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Financial Services Trade Liberalisation in Indonesia

Policy Patterns and Economic Linkages

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Financial Services Trade Liberalisation in Indonesia: Policy Patterns and Economic Linkages

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Foreword

The financial sector is vital for economic development primarily through its intermediate role between borrowers and lenders to ensure savings are put to efficient use. The openness of financial industries generally attracts a large pool of funders and borrowers, whose interactions will shape the efficient equilibrium.

The financial sector can also be, however, a source of instability and systemic risk. Regulations are therefore needed to ensure the soundness of the financial system and to prevent market violations, such as fraud, monopoly, and power abuse. Financial regulators in open economies seek to balance a free financial market with essential regulations in order to ensure an efficient and prudent financial market.

Over the last two decades, Indonesia has implemented policy reforms to liberalise its financial market and to modernise its financial regulatory framework. This study, conducted by ERIA and the OECD Trade Policy Division (OECD TPD), sets the scene by reviewing the liberalisation of Indonesia's financial sector within the context of the ASEAN Framework Agreement on Services (AFAS) and related agreements.

Building on the OECD Services Trade Restrictiveness Index database, the authors offer a descriptive assessment of Indonesia's services trade restrictiveness in the financial sector. Despite some liberalization, the barriers to trade in financial services remain high when compared to other developing economies.

By presenting new empirical evidence on the relationship between the reforms of Indonesia's financial sector, its financial services trade costs, and its manufacturing performance, this study highlights the potential implications and directions for future reforms in this critical sector.

This study is part of the Government of Indonesia's (GOI) efforts to review the country's position in AFAS ratifications. Other studies on institutional frameworks, macro policy, and financial market development have been conducted by ERIA on behalf of the GOI.

We sincerely express our gratitude to the Government of Indonesia, in particular the Ministry of Finance, Bank Indonesia, and Financial Services Authority (OJK), for their support to this project. We hope this study will provide insights that are useful to the GOI and to readers in general. This study is a scholarly exercise and not a policy memo representing any government or political interests. We encourage further research on the design and effects of financial services trade policy to complement the existing literature and to cope with the rapidly changing dynamics of today's world economy.



Tetsuya Watanabe

President

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List of Abbreviations and Acronyms

AFAS	ASEAN Framework Agreement on Services
AFTA	ASEAN Free Trade Agreement
AMS	ASEAN Member States
ATISTA	ASEAN Trade in Services Agreement
ASEAN	Association of Southeast Asian Nations
BPS	Statistics Indonesia
ERIA	Economic Research Institute for ASEAN and East Asia
FDI Index	FDI Regulatory Restrictiveness Index
GTRI	GATS Trade Restrictiveness Index
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
IBS	Census of Medium and Large Manufacturing Firms
INDSTAT	Industrial Statistics Database
ISIC	International Standard Industrial Classification of All Economic Activities
LKP	Banks Financial Report
MOF	Ministry of Finance
OECD	Organisation for Economic Co-operation and Development
OJK	Financial Services Authority
SPI	Indonesia Banking Statistics
STRI	Services Trade Restrictiveness Index
TRAINS	Trade Analysis Information System
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
WITS	World Integrated Trade Solution

Executive Summary

Indonesia embarked on a reform process of its financial sector following the Asian crisis in 1997-1998, which led to the collapse of several Indonesian banks and a strong depreciation of the rupiah. The Government of Indonesia (GOI) reacted by consolidating the banking sector by closing 64 commercial banks and recapitalising several financial institutions, the latter accompanied by increased central bank supervision (Lindgren et al., 1999). As part of this restructuring effort, Indonesia made general commitments in regional policy fora on policies regulating trade and investment in the banking sector.

These commitments were also consistent with a broader effort toward regional economic integration of services markets. In the context of the Association of Southeast Asian Nations (ASEAN), ASEAN Member States (AMS) have signed and implemented several trade agreements, including the ASEAN Free Trade Agreement (AFTA) in 1993 and the ASEAN Framework Agreement on Services (AFAS) in 1995. The most recent Agreement, ASEAN Trade in Services Agreement (ATISA), was signed in 2020 and supersedes AFAS. It is expected to push services market integration further. Among the main objectives of AFAS are increased cooperation amongst AMS to improve efficiency and competitiveness of the services sector, to diversify the production capacity, supply, and distribution of services within and outside ASEAN, to eliminate restrictions on trade in services amongst AMS, and to promote trade in services by expanding the depth and scope of liberalisation beyond the General Agreement on Trade in Services (GATS).

This study aims to shed light on the scope and dynamics of financial liberalisation in Indonesia and its relationship with relevant dimensions of Indonesia's economic performance.

The OECD Services Trade Restrictiveness Index (STRI) is used to assess the relevant policies in the financial sector in Indonesia, also by comparing them with the regulatory frameworks in other service sectors as well as in other emerging economies. Indonesia's services restrictiveness in the two financial services sectors covered in this study – commercial banking and insurance – is neither amongst the most restrictive nor amongst the most liberal services sectors in the country. However, Indonesia's services trade policy is more restrictive than most of its peers in these two sectors. By using the STRI and GATS Trade Restrictiveness Index (GTRI) methodology, this study finds no measurable divergence between Indonesia's financial services commitments in AFAS and its GATS commitments.

Looking at all services sectors covered in the OECD STRI, the findings presented here show that closing half of the gap to the best-performing country in each sector would reduce Indonesia's STRI by 0.18 on average across all sectors and cut more than one-third of Indonesia's current level of regulatory restrictiveness to services trade. Although such an ambitious reform is challenging, its impact would be remarkable. This reduction in services trade costs is estimated at around 27% on average across all sectors. The impact is most pronounced in sectors that are crucial inputs for other services and manufacturing activities. In the commercial banking sector, services trade costs could fall by almost 60%, while insurance services could benefit from reductions of more than 40% in trade costs.

Financial services trade reforms have the potential to benefit not only the financial sector, but also industries that use financial services as intermediate inputs. To explore the relationship between policy reforms in the financial sector and economic performance across industries, empirical analysis is undertaken at the level of sectors and firms downstream in the supply chain. The results indicate a negative correlation between the level of restrictiveness in the financial sector (commercial banking and insurance services) and financial services performance; and a positive relationship between the productivity performance of manufacturing industries and that of the financial sector.

Regression analysis at the sector-level indicates that greater regulatory openness to services trade in upstream financial services is associated with higher productivity in downstream manufacturing industries. In an ambitious scenario where Indonesia liberalises its regulatory framework regarding financial services to the extent that it halves the gap in terms of the STRI score with respect to the OECD average, value-added per employee is expected to increase by 8% on average in Indonesia's manufacturing sector across the 15 manufacturing industries included in the analysis.

The estimated linkages between upstream reforms and downstream performance are found to be heterogeneous across industries. The textile industry shows the highest downstream productivity increase (+14.5%) associated with upstream reform. Similarly, sizeable increases in productivity are also predicted for metal products (+13.6%); computer, electronic, and optical equipment (+6.9%); and food products, beverages, and tobacco (+4.9%). The magnitudes estimated across industries are shaped by differences in the intensity of the use of financial services. Industries with intensive usage of financial services benefit more from trade liberalisation than do industries using financial services inputs less intensively.

A firm-level analysis based on Indonesia's census of medium and large manufacturing firms (IBS) and STRI is also undertaken to further investigate the relationship between firm-level productivity performance and the degree of trade openness in financial services. The firm-level regressions indicate that lower regulatory restrictions to services trade in upstream financial services are associated with higher productivity of downstream firms. In the scenario where Indonesia halves the gap in terms of the STRI score between its regulatory framework in the financial services sector and the OECD average, the associated increase in the productivity performance of firms using financial services as intermediate inputs would be almost 10%, with an average value of 2%.

The most significant productivity increase would be observed in wheat flour production (+9.9%), which is included among the industries prioritised by the National Industry Development Master Plan, 2015–2035 (Government of Indonesia, 2015). Other prioritised industries with estimated sizeable productivity increases following the hypothesised ambitious policy reform include medical equipment (+6.3%), meat (+3.8%), manufacturing of carpets, rope, and textiles (+3.8%), knitting mills (+3.7%), footwear (+2.1%), and manufacture of wearing apparel (+1.6%). The lowest productivity increase (below 0.01%) would be in rice, native medicine, and salty and dry fish production. These industries typically provide jobs for low-income groups in Indonesia.

Careful reform in these areas could significantly reduce services trade costs in Indonesia, with beneficial spillover effects to downstream businesses and consumers. To protect the stability of Indonesia's financial sector, any reform efforts should proceed gradually and pay careful attention to potential vulnerabilities in the financial sector.

Chapter 1

Introduction

As part of the economic integration of the Association of Southeast Asian Nations (ASEAN), ASEAN Member States (AMS) have signed and implemented several trade agreements. The first one was the ASEAN Free Trade Agreement (AFTA), officially implemented in 1993, covering trade in goods. After that, the ASEAN Framework Agreement on Services (AFAS) was signed in 1995 with a focus on trade in services. Through AFAS, AMS are committed to expanding their market access in the financial services sector (banking, insurance, reinsurance, capital market related services, and other financial services) and promoting the efficiency and competitiveness of the service sector more broadly. The AFAS commitment supports the efforts to realise ASEAN economic integration in the services sector, which has grown rapidly in the last decade, contributing around 40% to the ASEAN economy.

AFAS has three main objectives:

- a. Enhance cooperation amongst AMS to improve efficiency and competitiveness in the sector, to diversify the production capacity, supply, and distribution of services within and outside ASEAN.
- b. Substantially eliminate restrictions to trade in services amongst AMS.
- c. Liberalise trade in services by expanding the depth and scope of liberalisation beyond those undertaken by AMS under the General Agreement on Trade in Services (GATS), with the aim of realising a free trade area in services.

AFAS provides a broad guideline for AMS to progressively improve market access and ensure equal national treatment for services suppliers amongst AMS in all four modes of services supply. In 2020, AMS signed the ASEAN Trade in Services Agreement (ATISA), which superseded AFAS and is expected to push services market integration further.

AFAS protocols consist of 10 packages of commitment. In 2019, ASEAN Finance Ministers signed the Protocol to Implement the eighth Package of Commitments on Financial Services under AFAS. Indonesia ratified the seventh package of commitments in October 2020 and is preparing to ratify the eighth package.

