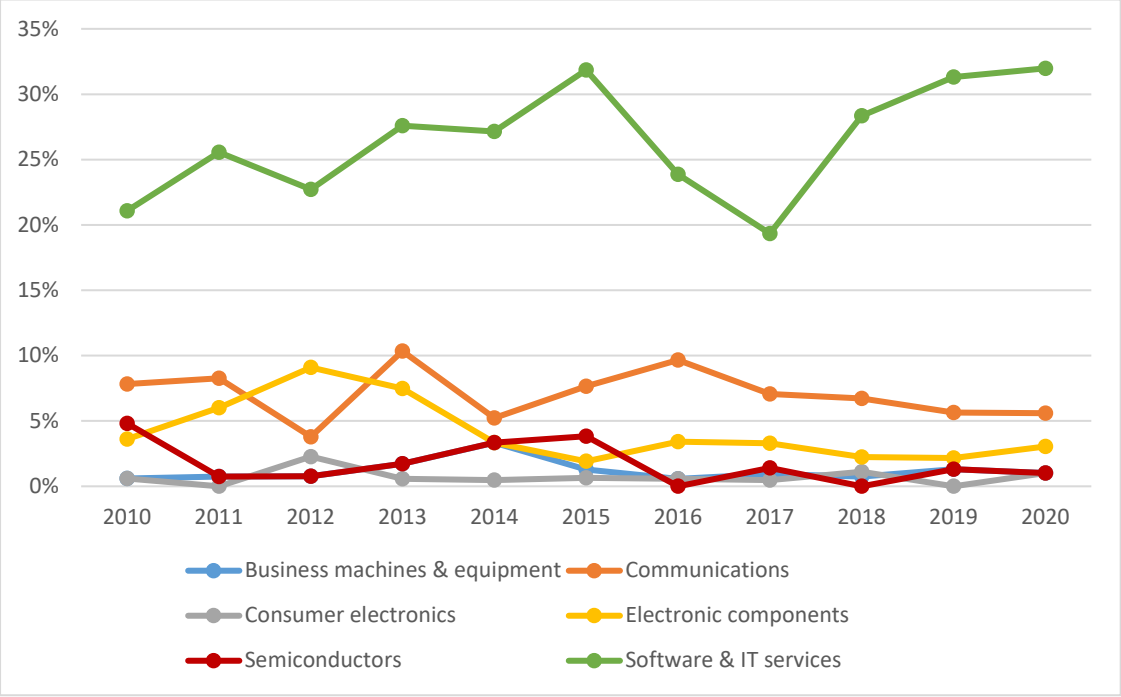
Japan's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Japan's number of IFDI projects per digitally enabling sector

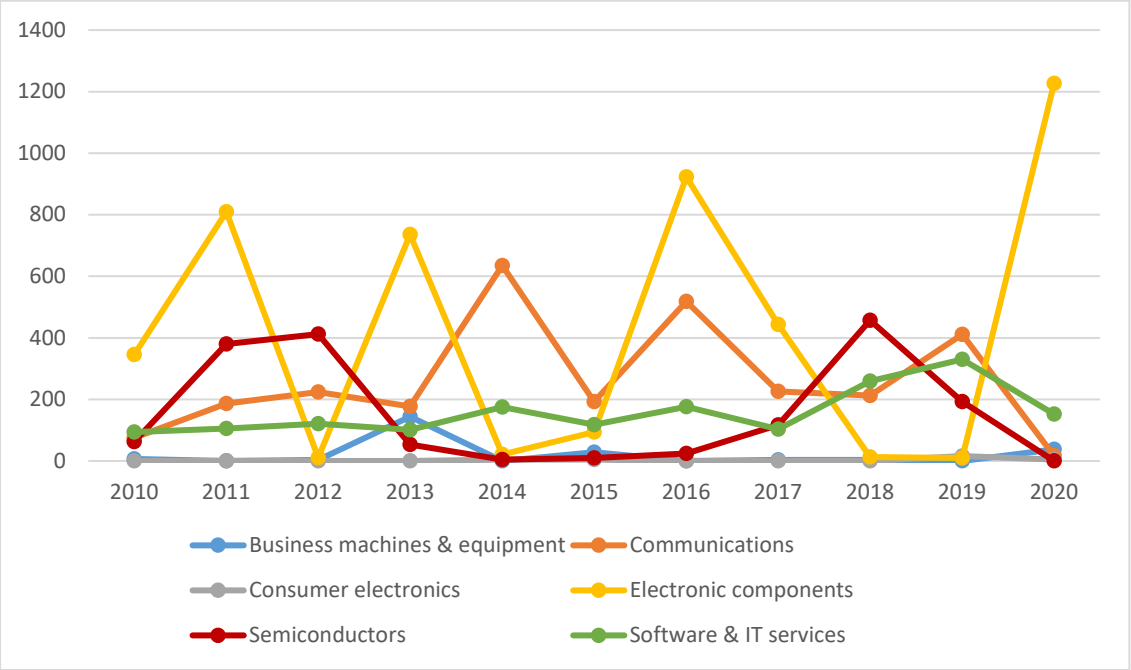


Japan's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

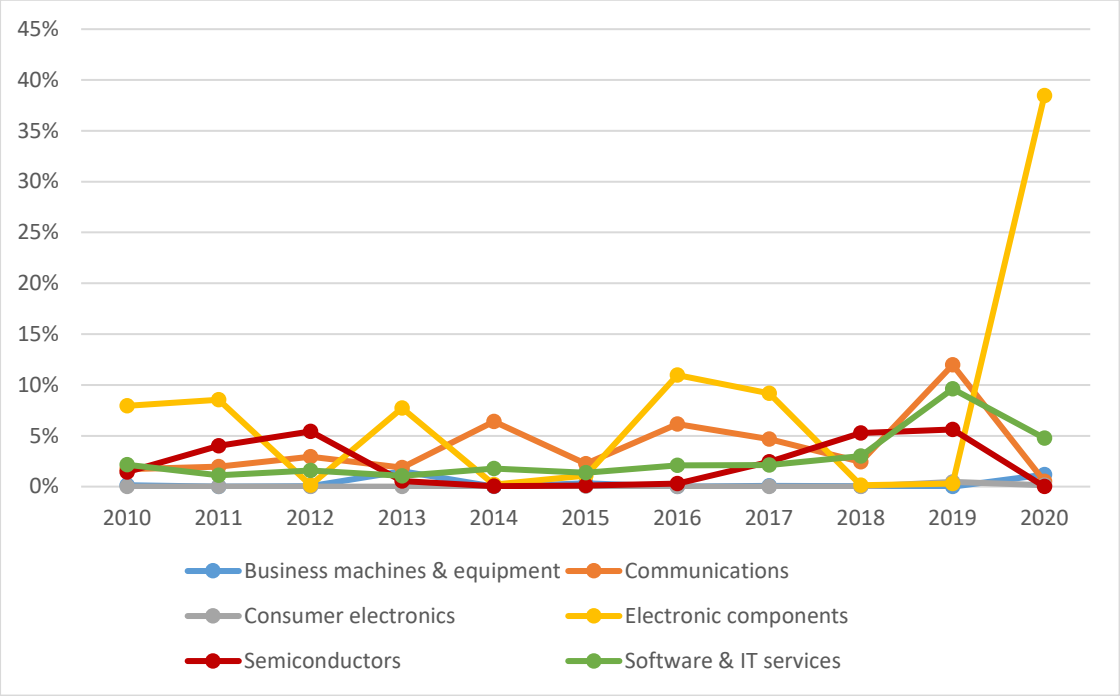


Republic of Korea

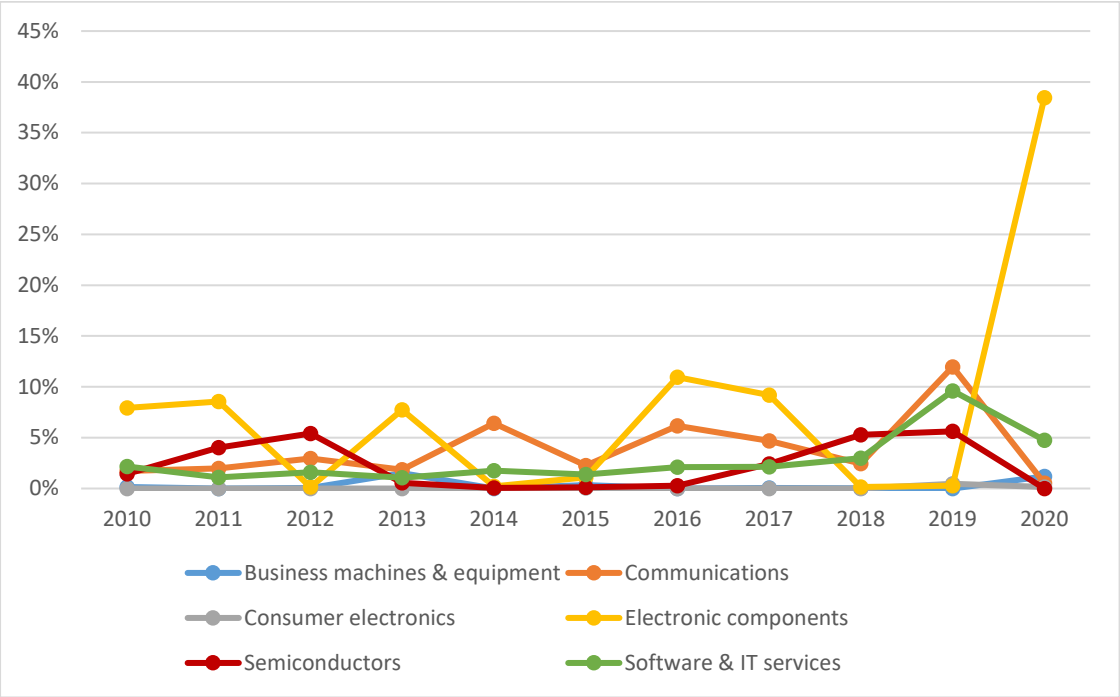
Korea's IFDI capital received per digitally enabling sector (USD million)