Indonesia's Ministry of Finance (MOF), Bank Indonesia, and Financial Services Authority (OJK) have agreed on the Economic Research Institute for ASEAN and East Asia (ERIA) undertaking a study to evaluate the impacts of financial liberalisation, particularly AFAS, on the development of Indonesia's financial services sector. This study has been designed to provide policymakers with descriptive empirical evidence, helping to inform the next steps of Indonesia's policy reform in financial services.

This report is part of a comprehensive study to evaluate the impacts of financial liberalisation on institutional changes, financial markets, financial-related sectors, and household financial inclusion in Indonesia. It presents descriptive analysis of the policy restrictions in the financial sector in Indonesia and of their relationship with economic performance in other sectors,

notably manufacturing. A comparative perspective looking at other AMS and emerging economies has been adopted.

The contribution of this report is twofold. First, it quantifies the degree of restrictiveness and the associated trade costs embedded in (i) the regulatory policy regime applied in the Indonesian financial services sector, (ii) Indonesia's GATS commitments for financial services, and (iii) Indonesia's financial services commitments within AFAS. Second, the report provides an empirical assessment of the relationship between regulatory restrictions in financial services and the productivity performance of firms and sectors that use financial services as intermediate inputs.

The financial sector in Indonesia is relatively highly regulated. The country experienced negative effects of incautious financial policy during the Asian crisis in 1997–1998. Several banks collapsed, and the rupiah depreciated deeply. The Government of Indonesia undertook banking consolidation with the initial closure of 16 insolvent financial institutions, which broadened later to 64 commercial banks, while the recapitalisation of several financial institutions was accompanied by enhanced central bank supervision of financial institutions (Lindgren et al., 1999). As part of the restructuring of the banking sector, Indonesia made General Commitments in Mode 3 (Commercial Presence) for the banking sub-sector in the AFAS second package in 2002.

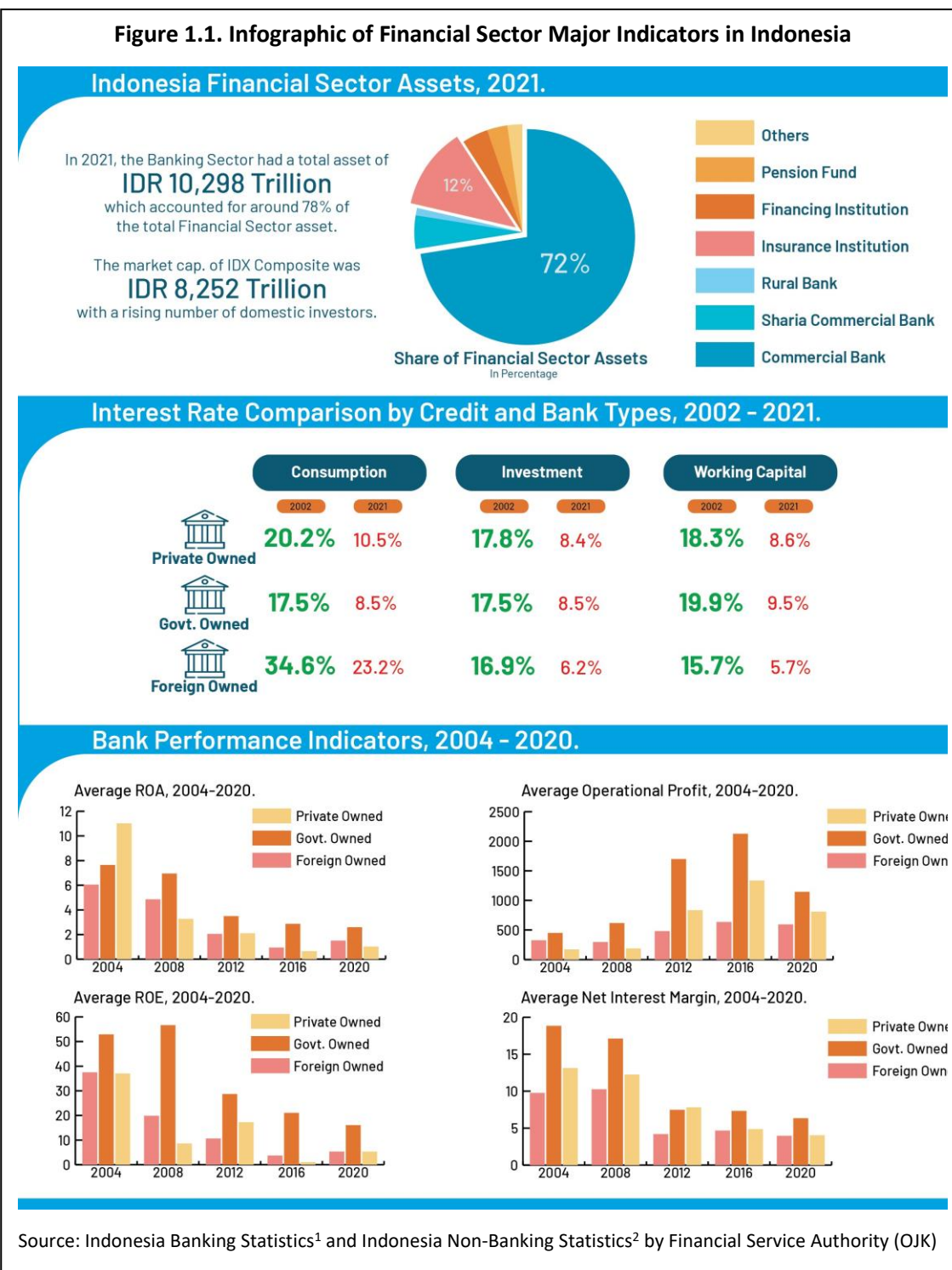
Foreign entities are allowed to acquire a bank, establish a foreign bank branch, or establish a new bank. To acquire a bank via stock purchase, foreigners can own up to 99% and a local shareholder is required for the remaining 1%. To establish a branch, the bank can be 100% foreign owned but must provide at least Rp3 trillion (approximately \$200 million) paid-up capital for commercial or sharia banks. To establish a new bank, a foreign entity is required to have 1% of its stock provided to local shareholders, and it must provide Rp3 trillion (\$200 million) for a commercial bank or Rp1 trillion (\$65 million) for a sharia bank. Bank Indonesia also requires the investors to have a specific operating licence to establish the new bank.

A more regulated financial sector typically puts additional restrictions on the establishment, access, product variants, and utilisation of financial products. These could have effects on linked sectors, including manufacturing. One can expect that lower regulatory restrictions to trade in financial services are associated with higher productivity performance across sectors and firms that use financial services as intermediate inputs. The empirical evidence presented in the report confirms this hypothesis. In a cross-country setting, we find a negative association between upstream restrictions and downstream performance, with Indonesia not departing from the average pattern. A similar result is established using Indonesian firm-level data.

The rest of the report is organised as follows. Chapter 2 uses the Organisation for Economic Co-operation and Development (OECD) policy data to provide an empirical assessment of the regulatory regime in the Indonesian financial services sector. Chapter 3 delves in an econometric analysis of the relationship between regulatory policy in the financial sector and the productivity

performance of firms and sectors that use financial services as intermediate inputs. Chapter 4 concludes and discusses policy implications.

Figure 1.1. Infographic of Financial Sector Major Indicators in Indonesia



¹ Accessed on 03 March 2022 from <https://www.ojk.go.id/id/kanal/iknb/data-dan-statistik/statistik-iknb/default.aspx>

The total asset of banking sector in 2021 was Rp10,298 trillion, comprising assets from commercial banks (Rp9,466 trillion), sharia commercial banks (Rp646 trillion), and rural banks (BPR) (Rp186 trillion). The total asset of non-banking sector was Rp2,840 trillion, primarily composed of the insurance industry (Rp1,634 trillion), the financing industry (Rp583 trillion), and pension funds (Rp329 trillion). Lastly, the Indonesia Stock Exchange (IDX) has a market capitalisation of Rp8.252 trillion. In terms of total assets, commercial banks still dominate more than 77% of Indonesia's financial sector, followed by the insurance industry at 12.6%.

From the perspective of bank performance, there was a downtrend in the net interest margin during 2004–2020. One reason for this is the generally low-interest rate charged for working capital, investment, and consumption. On average, commercial banks in 2021 charged an interest rate of 8.59% for working capital, 8.35% for investment, and 10.53% for consumption – these numbers are even lower in government-owned banks. In 2002, these three categories had a double-digit interest rate ranging from 17% to 20%. The same downward trend was also found in the return on assets and return on equity of the banking industry. However, there is an increasing pattern in the average operating profit within the same period.

Chapter 2

Convergences in Financial Liberalisation in Indonesia and other ASEAN Member States

This section sheds light on overall policy patterns and recent trends affecting services trade in Indonesia and the ASEAN region. While focusing specifically on financial services, it also provides an overview of relevant trade policies and relevant domestic policies affecting other services sectors in Indonesia.

It is well known that trade costs for services trade largely exceed average tariffs on traded goods (WTO, 2019). Recent estimates indicate average trade costs of around 100% for cross-border trade in insurance services and around 250% for financial services (Benz and Jaax, 2020). A significant share of these trade costs comes from restrictive laws and regulations. Restrictive services policies limit the ability of services providers to access foreign markets, but also the ability of domestic firms to access services inputs at competitive prices. There is evidence that services trade barriers represent a significant cost for importers as well as exporters of services (Nordås and Rouzet, 2015). Furthermore, there is evidence that restrictions to services trade can affect small and medium-sized enterprises more than they affect large companies. This is mostly due to the fixed cost nature of many services trade barriers, such as burdensome regulatory procedures or non-transparent licensing requirements (Rouzet, Benz, and Spinelli, 2017).

Restrictive services policies may also affect firms in the manufacturing sector. Such cross-sectoral spillovers are a direct consequence of creating new business models where goods and services are bundled and due to the integration of services and goods in global value chains (Miroudot and Cadestin, 2017).

To a large extent, barriers to services trade result from non-discriminatory laws and regulations behind the border. Examples include inadequate competition frameworks or lack of transparency related to regulatory procedures, such as licensing, in the financial services sector. Streamlining of relevant laws and regulations can bring efficiency gains and lower industry mark-ups, helping to reduce costs for downstream businesses and consumers (Rouzet and Spinelli, 2016).

A hypothetical reform that closes half of the gap between Indonesia and the most liberal country in each sector could lead to a significant reduction in services trade costs.