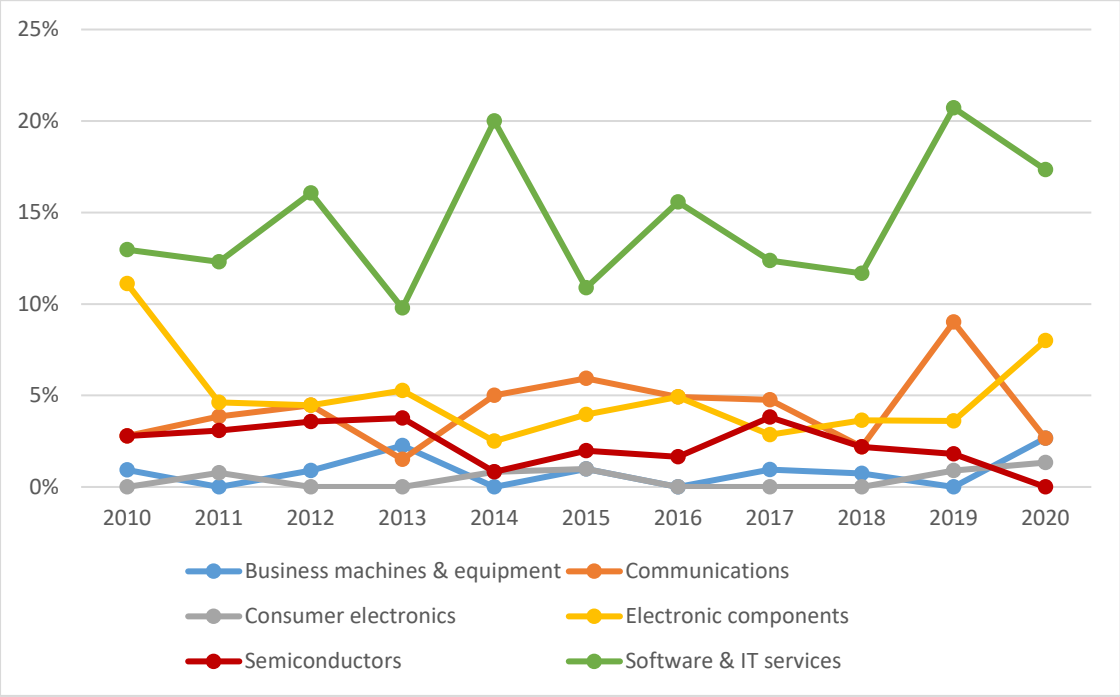
Korea's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Korea's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)

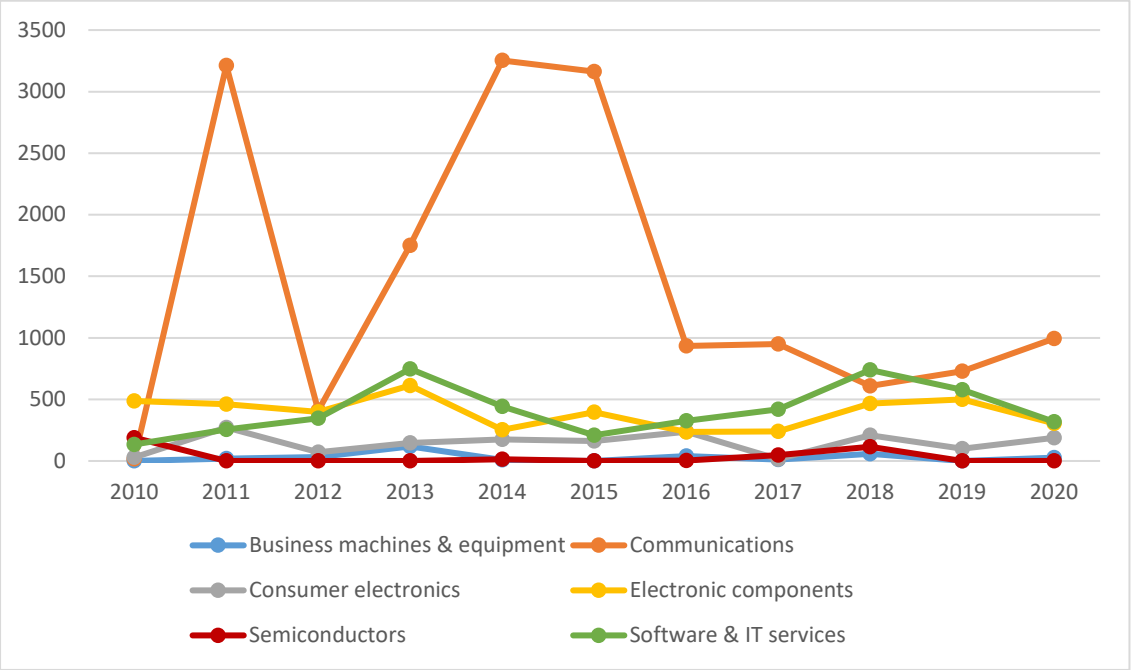


Korea's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

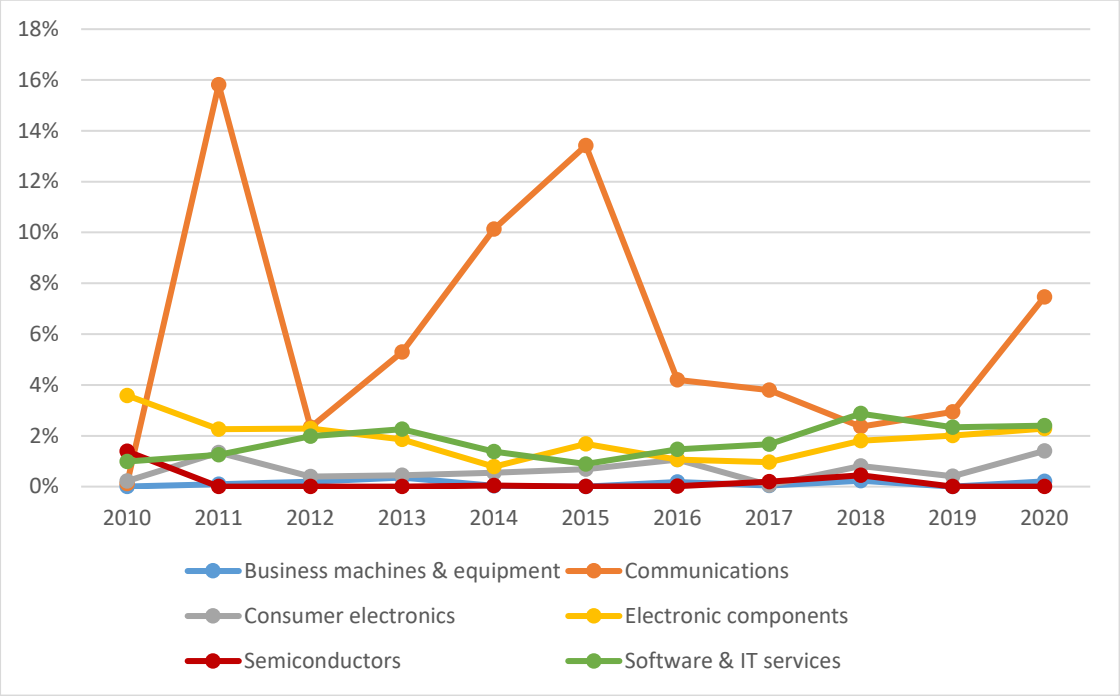


Mexico

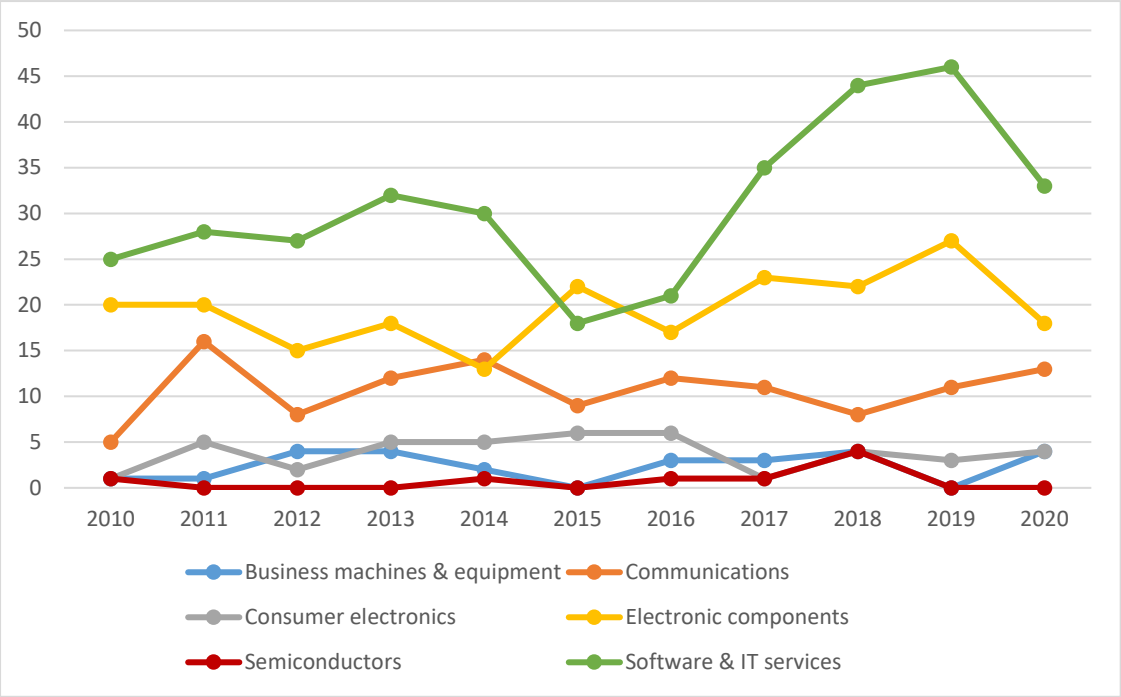
Mexico's IFDI capital received per digitally enabling sector (USD million)



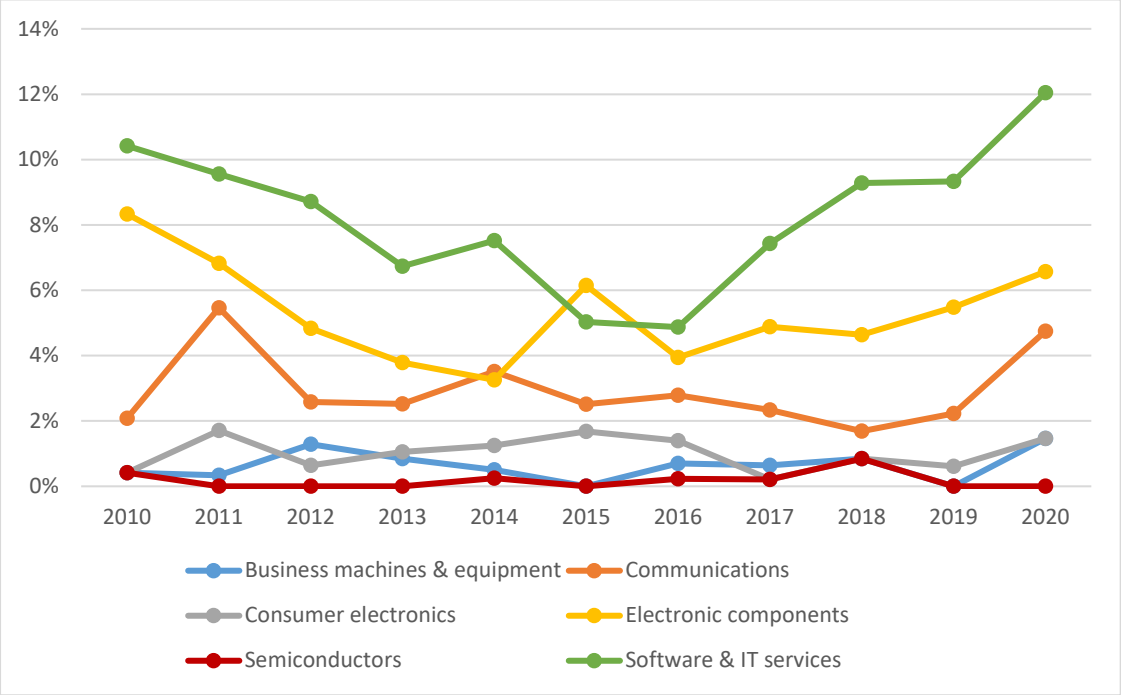
Mexico's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Mexico's number of IFDI projects per digitally enabling sector

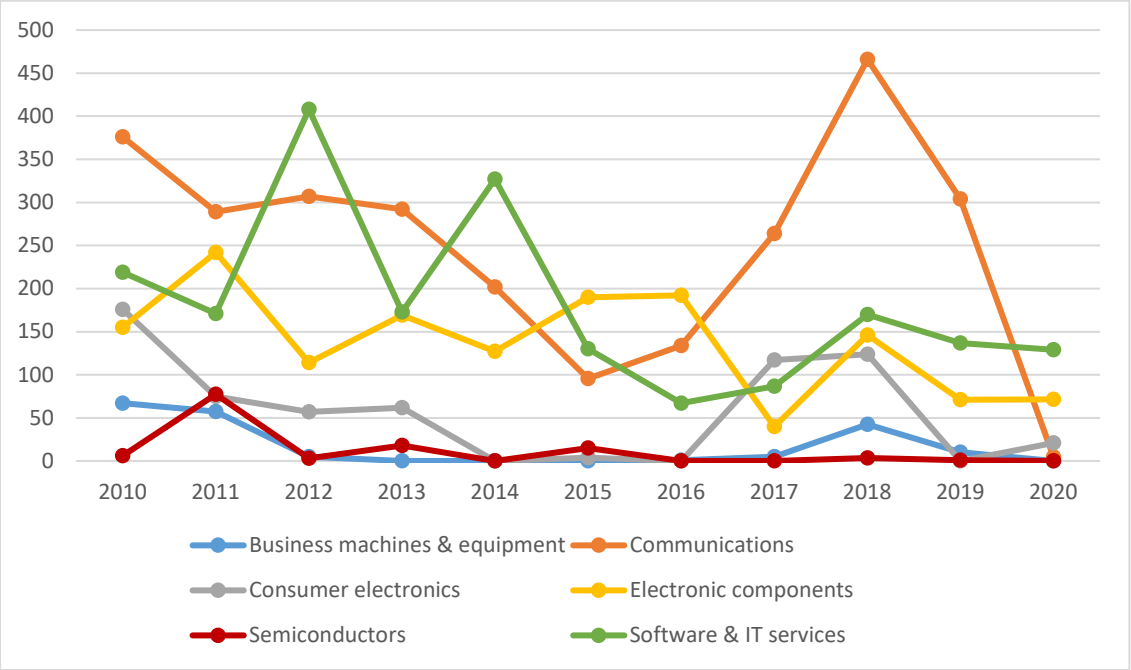


Mexico's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

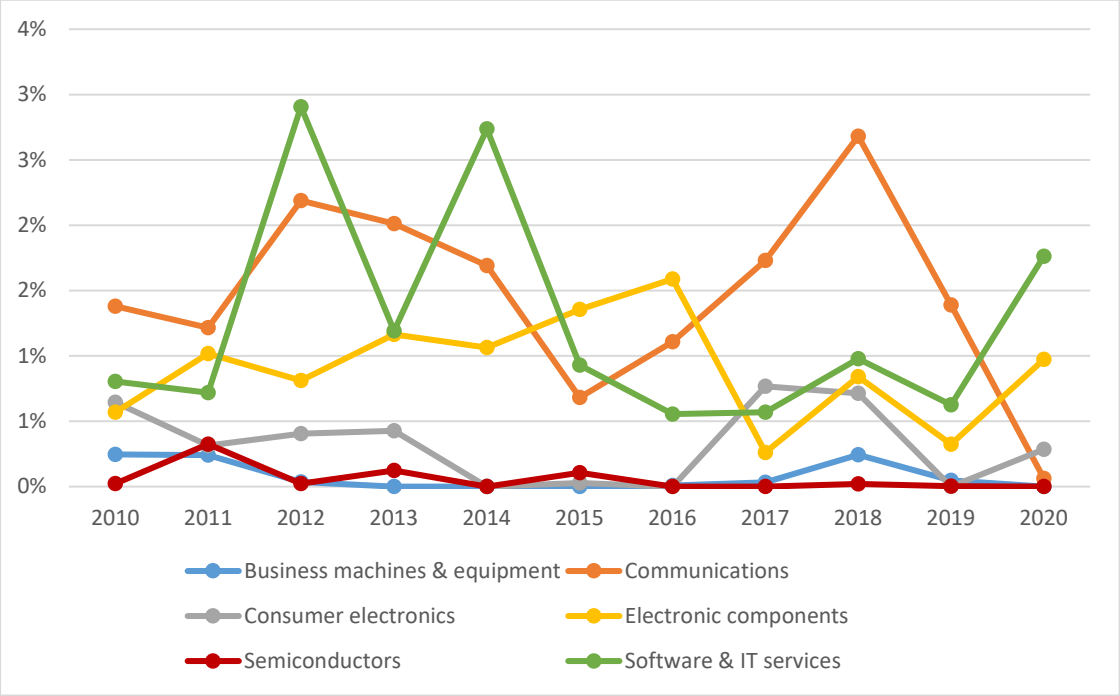


Russia

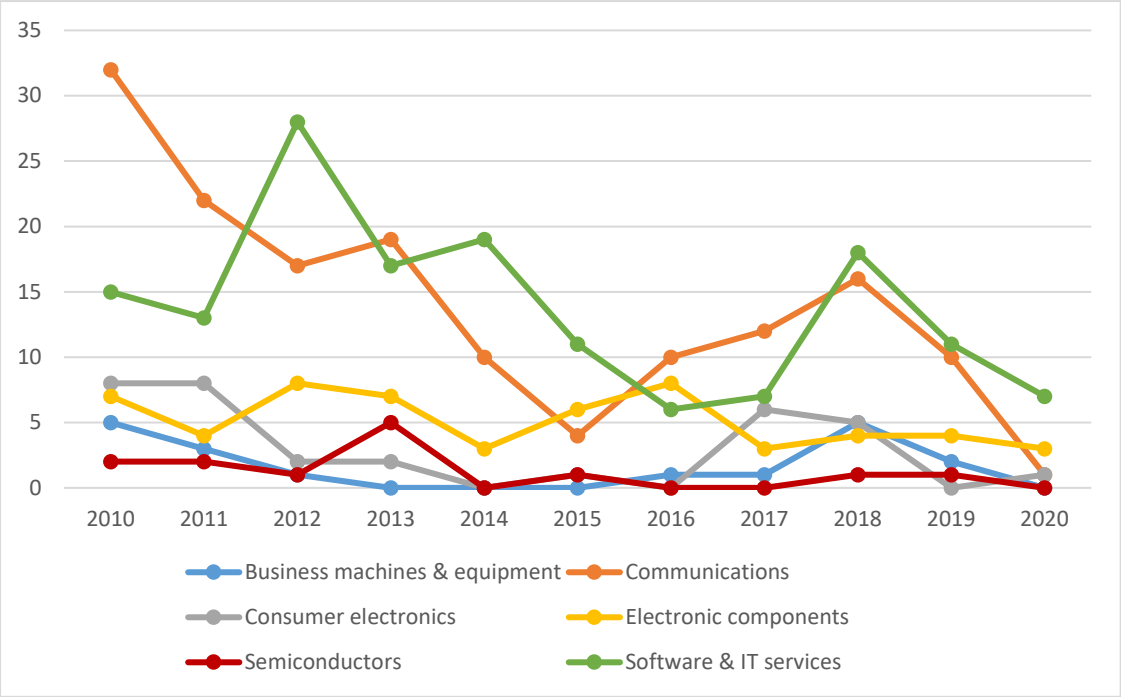
Russia's IFDI capital received per digitally enabling sector (USD million)