1. Descriptive Policy Assessment using the STRI

The OECD Services Trade Restrictiveness Index (STRI) provides information on regulations that affect trade in services in 22 sectors across 50 countries, including all OECD countries and several emerging market economies. The STRI covers limitations on market access and national treatment, as well as national regulatory and competition policies which apply to both

national/resident and foreign/non-resident companies, and investment policies. The policy measures accounted for in the STRI database are organised under five policy areas.

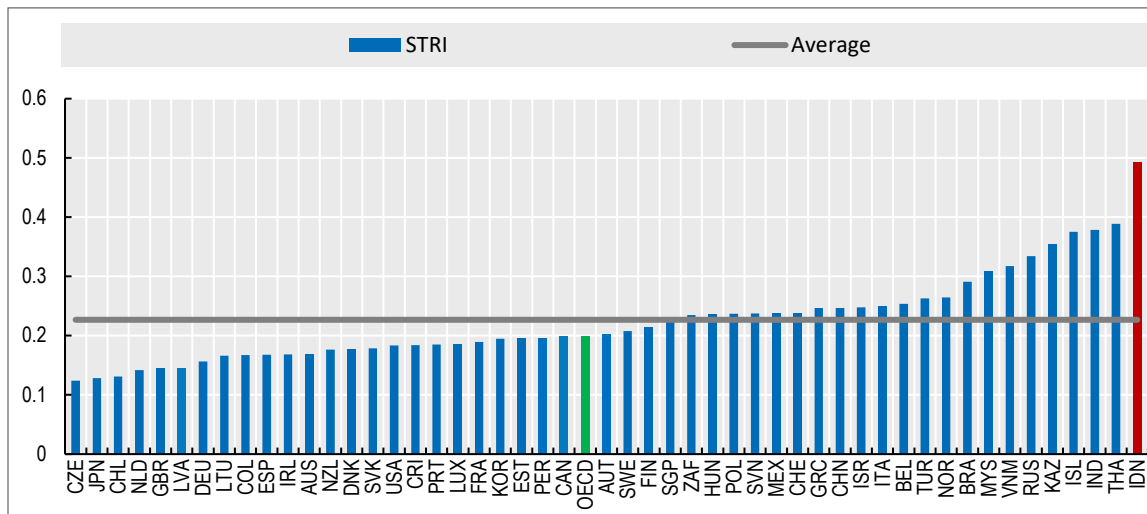
- Restrictions on foreign entry include information on foreign equity limitations, requirements that management or the board of directors must be nationals or residents, foreign investment screening, restrictions on cross-border mergers and acquisitions, capital controls, and several sector-specific measures.
- Restrictions on the movement of people include information on quotas, economic needs tests, and the duration of stay for foreign natural persons providing services as intra-corporate transferees, contractual services suppliers, or independent service suppliers; and recognition of foreign qualifications in regulated professions.
- Other discriminatory measures include discrimination against foreign services suppliers in terms of taxes, subsidies, and public procurement; and instances where national standards differ from international standards, where relevant.
- Barriers to competition include information on anti-trust policy, government ownership of major firms, and the extent to which government-owned enterprises enjoy privileges and are exempted from competition laws and regulations. Sector-specific pro-competitive regulation in network industries also falls under this category.
- Regulatory transparency includes information on consultations and publications prior to the entry into force of laws and regulations. It also records information on administrative procedures related to establishing a company and obtaining a licence or visa.

The STRI reviews regulations currently in force and does not take into account preferential trade agreements. The STRI database is updated every year, and the countries covered are given the opportunity to comment on, and discuss, the accuracy of the information therein.

The regulatory framework for services in Indonesia is relatively restrictive (Figure 1). The average STRI score across all sectors included in the STRI is around 0.5. This is higher than the OECD average and higher than the STRI scores of other emerging market economies covered in the STRI database. While a restrictive regulatory framework for services is usually the source of unnecessary costs for businesses and consumers, it is acknowledged that the speed and degree of services liberalisation must be aligned with a country's economic development and broader regulatory environment.

The results are in large part due to general regulations that apply to all sectors of the economy. Certain management positions in corporations are reserved for Indonesian nationals, and commercial or local presence requirements exist in all sectors. Investments in all sectors are subject to screening, and price preferences are given to local providers in the context of public procurement. The acquisition of land and real estate by foreigners is restricted to the right of use for a limited period of years. The state has a prominent role in the economy. There is at least one major state-owned enterprise in most services sectors. At the same time, there are no discriminatory taxes or subsidies, and laws and regulations are transparent and grant due process to foreign providers (e.g. appeal procedures). Indonesia applies restrictions to trade through the movement of natural persons and maintains labour market tests on all categories of service providers covered in the STRI, despite a recent regulatory update. The duration of stay for all three categories is limited to 24 months on the first entry permit.

Figure 2.1. Comparison of Services Restrictiveness Across Countries, 2021



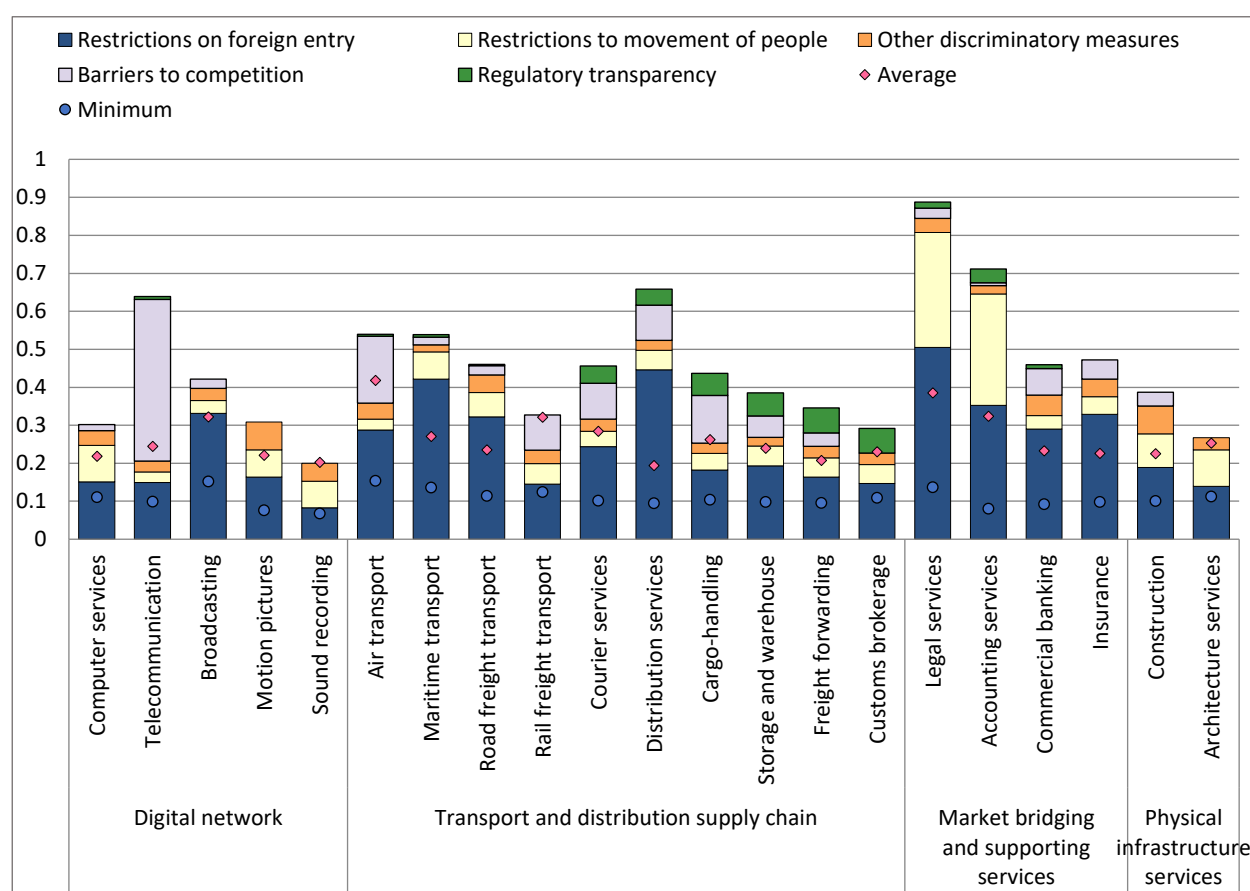
OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.

Source: OECD STRI database (OECD, n.d.).

Figure 2.1 shows a snapshot of Indonesia’s services restrictiveness across sectors, using 2021 data. Relative to the average STRI score across all countries, sound recording, and rail and air transport stand out as relatively liberal sectors. Nonetheless, restrictiveness in the three sectors is still higher than the average across all countries. Sound recording is part of the sectors recently opened to foreign providers. In rail transport, competition law does not apply to state-owned enterprises and the government can overrule the decisions of the regulator. Indonesia is amongst the few countries in the sample that have fully or partially eased foreign equity restrictions in air transport under the 2016 Negative Investment List. It currently allows majority foreign ownership, following recent reforms to the sector.

Distribution services, telecommunication, and legal services are the three sectors with the highest score relative to the average STRI score across all countries. The relatively high score for distribution services is largely related to the fact that foreigners are not allowed to invest in a large part of retail distribution, including retail stores such as supermarkets and mini-markets. Majority foreign investment in department stores is permitted but is conditional upon a special licence granted by the Ministry of Trade. In telecommunication, Indonesia maintains a range of investment restrictions. In addition, pro-competitive policy measures are in place only partially, and the government can overrule the decisions of the regulator. In legal services, foreign lawyers are not allowed to set up a commercial presence or practice law in the country. They can only be hired by Indonesian law firms to advise on foreign law.

Figure 2.2. Snapshot of Indonesia's Services Restrictiveness Across Sectors, 2021



OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.

Source: OECD STRI database (OECD, n.d.).

1.1. Financial Services

The OECD STRI covers two financial services sectors: commercial banking and insurance activities. Commercial banking includes lending, deposit-taking, and payment services. The insurance sector covers a number of subsectors with potentially diverging regulation, including life insurance; non-life insurance; reinsurance; and maritime, aviation, and transport insurance. Restrictiveness towards other financial services activities, such as asset management, participation in issues of securities or settlement, and clearing services, cannot currently be assessed with the STRI methodology.

Indonesia's services restrictiveness in the two financial services sectors – commercial banking and insurance – is neither amongst the most restrictive nor amongst the most liberal services sectors in the country. For both sectors, Indonesia's STRI score is roughly twice as high as the average across all countries, indicating a more restrictive environment for financial services than in the OECD and large emerging market economies.