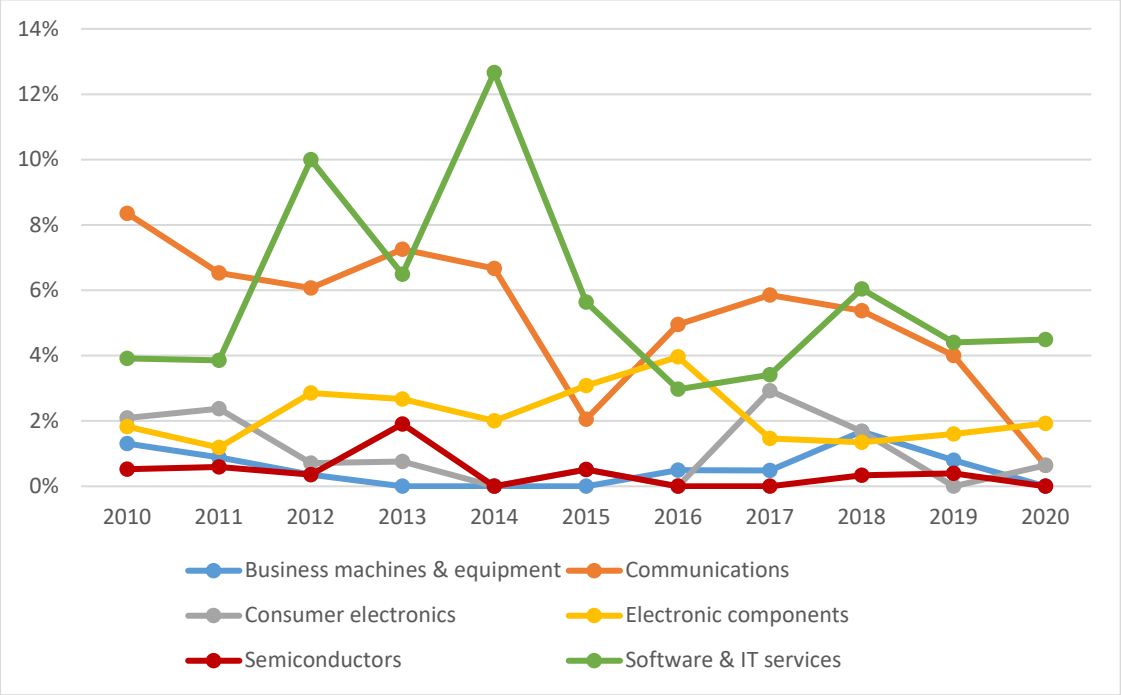
Russia's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Russia's number of IFDI projects per digitally enabling sector

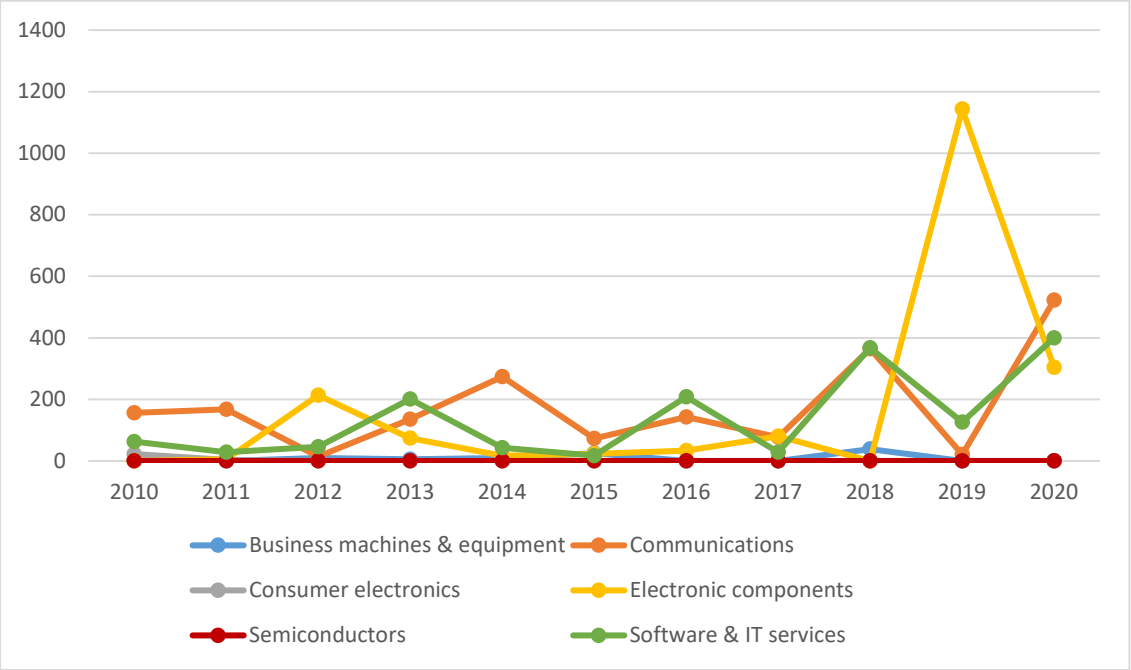


Russia's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

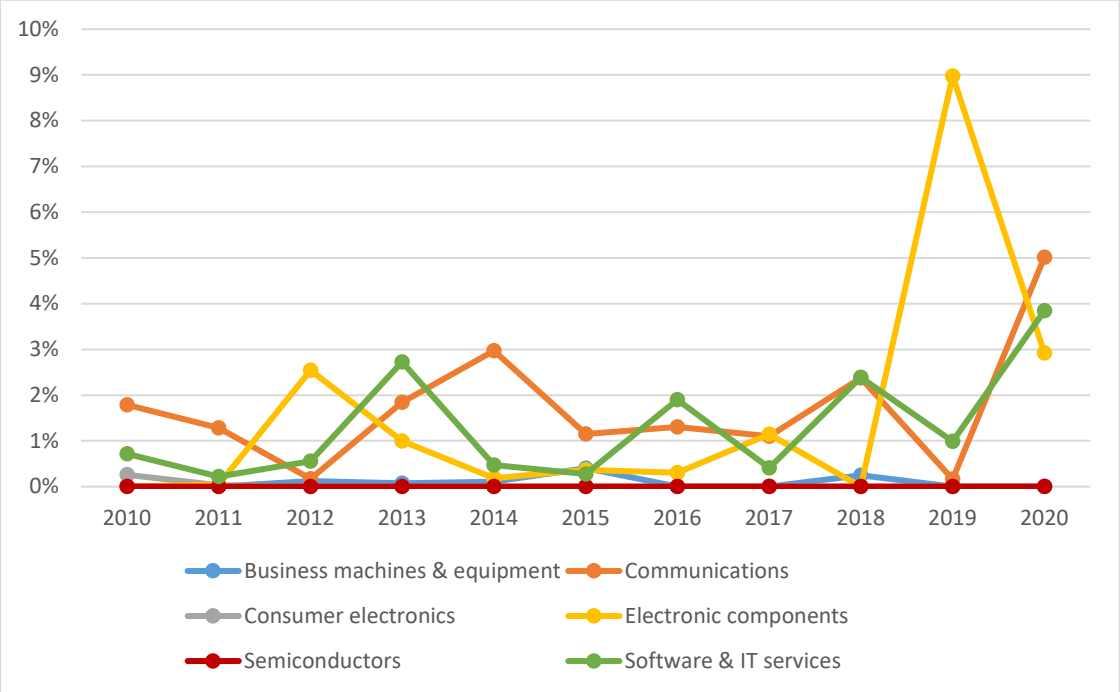


Saudi Arabia

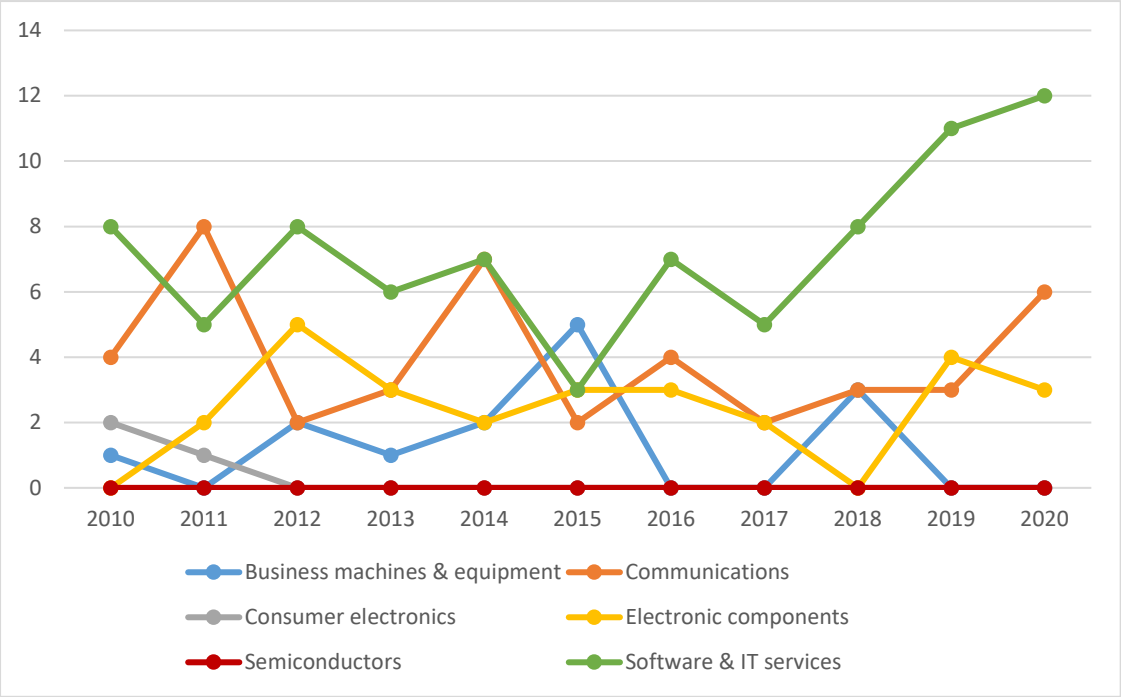
Saudi Arabia's IFDI capital received per digitally enabling sector (USD million)



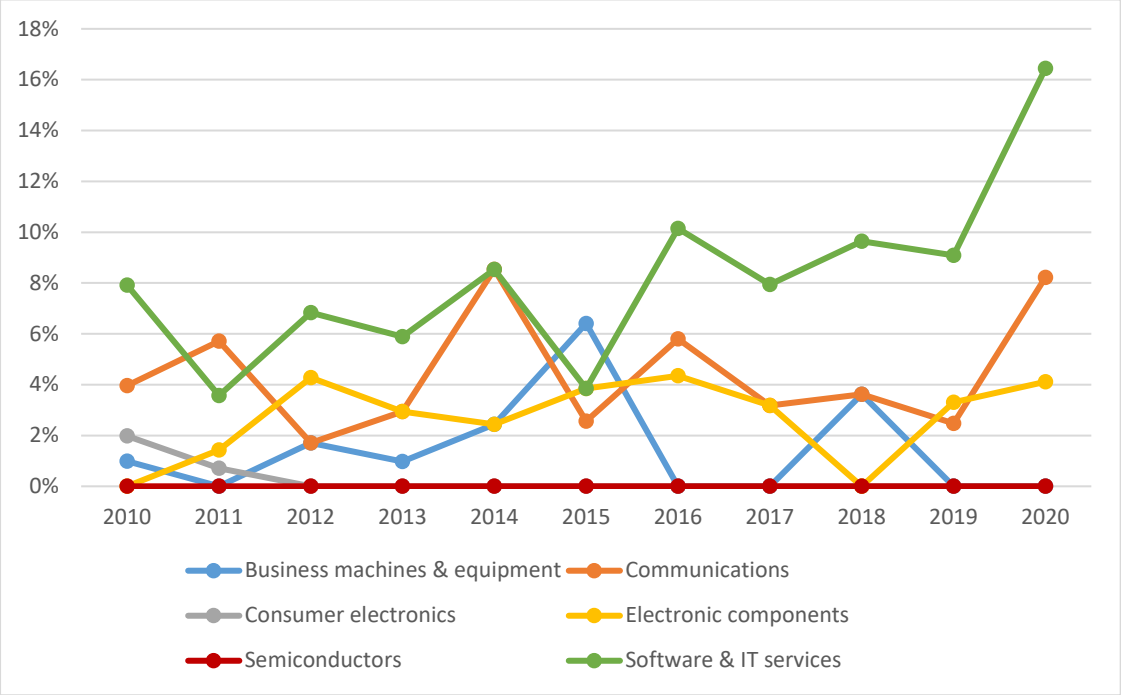
Saudi Arabia's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Saudi Arabia's number of IFDI projects per digitally enabling sector

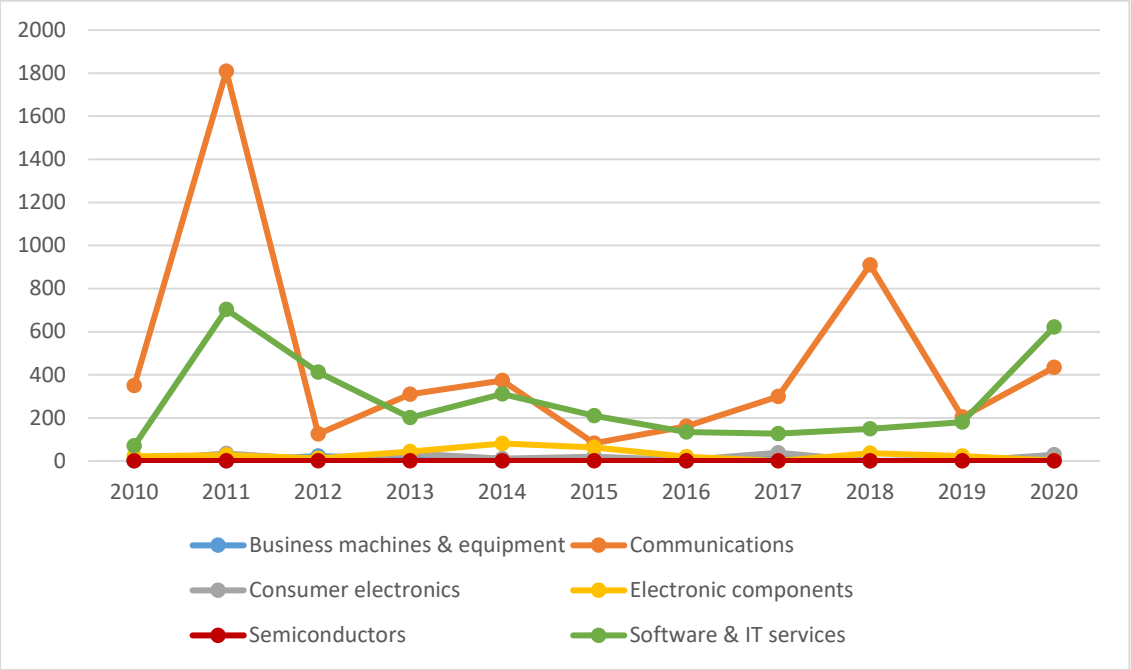


Saudi Arabia's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

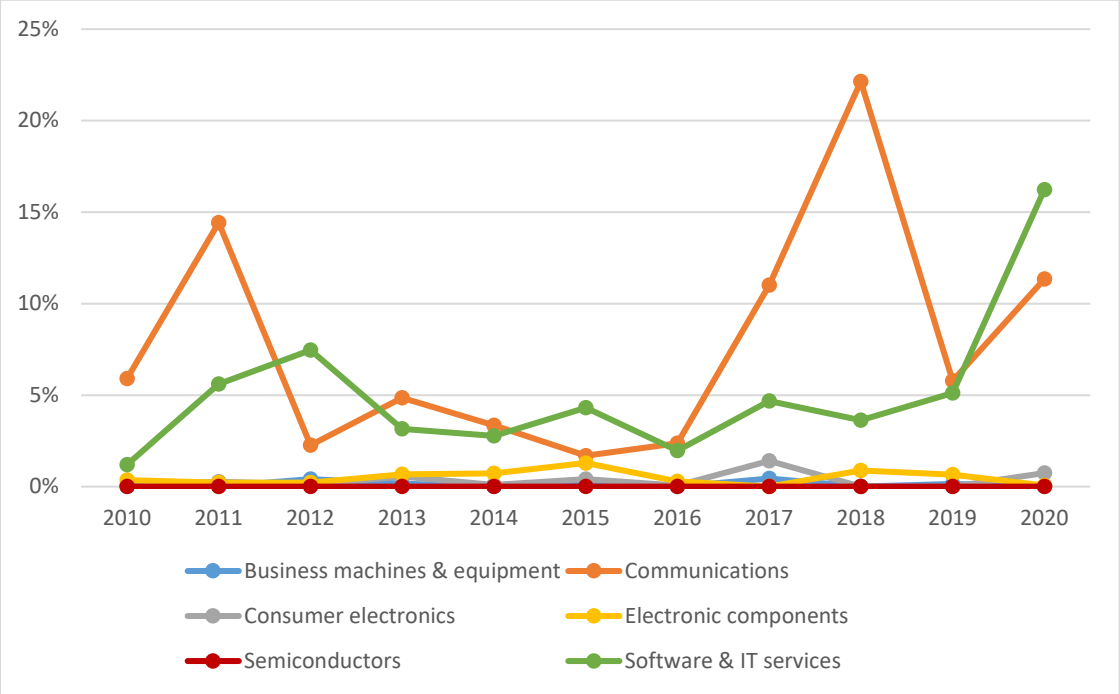


South Africa

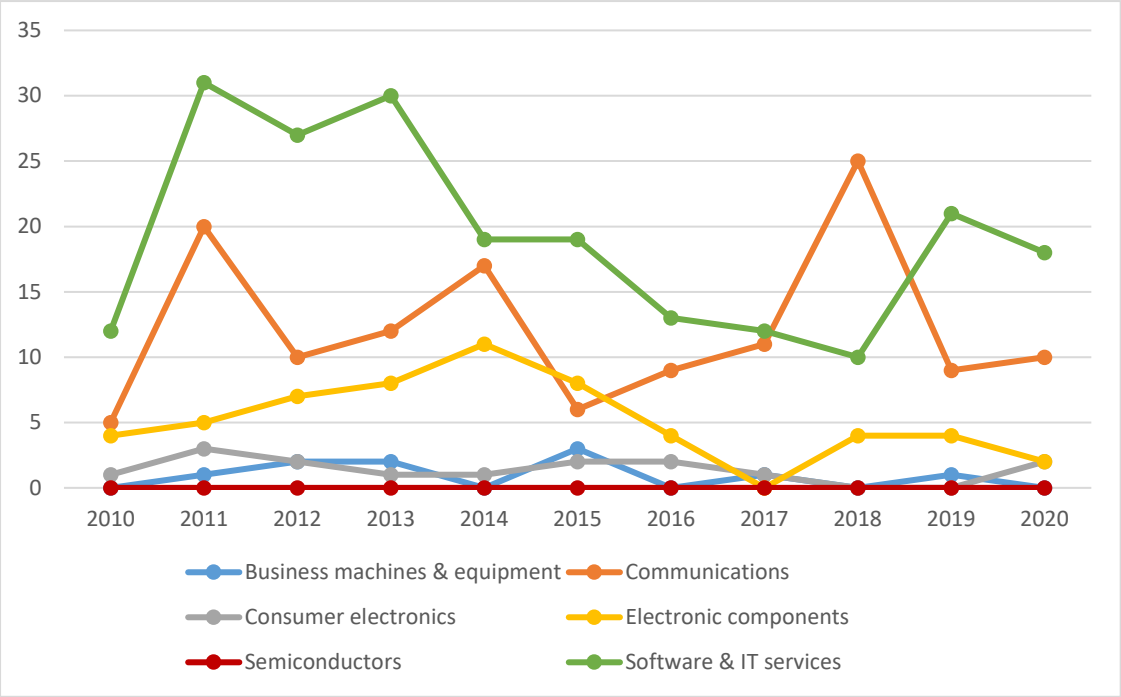
South Africa's IFDI capital received per digitally enabling sector (USD million)



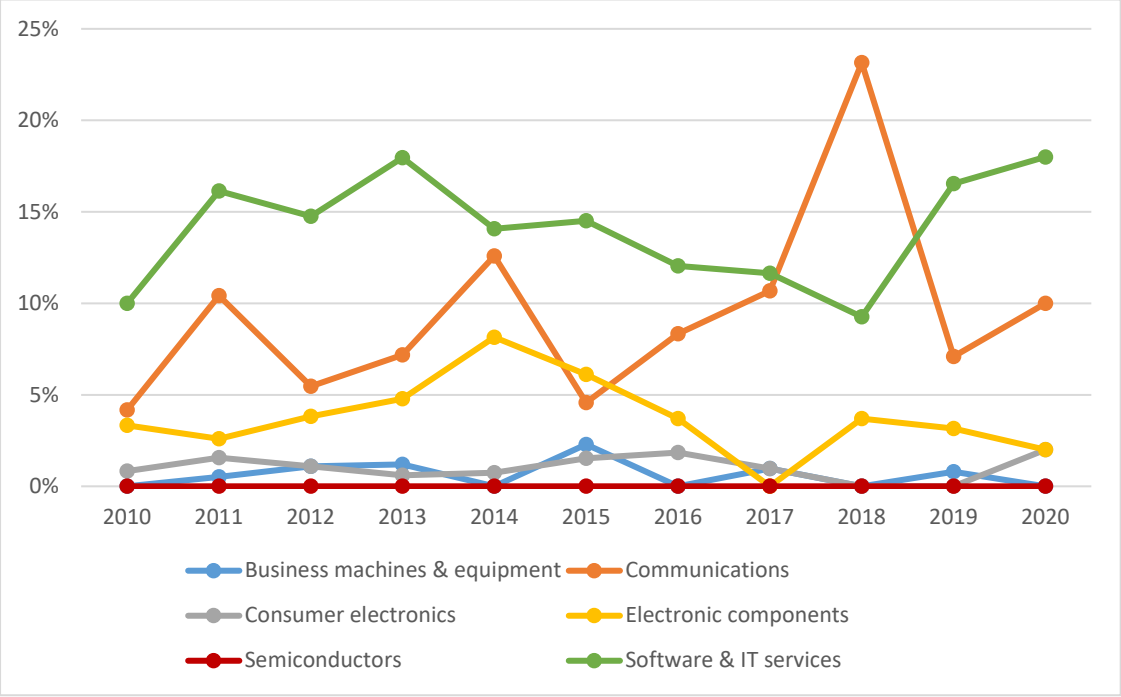
South Africa's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