Commercial banking

In line with the majority of countries covered in the STRI database, Indonesia allows imports of commercial banking services via Mode 3, the commercial presence of foreign companies. Foreign investment in the commercial banking sector is possible up to a threshold of 99% foreign equity, while 1% must remain owned by Indonesian citizens or commercial entities under Indonesian law. Only in the case of Indonesian banks listed on the stock exchange, foreigners can acquire 100% of these stocks.

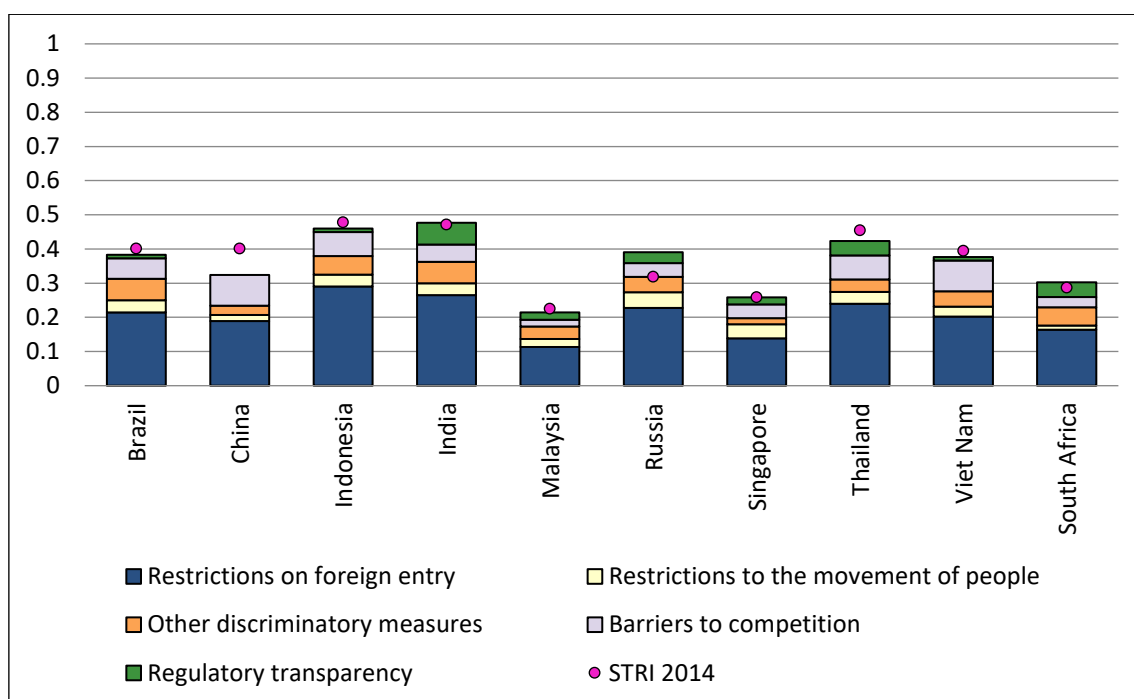
Entry into the Indonesian commercial banking sector is subject to licensing requirements. Economic needs tests are applied in the allocation of banking licences, following the principle that banks in Indonesia shall support national development contributing to sustainable economic growth and improving the welfare of all citizens. To obtain a licence, foreign companies need to be amongst the 100 largest banks globally and enjoy a favourable rating from an international rating agency. Cross-border trade (Mode 1 services trade) in commercial banking, including deposit-taking and lending, is not possible in Indonesia. While many OECD economies allow cross-border trade in a number of financial services activities, barriers to cross-border trade in commercial banking are still relatively common amongst emerging market economies such as Indonesia.

Interest rates on deposits are regulated in Indonesia, and commercial banks must allocate at least 20% of their credit to micro, small, and medium-sized enterprises. Regulation on early repayment conditions for loans is missing. Loans in foreign currency are not permitted, except for export–import activities and syndicated loans. Moreover, there are restrictions on lending to non-residents for domestically licensed banks.

In the commercial banking sector, Indonesia's regulatory environment for financial services trade is amongst the most restrictive of its peers (Figure 2.2). The STRI score of Indonesia in commercial banking is higher than the scores of most other ASEAN economies and of Brazil, Russia, India, China, and South Africa (BRICS). This comes from a large contribution of restrictions on foreign entry to the overall STRI score.

The most restrictive market for trade in commercial banking services, according to the OECD STRI, is India. Trade barriers in this sector in Thailand, Russia, Brazil, and Viet Nam are only moderately lower than those in Indonesia. However, other ASEAN economies, including Malaysia and Singapore, impose significantly lower barriers to trade in commercial banking services.

Figure 2.3. Trade Restrictiveness for Commercial Banking Services, 2021



OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.

Source: OECD STRI database (OECD, n.d.).

The STRI methodology can be applied beyond national laws and regulations to quantify the degree of restrictiveness implied in other policy settings, including the GATS or regional trade agreements.

The GATS Trade Restrictiveness Index (GTRI) uses the STRI methodology to evaluate a country's GATS commitments and quantify the GATS regime relative to applied services restrictiveness. Importantly, GATS commitments are limited to areas of market access and national treatment, while the STRI methodology also covers domestic regulation and other barriers to services trade. To ensure a comparable assessment of the two frameworks, only market access and national treatment measures of the STRI methodology are used for the purpose of this comparison between GATS commitments and the applied services trade regime (Miroudot and Pertel, 2015; Benz and Rozensteine, 2021). The difference in the restrictiveness of the GATS regime and the restrictiveness of the applied regime is labelled 'water in the GATS'².

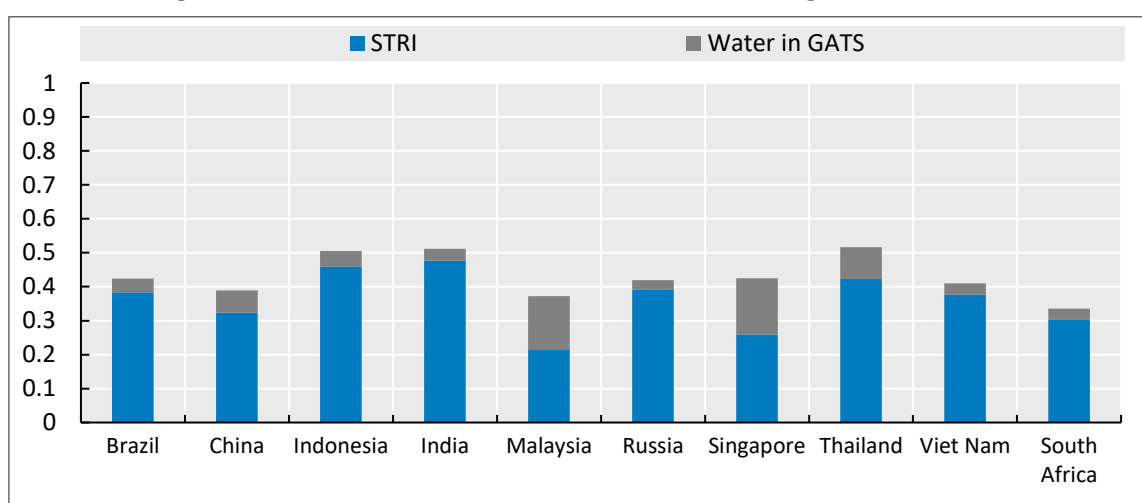
In the case of Indonesia, GATS commitments are relatively similar to the restrictiveness of the applied services regime (Figure 2.3). This implies that Indonesia has relatively little scope for more ambitious GATS commitments without reform of the applied regime. At the same time, the overall restrictiveness of Indonesia's GATS regime is still relatively high. In fact, together with Thailand and India, Indonesia is the economy with the lowest ambition in its GATS commitments

² This term is used in analogy to 'water in tariffs', indicating the difference between bound tariffs and applied tariffs.

in the commercial banking sector. This also implies that Indonesia’s relatively restrictive applied regime is the main reason for relatively low levels of water.

Amongst the peer economies with available data, Russia stands out as the country with the lowest level of water in the GATS. While Russia’s applied regime for commercial banking is relatively restrictive, its GATS commitments tightly bind the applied regime. A country with similarly ambitious GATS commitments is Singapore. However, due to a more liberal applied regime, these commitments result in a much higher degree of water in the GATS. South Africa has the most ambitious GATS commitments in commercial banking services of this group of economies.

Figure 2.4. GATS Commitments in Commercial Banking Services, 2021



GATS = General Agreement on Trade in Services, GTRI = GATS Trade Restrictiveness Index, OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index. Sources: OECD calculations using the STRI (OECD, n.d.).

Insurance services

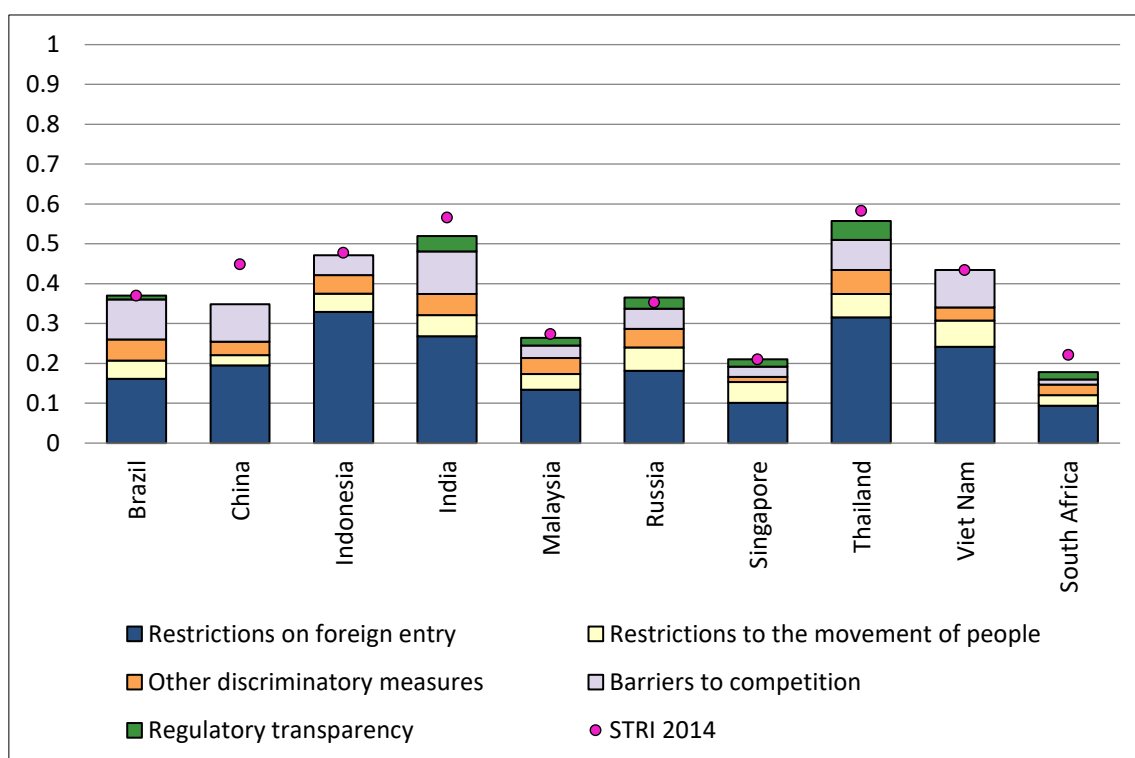
In the insurance sector, Indonesia allows services trade via the commercial presence of foreign insurance companies. However, the participation of foreign companies is limited to 80% of total equity, following the Negative Investment List 2016. This restriction applies in most segments of the insurance market, including life insurance, non-life insurance, and reinsurance. Market entry is only allowed in the form of joint ventures with local companies. Branches of foreign insurance companies are not allowed in Indonesia. Approval by the regulatory authority is required for new insurance products. Moreover, insurance companies are obliged to use domestic reinsurers for simple risk insurance.