South Africa's number of IFDI projects per digitally enabling sector

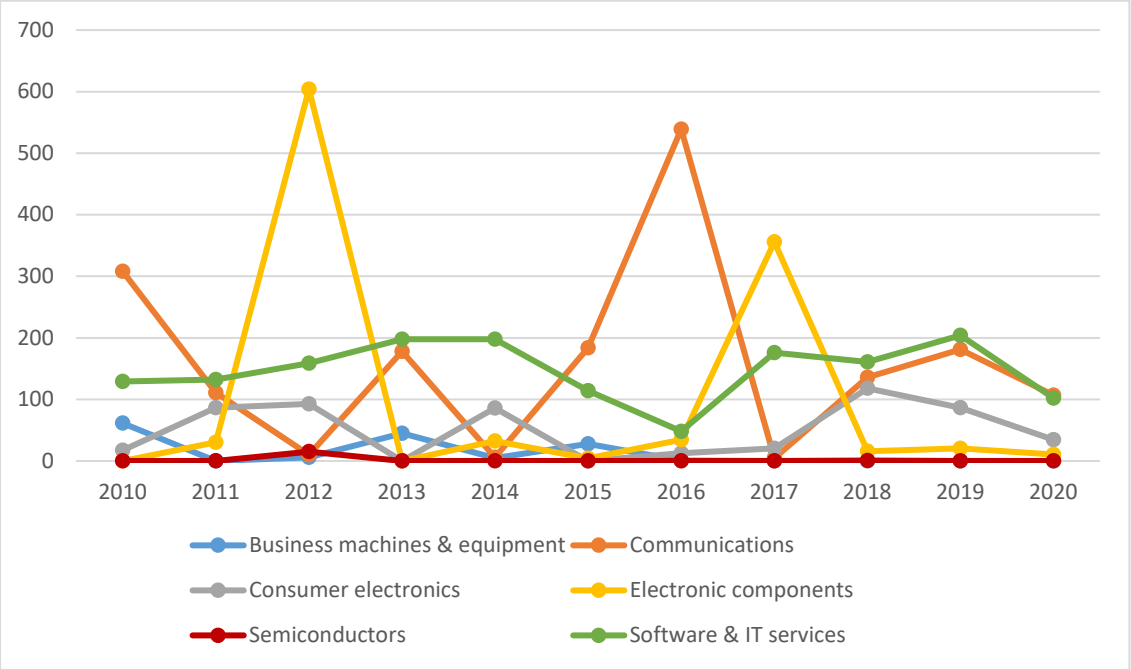


South Africa's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

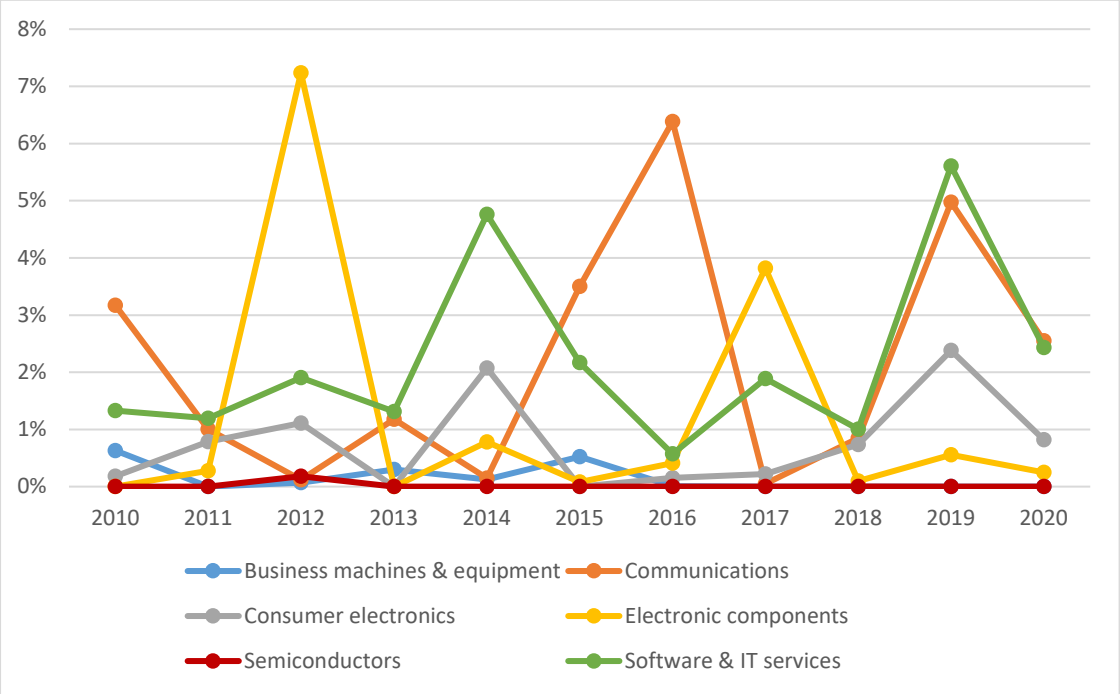


Turkey

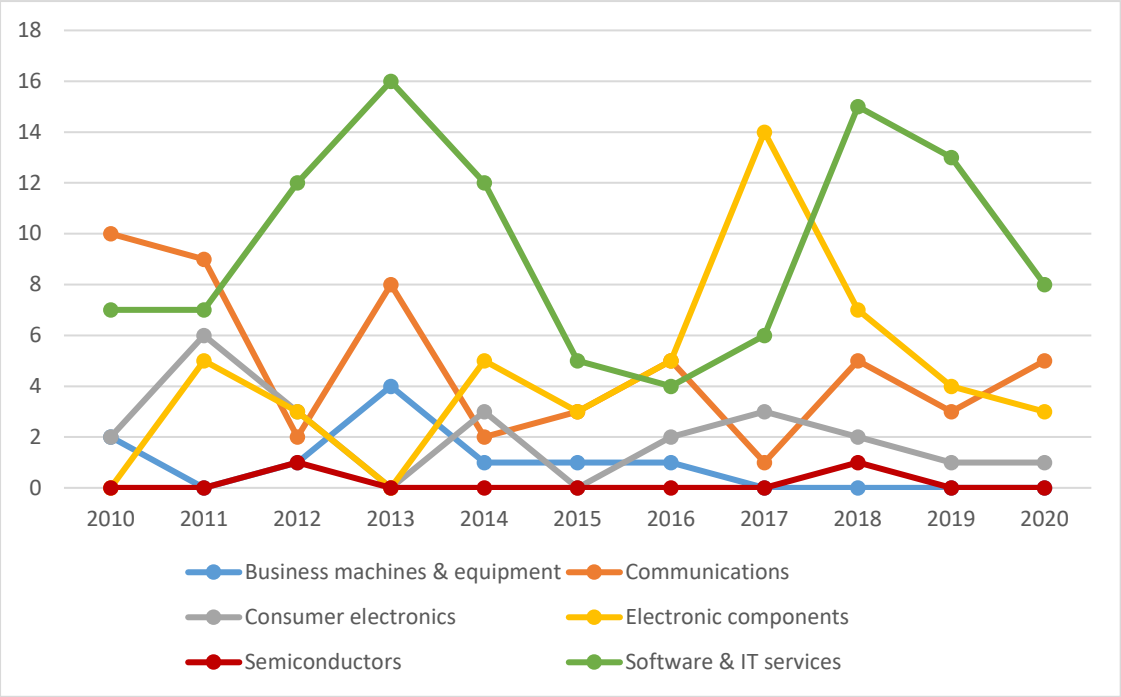
Turkey's IFDI capital received per digitally enabling sector (USD million)



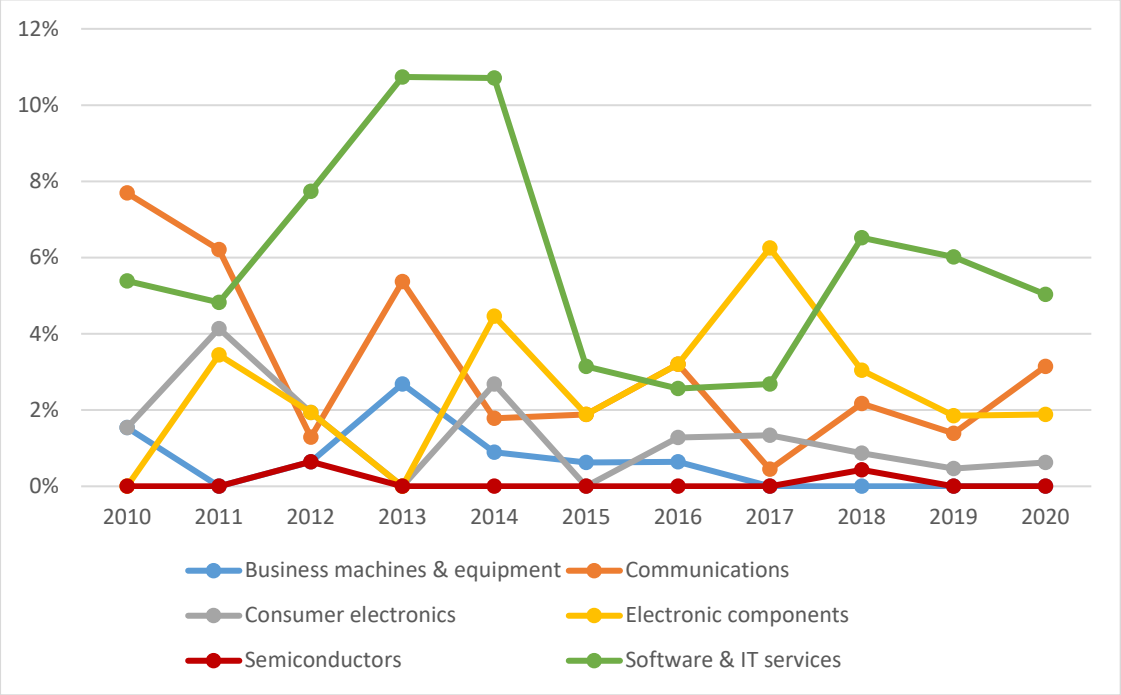
Turkey's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