Indonesia’s services trade regime is more restrictive than most of its peers in this sector, as shown in Figure 2.4. Again, this results in large part from a high contribution of restrictions on foreign entry. However, Indonesia is not the most restrictive economy for trade in insurance services in the region. Thailand’s regulatory regime in this sector is slightly more restrictive. Thailand’s poor performance comes particularly from a lack of regulatory transparency and an inadequate regime related to competition policy in the insurance sector. These are two policy

areas in which Indonesia performs better than Thailand. Indonesia’s insurance sector is also more open to services trade than the insurance sector in India.

South Africa, Singapore, and Malaysia have the most liberal regimes for trade in insurance services. China has made the most significant progress towards trade liberalisation in this sector between 2014 and 2021.

Figure 2.5. Trade Restrictiveness for Insurance Services, 2021



OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.

Source: OECD STRI database (OECD, n.d.).

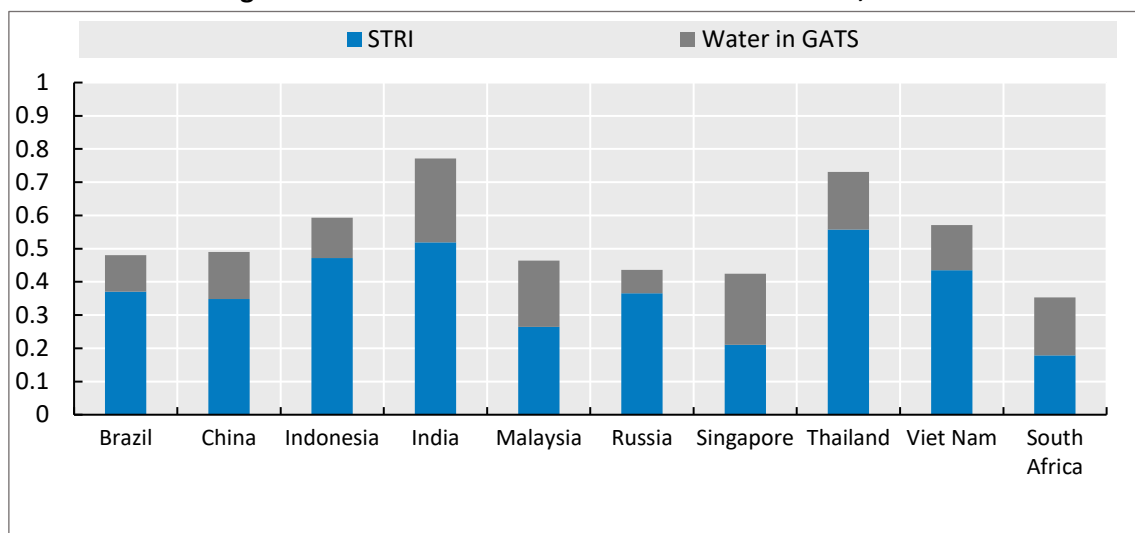
The scope of trade liberalisation through Indonesia’s GATS commitments in the insurance sector is somewhat less ambitious than Indonesia’s applied regime in the sector (Figure 6). Water in the GATS of around 0.1 comes on top of Indonesia’s STRI of around 0.5, making a combined GTRI of around 0.6. Nonetheless, the ambition of Indonesia’s GATS commitments compares favourably with some of its peers.

India’s GATS commitments in the insurance sector are the least ambitious amongst the peer group, composed of ASEAN economies and BRICS. Consequently, water in the GATS, but also applied services restrictiveness measured by the STRI, are amongst the highest in this group. In other words, India has hardly made any substantial commitments to the GATS in the insurance sector.

In addition, a number of other economies with GATS commitments leave significant slack in their applied services regime. For example, Malaysia’s GATS commitments are similar to those of Brazil, according to the GTRI. However, Malaysia’s applied regime for trade in insurance services

is much more liberal than the regulatory environment in Brazil. From this group, South Africa is the economy with the most ambitious GATS commitments.

Figure 2.6. GATS Commitments in Insurance Services, 2021



GATS = General Agreement on Trade in Services, GTRI = GATS Trade Restrictiveness Index, OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.
Sources: OECD calculations using the OECD STRI (OECD, n.d.).

2. Descriptive Assessment Beyond STRI: AFAS

AFAS, ratified in December 1995, has the objective to facilitate the free flow of services within the region.

Liberalisation of financial services through AFAS advanced progressively through different rounds of negotiations, starting in 2002. Subsequent rounds followed in 2005, 2008, 2011, 2015, 2016, and 2019. While the different rounds of negotiations built upon each other, it is noteworthy that not all rounds achieved major progress with respect to the liberalisation of financial services.

The methodology of the STRI and GTRI can be used to compare the ambition of Indonesia's AFAS commitments for commercial banking and insurance activities. Like the GTRI, this assessment is only based on the measures of the STRI methodology pertaining to restrictions regarding market access and national treatment. Measures related to domestic regulation are not included in this assessment.

The assessment finds that there is no measurable divergence between Indonesia's financial services commitments in AFAS and Indonesia's GATS commitments. Based on the STRI and GTRI methodology, the different commitments are characterised by identical levels of restrictiveness. Consequently, the measure of 'water' in the GATS discussed in the previous section also represents a comparable measure of 'water' in AFAS, allowing for some tightening of commitments without the necessity of implementing changes in the applied regime.

For example, regarding services trade in commercial banking, Indonesia has not made any commitments regarding cross-border services trade (Mode 1). Regarding services trade via

Mode 3 (commercial presence), foreign banks are allowed to establish or acquire locally incorporated banks in accordance with existing regulations in cooperation with Indonesian national and/or Indonesian legal entities. These joint ventures should be in the form of a Limited Liability Enterprise (Perseroan Terbatas/PT), and foreign partners may own not more than 49% of the capital share of this enterprise. Acquisition of local existing banks through the purchase of shares in the stock exchange is allowed up to 51% of the listed shares in the stock exchange. Indonesia's commitments in the insurance sector are similar.

3. Trade Costs

Indonesia exhibits some room for further liberalisation in different services sectors. The impact of regulatory reforms on services trade costs can be quantified through gravity modelling.

Closing half of the gap to the best performing country in each sector would be possible through an ambitious agenda for the modernisation of different services sectors (Figure 2.6). This would imply a reduction of Indonesia's STRI by 0.18 on average across all sectors. This would cut more than one-third from Indonesia's current level of regulatory restrictiveness to services trade.

Even though such an ambitious reform could be very challenging, the beneficial impact of such a reform would be remarkable. This reduction in barriers to cross-border trade in services could be around 27% on average across all sectors.

The impact is most pronounced in a number of sectors that are crucial inputs for other services and manufacturing activities. In the commercial banking sector, services trade costs could fall by almost 60%, while insurance services could benefit from trade cost reductions of more than 40%. Some professional services would also be strongly affected, including legal services and accounting.

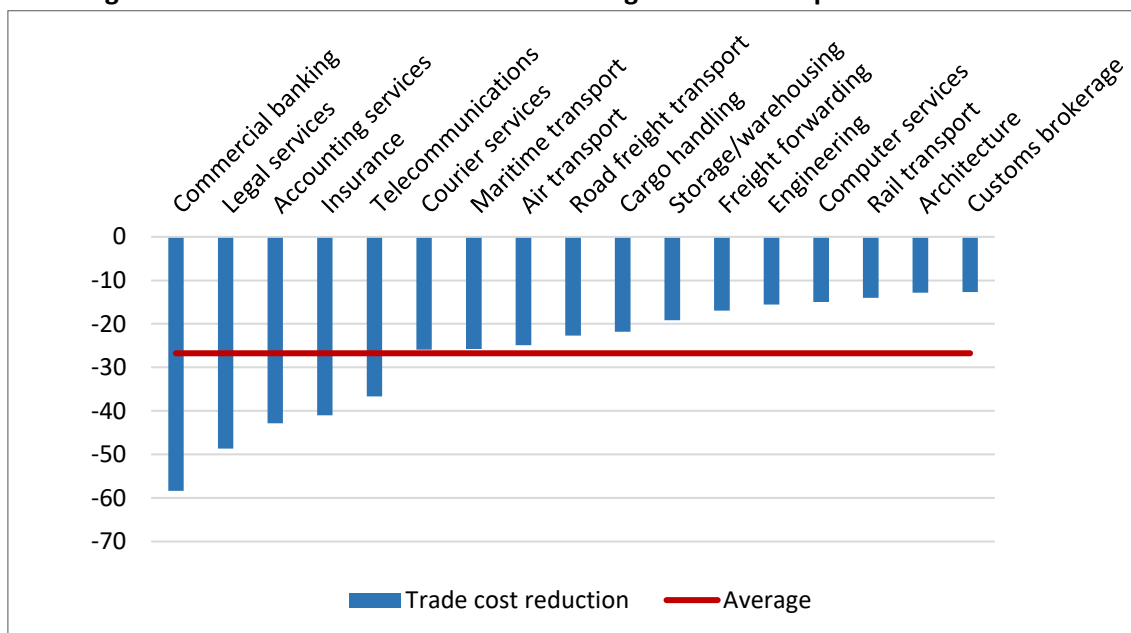
However, such a reform would require ambitious policy changes in a number of policy areas. For example, in the commercial banking sector this reform could be composed of the following elements. Related to restrictions on foreign entry, Indonesia could consider eliminating the limitation on foreign equity for investment in local banks, remove requirements for Indonesian residency and nationality for board members and managers, eliminate economic needs tests for the allocation of licences and apply non-discriminatory licensing criteria, and eliminate restrictions on banks' branch networks.