Turkey's number of IFDI projects per digitally enabling sector

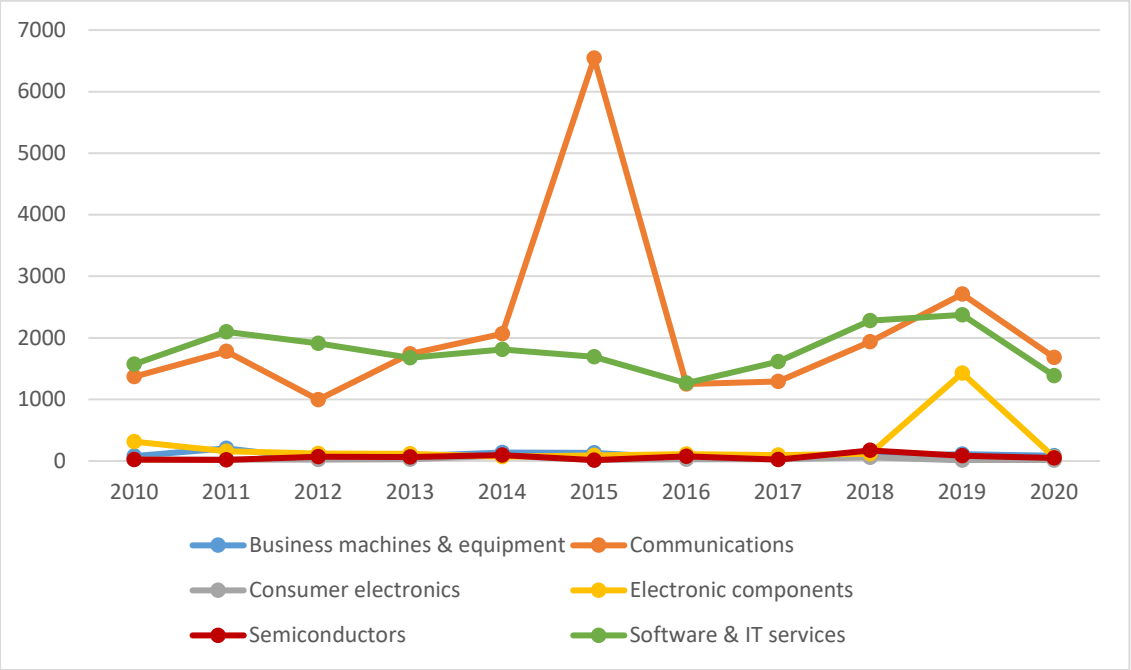


Turkey's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

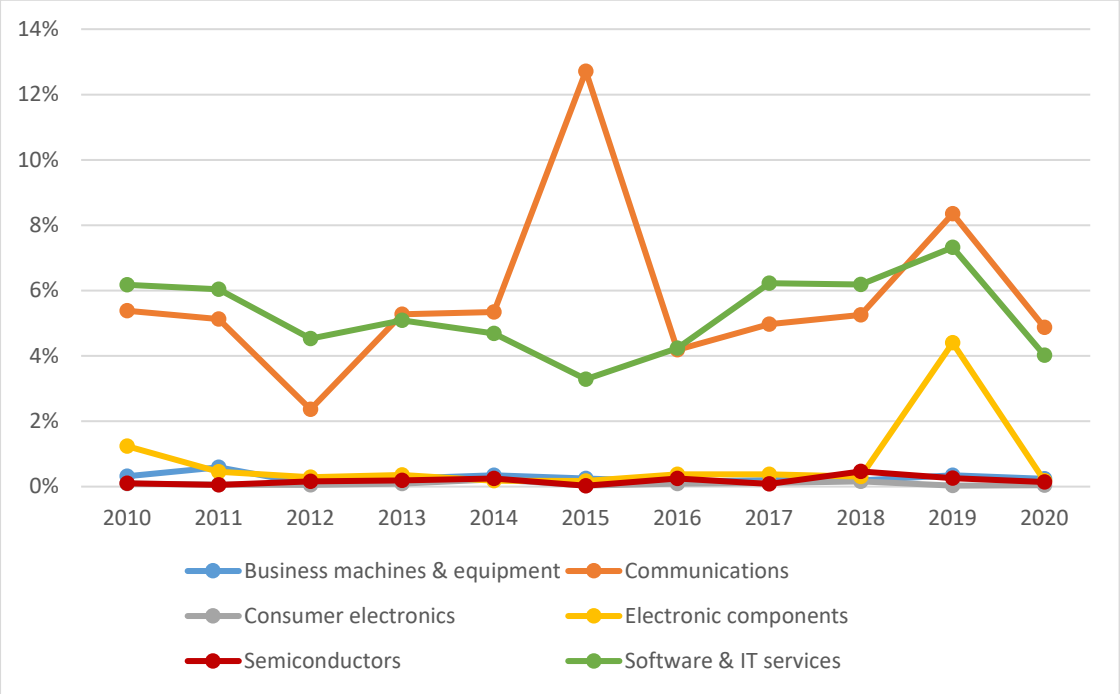


United Kingdom

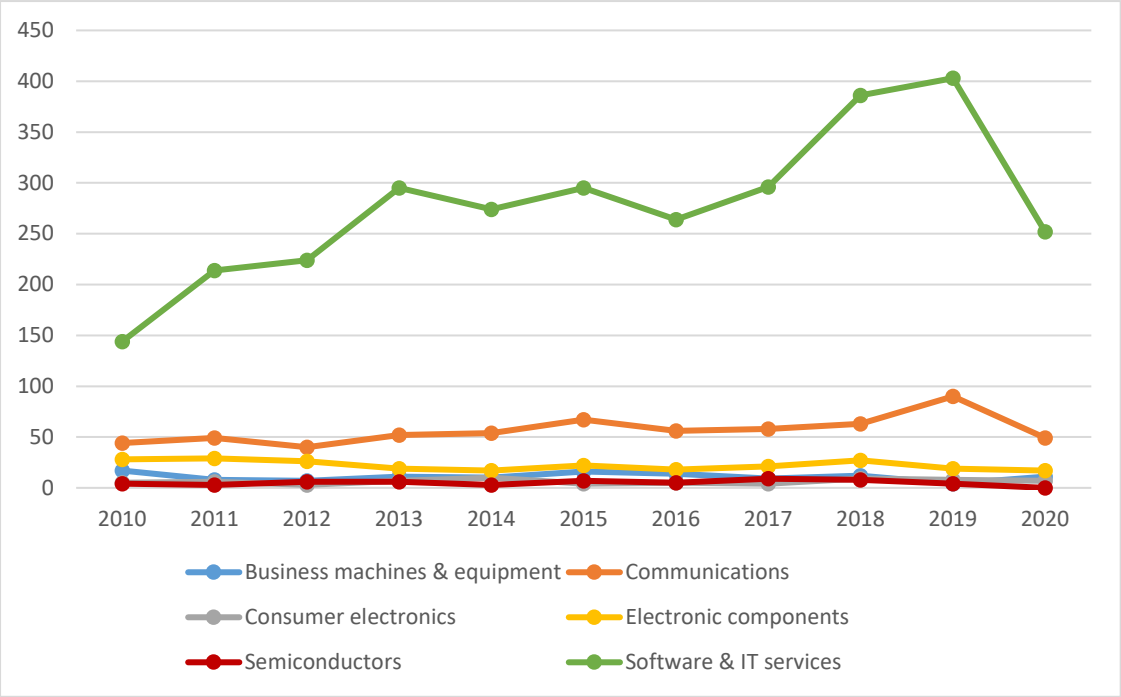
United Kingdom's IFDI capital received per digitally enabling sector (USD million)



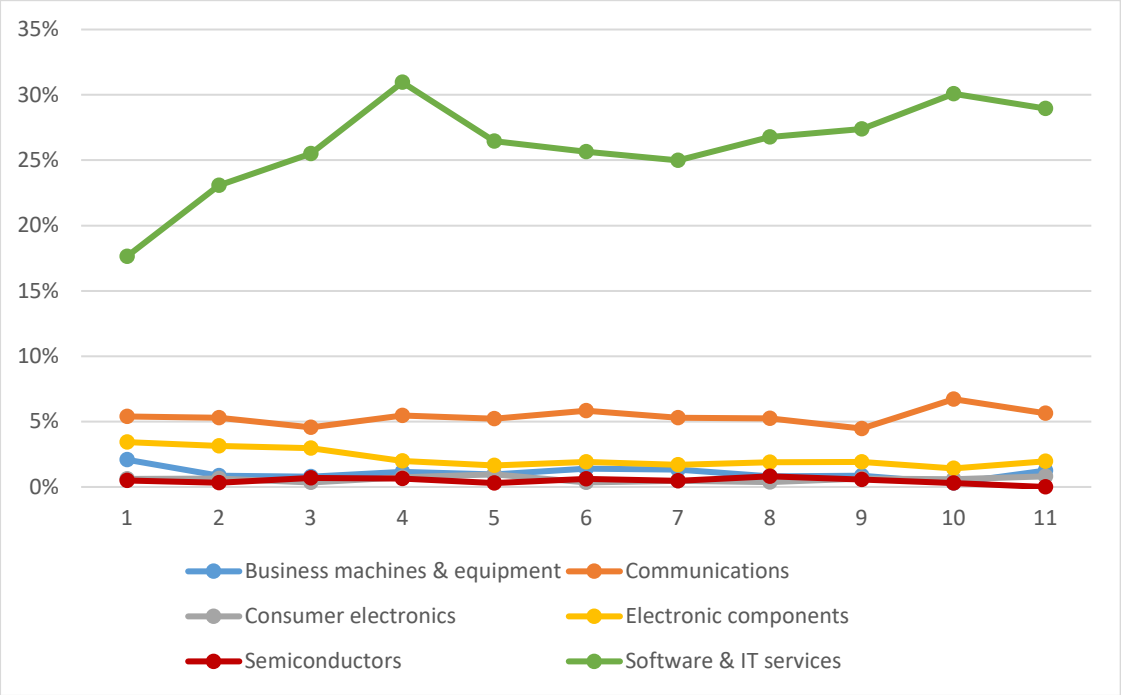
United Kingdom's share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