In the policy area on the movement of people, Indonesia could eliminate labour market tests for services provision through the movement of natural persons, including intra-corporate transferees, contractual services providers, and independent services suppliers. Moreover, the initial duration of stay in Indonesia should be raised to more than 36 months. Finally, related to barriers to competition, Indonesia could consider the deregulation of interest rates on deposits and contractual interest rates on loans, as well as the introduction of regulation on early repayment conditions. Overall, this package of reform could close half of the gap to the best performing country in the STRI database in the commercial banking sector.

The resulting impact on trade costs depends on the initial level of regulation stringency (compared with the best performer), but also on the potential impact of restrictive regulation on services trade costs. This implies that the estimated benefit of such a reform is smaller in

sectors where Indonesia’s regulatory regime is already closer to the best performing country. Examples of these sectors include customs brokerage and rail transport.

Figure 2.7. Trade Cost Reduction from Closing Half of the Gap to Best Performers



OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index.

Sources: OECD calculations using the STRI database (OECD, n.d.) and Benz and Jaax (2020).

This section has provided a descriptive assessment of Indonesia’s services regime, with a focus on financial services. The descriptive evidence presented here – covering national laws and regulations, GATS commitments, and AFAS schedules – has highlighted the scope for further liberalisation in the sector, pointing to some policy areas where restrictions tend to be higher than in other sectors in the country as well as in the financial sector across regional peers. To support policy action in the direction of removing policy barriers to services trade, a gravity-based analytical exercise estimated that an ambitious policy reform would imply a reduction in trade costs of 60% and 40% for trade in commercial banking and insurance services, respectively.

How would such reform be reflected in other dimensions of the economy, and in particular on the productive performance of Indonesian industry? The next section of this report will provide more specific analytical evidence on the linkages between financial services liberalisation and productivity in Indonesia.

Chapter 3

Upstream Financial Services Trade Liberalisation and Downstream Performance

We now turn to the empirical analysis of the relationship between services trade policy and productivity performance in Indonesia. Section 1 introduces the conceptual framework and the econometric methodology used in our exercise, provides a brief overview of related literature, and discusses relevant stylised facts. Sections 2 and 3 present the econometric exercise conducted on sector- and firm-level data, respectively.

1. Conceptual Framework

There is growing recognition that services and manufacturing are closely intertwined in global value chains (Andrenelli et al., 2018; Miroudot, 2019; Ariu et al., 2019). Services act as crucial inputs to virtually all economic sectors, including manufacturing activities, and play a central role in the coordination of the flows of goods, capital, and knowledge between different locations (Low, 2013).³

Many services activities – including transport services, logistics, telecommunication, and management services – are fundamental tools to coordinate increasingly fragmented global production processes, manage within-firm processes, and coordinate between upstream suppliers and downstream customers in global value chains (Francois, 1990; Bloom et al., 2013; Baldwin, Forslid, and Ito, 2015). Moreover, research and development, as well as professional and business services including those focusing on product development, innovation, and marketing, help meet market demand, anticipate consumers' preferences, and expand to new markets (Bloom, Draca, and Van Reenen, 2016; Berlingieri and Pisch, 2022).

Financial services are no different. Access to higher quality to price ratio financial services can increase producers' capacity to invest in new, productivity-enhancing technology and to better manage the risks associated with those investments. Banking and insurance services can also be relevant for investment in research and development processes as well as for scaling up production activities and contesting new markets (Francois and Hoekman, 2010; Bamieh et al., 2020).

Overall, the cost, quality, and variety of services available to firms can help determine the productivity of an economic system. Trade is an important channel through which firms can improve their access to intermediate inputs, including services. Changes to the regulatory framework of a given services sector that are relevant for trade, are therefore likely to create spillover effects on manufacturing activities that source services inputs.

The empirical investigation of this impact channel, from upstream services-related variables (the treatment) to downstream performance (the outcome), relies on a well-established

³ Services account for a substantial share of the value of manufacturing exports, and manufacturing firms increasingly sell goods in bundles with services (Miroudot and Cadestin, 2017).

econometric setting. The analysis is conducted at the level of downstream economic actors, either firms or sectors, potentially using services as intermediate inputs. While the outcome variable (performance) is measured at the level of downstream units, the treatment (a services-related variable) varies across services sectors. The econometric approach consists of building a composite treatment variable that, for each downstream unit of analysis, aggregates the services sector-specific treatment taking into account the intensity by which the downstream economic actor (e.g. manufacturing sectors or firms) uses each services sector as an intermediate input.

By relying on different applications of this methodology, a rich body of empirical studies demonstrates the economic relevance of upstream services regulation to the performance of downstream manufacturing industries.

Firm-level evidence shows that regulatory reforms facilitating foreign entry into services sectors positively affected manufacturing productivity in the Czech Republic (Arnold, Javorcik, and Mattoo, 2011) and Chile (Fernandes and Paunov, 2012). In a study that exploits rich data on Chinese firms, Bas and Causa (2013) also found that regulatory reforms in upstream sectors boosted the productivity of downstream manufacturing firms.

Similarly, Arnold et al. (2016) found that regulatory reforms regarding banking, telecommunication, insurance, and transport reforms implemented in India after 1991 had significant positive effects on the productivity of manufacturing firms. In a further study dedicated to the case of India, Bas (2014) related measures of regulatory liberalisation in three services sectors in the mid-1990s to firm-level outcomes in downstream manufacturing industries. Her results also indicated that services liberalisation positively affected the export performance of downstream manufacturing firms. Adopting instead an empirical approach based on sector-level data for 57 countries at different levels of development, Beverelli, Fiorini, and Hoekman (2017) identified a positive effect of liberalisation of services trade on downstream manufacturing productivity. These authors highlighted the pivotal role of institutions in shaping this effect.⁴

The above-mentioned studies linking measures of services regulation to downstream manufacturing performance assume that downstream spillover effects of services reforms are driven by improved access to high-quality services (i.e. an improvement in the performance of services available as inputs for downstream sectors). A related set of empirical contributions directly links measures of services performance to measures of manufacturing performance. Focusing on the overall level of financial market development, a seminal study by Rajan and Zingales (1998) found that industries that are more dependent on external finance develop faster in countries with more developed financial markets. In a comprehensive firm-level analysis covering 119 countries, Hoekman and Shepherd (2017) identified a positive link between services productivity and the productivity and export performance of manufacturing firms.⁵ Furthermore, Bilir, Chor, and Manova (2019) exploited detailed data on United States

⁴ Moreover, Barone and Cingano (2011); Boursès et al. (2013); and Cette, Lopez, and Mairesse (2016) used data for OECD countries and found that anticompetitive upstream regulation of services sectors negatively affects downstream manufacturing productivity.

⁵ Their findings suggest that a 10% improvement in services productivity is associated with an increase in manufacturing productivity of 0.3% and a resulting increase in exports of manufacturing firms by 0.2%.

(US) multinational companies and found that higher levels of financial development in a country are associated with more entry by multinational affiliates.⁶

Indonesia is a relevant case study for the application of this analytical framework. On the one hand, as discussed in Chapter 2, regulatory barriers to trade in financial services are relatively high for Indonesia, generating space for policy action. On the other hand, increasing sectoral productivity is high on the policy agenda for the country's economic transformation. Therefore, investigating whether and how removing barriers to trade in financial services can affect sectoral productivity will offer important insights for policy reform.

1.1. Descriptive Evidence

Before moving to the discussion of our econometric exercises, it is useful to inspect whether the data support the mechanics of the conceptual framework presented in this section and adopted in the analysis. A negative association between policy barriers to financial services trade on the one hand, and the quality of or access to financial services in a country on the other, would help explain a positive relationship between lower restrictions to trade in financial services and the productivity of firms and sectors that rely on financial services as intermediate inputs.

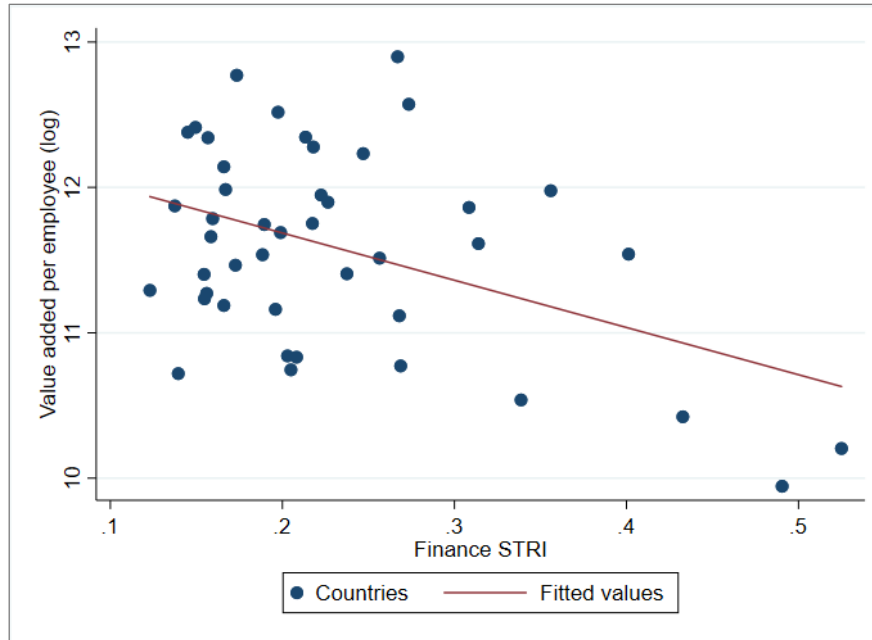
Starting from a cross-country perspective, the data from 47 economies plotted on Figure 2.7 reveal a negative correlation between a country's STRI score in the financial sector (commercial banking and insurance services) and financial services performance (panel A). Greater regulatory openness – signalled by a low STRI value – is associated with higher levels of value added per employee in the financial sector. Panel B instead displays a positive relationship between productivity performance – as measured by value added per employee – between manufacturing industries and the financial sector. A key takeaway from Figure 2.7 panel B is the positive correlation, meaning that a relatively low (high) level of industrial productivity is associated with low (high) performance in the financial sector.

The combination of these two graphs therefore suggests that (i) lower regulatory barriers to financial services trade are associated with higher productivity in financial services, and (ii) productivity in financial services displays a positive link with manufacturing productivity.

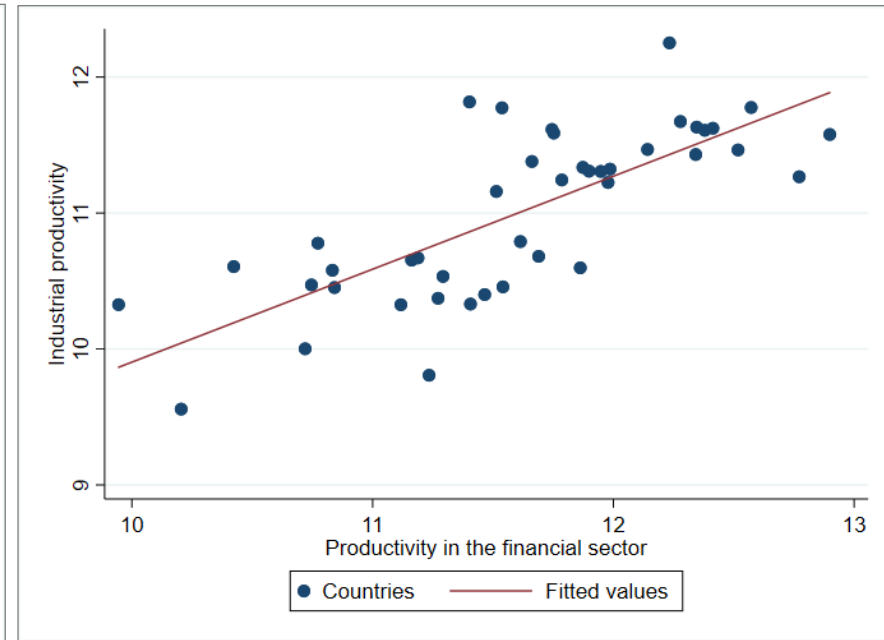
⁶ In a contribution focused on the link between services and the sourcing of foreign manufacturing inputs, Debaere, Görg, and Raff (2013) analysed Irish plant-level data and found that greater availability of computer services and professional services increases firms' foreign sourcing of materials relative to sales.

Figure 3.1. Stylised Facts From 47 Countries

Panel A: Finance STRI and productivity of financial sector



Panel B: Manufacturing productivity and financial services productivity



OECD = Organisation for Economic Co-operation and Development, STRI = Services Trade Restrictiveness Index, UNIDO = United Nations Industrial Development Organization.

Notes: Data for financial productivity come from the OECD Trade in Employment database; industrial productivity is measured with UNIDO Industrial Statistics data; and data on the regulation of financial services trade come from the OECD STRI database for 2014 and 2015.

Sources: OECD (n.d. b), Trade in Employment (TIM) 2021 ed. (Horvát, Webb and Yamano, 2020) (accessed 15 April 2021); UNIDO Industrial Statistics Database (INDSTAT 2) (UNIDO, n.d., ccessed 15 April 2021); OECD STRI database (OECD, n.d. a).

Reforms liberalising the regulatory framework for trade in upstream financial services allow firms to access more diverse or cheaper services inputs and are expected to have a positive impact on downstream manufacturing productivity. Downstream industries may benefit from an enlargement of the set of potential suppliers and thus source financial services that are either cheaper, previously unavailable, or of superior quality.

Zooming in on the Indonesia case study, we look at how the time evolution of the STRI for financial services relates to the interest rate and the number of loans to the manufacturing sector. Given the very limited number of observations that amount to the 6 years from 2014 to 2020, we replicate this exercise by replacing the STRI with the OECD FDI Regulatory Restrictiveness Index (FDI Index). The FDI Index database measures statutory restrictions on foreign direct investment and offers a broader time coverage, including yearly observations from 2010 to 2018 (Kalinova, Palerm, and Thomsen, 2010). We take the FDI Index for financial services as a proxy of restrictiveness to imports of financial services through commercial presence (Mode 3 imports). We find evidence of a positive relationship between barriers to trade in financial services and the interest rate in Indonesia. Similarly, we find that higher restrictions are associated with fewer loans to the manufacturing sector. Overall, these empirical patterns confirm support for a positive relationship between a less restricted policy environment for trade in financial services and both the quality-price-ratio of and access to financial services in Indonesia. But why might this be the case?

To provide a rough answer to this question, we investigate the empirical linkages between the OECD services trade policy data and indicators of competition in the Indonesian financial sector – the underlying assumption being that a more competitive market for financial services would increase the quality-price-ratio of these services as well as access by firms (and by household consumers). We find that there is a positive and statistically significant correlation between the 1 year-lagged FDI Index for banking and concentration indicators for the Indonesian banking sector, which we interpret as suggestive evidence in support of a negative relationship between regulatory barriers to trade in financial services and the degree of competition amongst financial firms in Indonesia.⁷

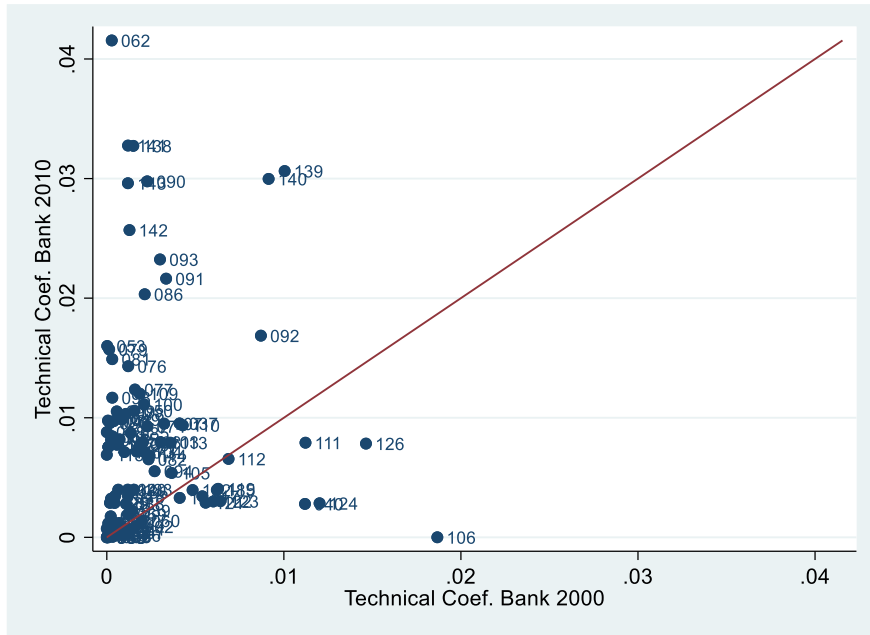
Finally, we inspect the evolution of the consumption of financial services by Indonesian manufacturing sectors. To this end, Figure 3.1 plots the intensity of input use by manufacturing sectors for 2000 (horizontal axis) and 2010 (vertical axis) for both banking services (panel A) and insurance services (panel B).⁸ Dots above the 45-degree line represent Indonesian industries where intermediate consumption of financial services increased during the 10 years from 2000 to 2010.

⁷ The data used to generate the results discussed in this paragraph come from the Banks Financial Report (LKP) (Financial Services Authority, 2020 a) and Indonesia Banking Statistics (SPI) (Financial Services Authority, 2020 b) provided by the Financial Services Authority (OJK). We computed the concentration ratios (CR4 and CR10) and the Herfindahl–Hirschman Index of banking industry using the fourth quarter asset data. We also gather specific banking data on the manufacturing industry such as the interest rate, total loans disbursed for the sector, and the size of non-performing loans generated by the sector.

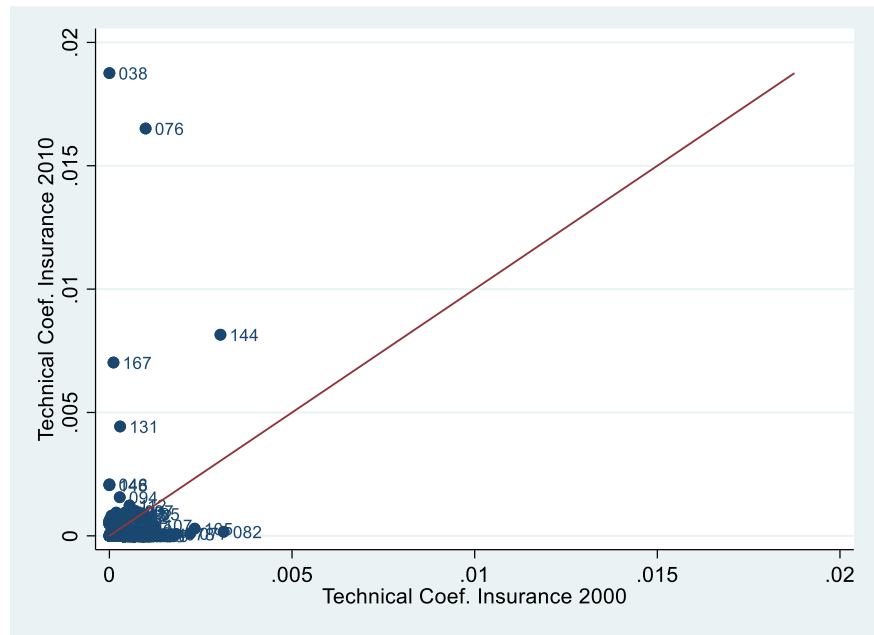
⁸ Input intensity is proxied by Input-Output technical coefficients.

Figure 3.2. Use of Financial Services by Indonesian Manufacturing Sectors

Panel A: Use of banking services



Panel B: Use of insurance services



Coef. = .Coefficient

Source: Authors' calculations on Input-Output data from Statistics Indonesia (BPS).

From 2000 to 2010, the use of banking services increased for the vast majority of downstream industries in Indonesia (Figure 3.1, panel A). While less widespread, a similar pattern can be seen for insurance services as well (panel B). This descriptive evidence suggests that policies affecting trade in financial services became increasingly relevant for productivity performance throughout the Indonesian economy.

Learning from the body of research summarised in the previous section and looking at the picture emerging from these stylised facts, we expect that removing regulatory barriers to trade in financial services would increase access to higher quality to price ratio financial services for Indonesian firms by strengthening competition in the financial sector. This in turn would have the potential to support higher productivity performance across Indonesian firms and sectors that rely on financial services as intermediate inputs.