United Kingdom's number of IFDI projects per digitally enabling sector

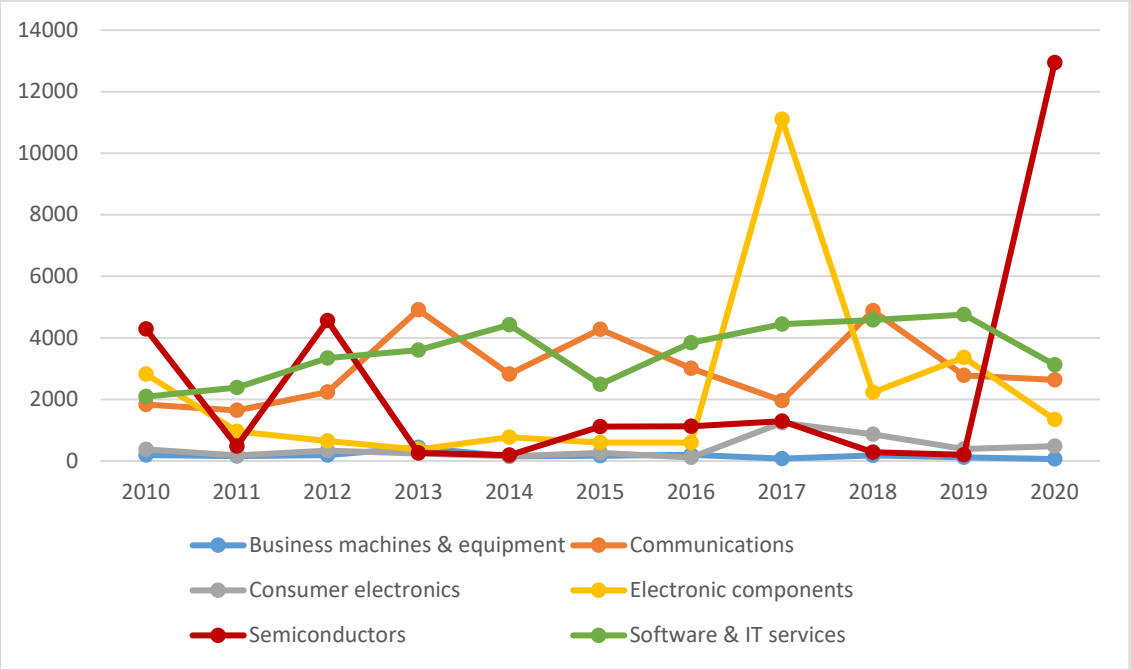


United Kingdom's share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)

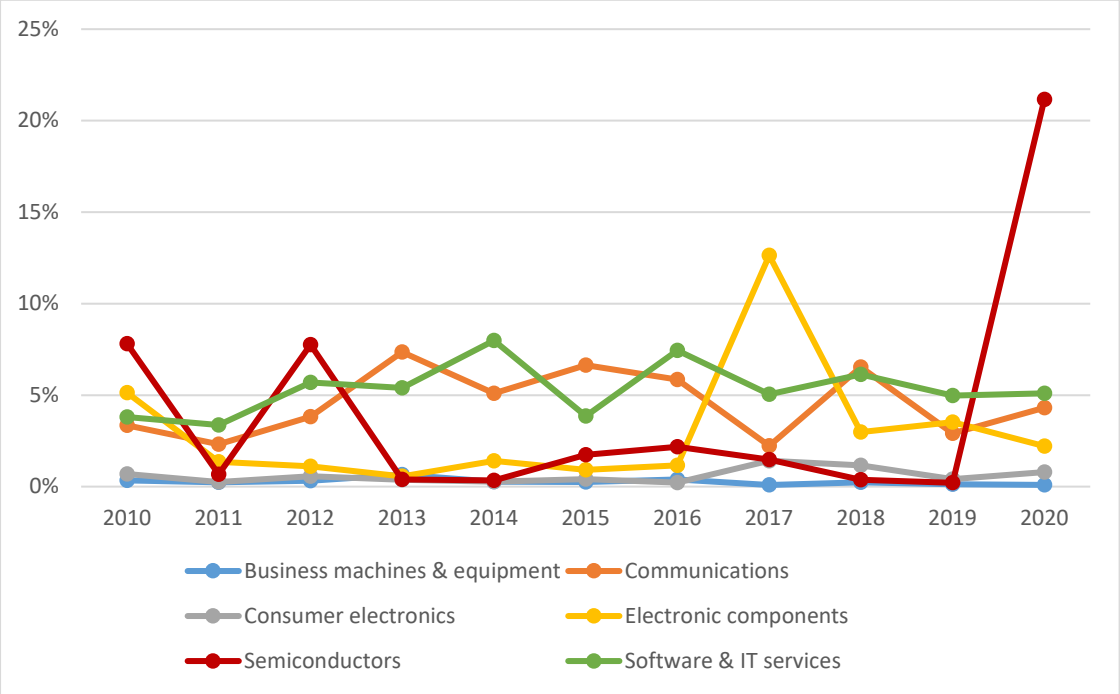


United States

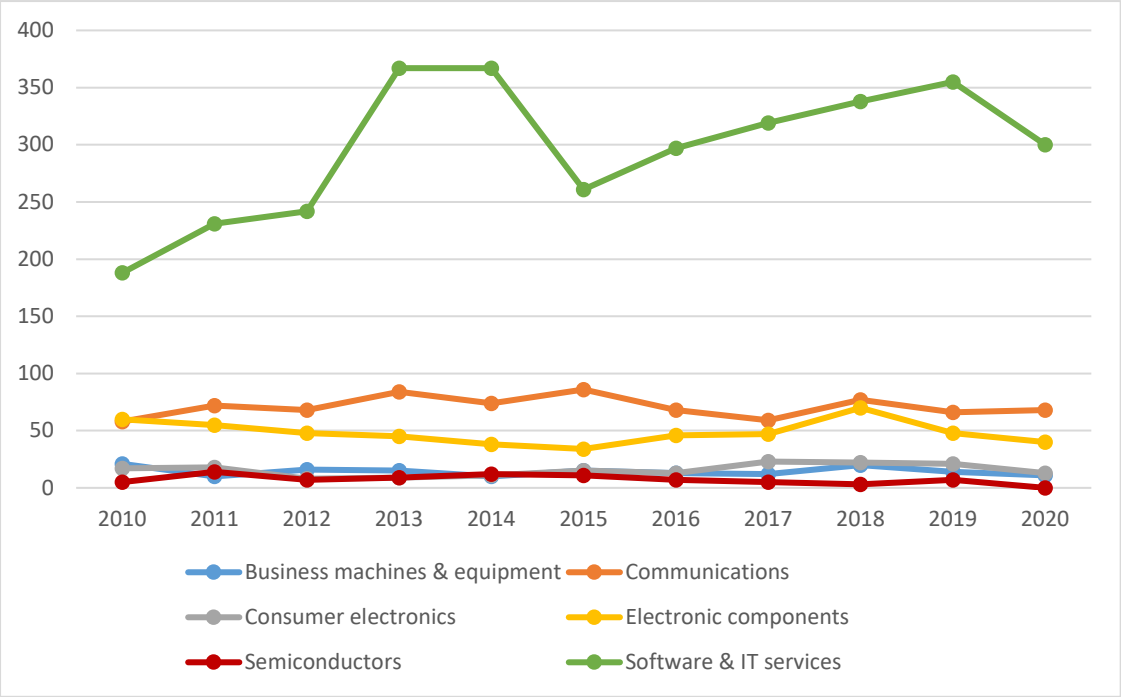
United States' IFDI capital received per digitally enabling sector (USD million)



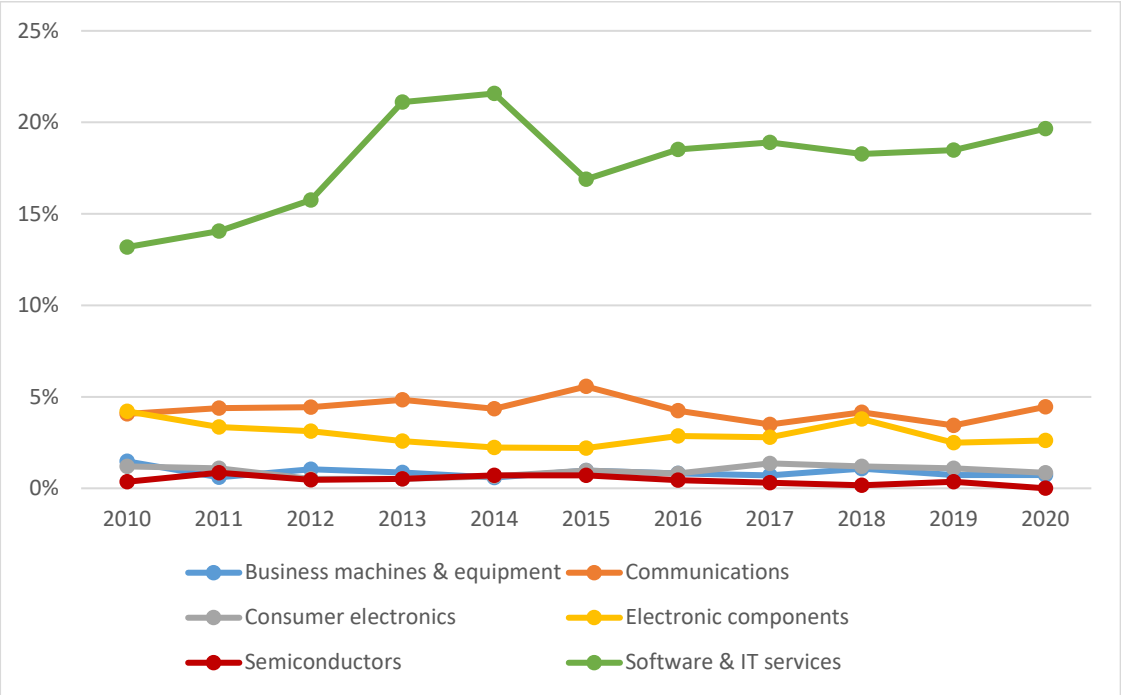
United States' share of capital received in digitally enabling sectors (out of total capital received for IFDI projects)



United States' number of IFDI projects per digitally enabling sector



United States' share of IFDI projects in digitally enabling sectors (out of total number of IFDI projects)



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