The next sections present the econometric exercises that examine the empirical association between upstream financial services trade regulations and downstream performance at the sector and firm level.

2. Sector-Level Regression Analysis

The first exercise in this section relies on sector-level data. The main advantage of this approach is to position the analysis of the Indonesian economy within a cross-country setting.

2.1. Data and Empirical Strategy

The empirical analysis presented here investigates the link between financial services trade regulations and downstream manufacturing productivity at the sectoral level, exploiting data covering 15 industries across a panel of 47 countries during 2014–2019. As a measure of productivity, the main dependent variable is constructed using the United Nations Industrial Development Organization (UNIDO) Industrial Statistics Database (INDSTAT 2) (International Standard Industrial Classification of All Economic Activities (ISIC Rev. 3)). The INDSTAT 2 database (UNIDO, n.d.) provides industrial statistics covering a broad set of country–industry pairs.⁹ Productivity is measured by apparent labour productivity, constructed as value added divided by the number of employees.

The measure of financial services regulation is based on the OECD STRI (Geloso Grosso et al., 2015), which provides indicators tracking changes in regulatory measures concerning services trade. The main variable of interest is constructed based on the STRI in banking and insurance. The STRI scores of these two sectors are combined into an aggregate financial services STRI. This variable, $STR I_{fin}$, is calculated as a weighted sum where banking and insurance weights are constructed using data for US manufacturing industries in 2010, derived from the World Input–Output Database. Weights represent industry-specific consumption of banking and insurance services as a share of the total intermediate inputs used.¹⁰

⁹ Version 2 of UNIDO’s INDSTAT is preferred to version 4 – although more recent – since it maximises the number of non-missing observations, especially regarding Indonesian industries.

¹⁰ Insurance and banking sectors are aggregated following the methodology implemented by Benz and Jaax (2020). See Table A.1 from Benz and Jaax (2020) for further information.

$$STRI_{fin_{i,c,t}} = STRI_{bnk_{c,t}} * w_{bnk_i} + STRI_{ins_{c,t}} * w_{ins_i} \quad (1)$$

The calculation of the key variable of interest is reflected by the equation above, where c refers to a specific country, i to a given manufacturing industry, and t to a given year. Weights vary across industries but do not vary across countries or years: This is due to the use of US weights for 2010 for all observations in the database. The decision to use US weights referring to 2010 relies on two main arguments. First, exploiting Input–Output data from a reference country is widely implemented by the literature to address endogeneity concerns (Bas and Causa, 2013; Arnold et al., 2016; Beverelli, Fiorini, and Hoekman, 2017). Second, and in line with the underlying literature, the relatively liberal regulatory framework of the US and its technological leadership in many areas allow for the assumption that US weights represent Input–Output relationships shaped by technological rather than regulatory constraints. Thus, weights referring to US industries are expected to approximate the optimal consumption of intermediate inputs. Similarly, the selection of the year of reference is also motivated by two main criteria. The reference year must be before the first year of analysis to address endogeneity concerns, but it also must be contemporaneous enough to capture relevant technological constraints.

Regarding control variables, data on tariffs come from the United Nations Conference on Trade and Development (UNCTAD) Trade Analysis Information System (TRAINS) (UNCTAD, n.d.), while data on capital stock come from the Penn World Tables (Feenstra et al., 2015). In line with the approach adopted by Arnold et al. (2016), input tariffs are constructed as a weighted average of tariffs applied on intermediate inputs weighted by the input use intensities of downstream industries. Gross domestic product (GDP) per capita and regulatory quality are sourced from the World Bank’s Worldwide Governance Indicators (Kaufmann et al., 2010). Alternative tariff controls are sourced from the World Bank’s World Integrated Trade Solution (WITS) (World Bank, n.d.) and data on households’ access to the internet come from the OECD (OECD, 2022). We also include a variable measuring value added generated by services industries as a percentage of total value added from the World Bank to control for the level of tertiarisation of an economy.

2.2. Results

Table 3.1 displays results from seven specifications using country and sector-year fixed effects. All regressions rely upon variations of the following specification:

$$Y_{i,c,t} = \beta STRI_{fin_{i,c,t-1}} + \boldsymbol{\gamma}' \mathbf{T}_{i,c,t-1} + \boldsymbol{\delta}' \mathbf{Z}_{c,t-1} + \lambda_{it} + \lambda_c + \varepsilon_{i,c,t} \quad (2)$$

Where $STRI_{fin}$ is the main variable of interest, it can be interpreted as a proxy for upstream regulation in financial services trade. \mathbf{T} is a vector of tariff controls – input and output tariffs – and \mathbf{Z} a vector of control variables. λ_{it} is an industry-year specific fixed effect that captures all unobservable shocks that jointly affect all observations in a given sector and year, such as a sudden drop in global demand. λ_c is a country fixed effect that controls for all time-invariant characteristics of a given country, such as a generally high level of adoption of digital technologies

Table 3.1. Baseline Results from Sector-Level Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Upstream Finance STRI ($STRI_{fin}$)	-30.808*	-30.664*	-30.768*	-30.607*	-30.591*	-30.331*	-28.871*
	(16.749)	(16.394)	(16.767)	(16.770)	(16.774)	(16.434)	(16.688)
Output tariffs		0.001				0.001	0.001
		(0.006)				(0.006)	(0.006)
Input tariffs		-0.023				-0.024	-0.024
		(0.026)				(0.026)	(0.026)
Capital stock per capita			0.221			-0.524	-0.521
			(0.463)			(0.547)	(0.547)
Rule of law				0.098**		0.067	0.067
				(0.048)		(0.051)	(0.051)
GDP per capita					0.159***	0.200***	0.200***
					(0.057)	(0.068)	(0.068)
$STRI_{fin} \times IDN$							-5.017
							(30.238)
Constant	11.120***	11.136***	11.094***	11.028***	9.526***	9.137***	9.130***
	(0.076)	(0.077)	(0.101)	(0.094)	(0.589)	(0.647)	(0.643)
Observations	3,311	3,076	3,268	3,311	3,296	3,031	3,031
R-squared	0.820	0.827	0.822	0.820	0.820	0.827	0.827
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

GDP = gross domestic product.

Notes: Robust (country-industry clustered) standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Authors' estimates.

The coefficient of the key variable of interest is negative and significant at the 10% level (Table 3.1). This indicates that a greater regulatory openness to services trade in upstream financial services is associated with higher productivity in downstream manufacturing industries. This result is robust to the inclusion of tariffs, capital stock, governance, and GDP controls – both separately (columns (2)–(5)) and jointly (columns (6)–(7)). The estimated coefficient ranges between -28.871 and -30.808 across specifications 1 to 7.

Input and output tariffs, respectively, control for possible changes in tariffs applied to intermediate inputs consumed and possible changes in tariffs applied to goods issued by downstream industries. Capital stock per capita controls for relative abundance of capital equipment across countries, as countries with a relatively high stock of capital per capita are likely be more productive. Furthermore, rule of law and GDP per capita capture the overall level of development in terms of the institutional framework and income.

The specification presented in column (7) incorporates an interaction term between the key variable of interest and a dummy coded one for Indonesia. Although insignificant, the interaction term yields a negative coefficient, which is in accordance with the negative relation between upstream financial services trade regulation and downstream productivity. Regarding the interaction term the lack of significance observed here may reflect the relatively small number of observations captured by the Indonesia dummy. Overall, the result shown in column (7) of Table 3.1 confirms the overall picture and simultaneously suggests that the link between the upstream finance STRI and productivity in the case of Indonesia is not statistically significant from the association observed in the overall sample.

The second set of specifications shown in Table 3.2 follows the pattern presented in Table 3.1, but uses a different set of controls. Control variables are again added one by one and eventually included altogether in column (6). Finally, column (7) replicates the specification from column (6) but includes the interaction term between the main regressor of interest and the Indonesia dichotomous indicator.

Table 3.2. Additional Results from Sector-Level Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Upstream finance STRI ($STRI_{fin}$)	-30.808*	-33.490*	-31.604*	-30.887*	-30.980*	-34.230**	-32.716*
	(16.749)	(17.363)	(16.737)	(16.756)	(16.776)	(17.387)	(18.414)
Tariff rate, applied, simple mean, manufactured products (%)		-0.001				-0.002	-0.002
		(0.006)				(0.006)	(0.006)
Share of tariff lines with international peaks, all products (%)		0.002				0.002	0.002
		(0.002)				(0.002)	(0.002)
Internet access			-0.002*			-0.002*	-0.002*
			(0.001)			(0.001)	(0.001)
Political stability				-0.035		-0.035	-0.035
				(0.022)		(0.024)	(0.024)
Services VA					-0.004	-0.003	-0.003
					(0.004)	(0.004)	(0.004)
$STRI_{fin} \times IDN$							-7.030
							(30.576)
Constant	11.120***	11.148***	11.305***	11.134***	11.390***	11.506***	11.501***
	(0.076)	(0.080)	(0.124)	(0.077)	(0.245)	(0.261)	(0.262)
Observations	3,311	3,076	3,268	3,311	3,296	3,031	3,031
R-squared	0.820	0.827	0.822	0.820	0.820	0.827	0.827
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

STRI = Services Trade Restrictiveness Index. Services VA = Value added generated by services sectors as a percentage of total value added.

Notes: Robust (country-industry clustered) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' estimates.

The conclusions drawn from Table 3.1 are not altered by the inclusion of alternative control variables in the regressions presented in Table 3.2. The coefficients associated with the key variable of interest are very close in magnitude to those estimated in the first set of regressions. We similarly control for input and output tariffs, but using an alternative data source. A measure of household-level access to the internet gives an overview of the possible use of internet-based financial services and proxies whether digital financial services could be widespread in a country. A measure of political stability is included, similar to the measure of rule of law, to take into account the quality of the institutional framework. In Table 3.2, the inclusion of alternative tariff controls slightly increases the coefficient of the STRI variable – it rises to –34.230.

To illustrate the economic magnitude of the effects identified in the analysis, a quantification exercise is carried out using results from our preferred specification reported in Table 3.1, column (6). In an ambitious scenario where Indonesia liberalises its regulatory framework regarding financial services so far that it halves the gap in terms of STRI score with respect to the OECD average (as measured in 2019), value added per employee is expected to increase by 8% on average in Indonesia’s manufacturing sector across the 15 manufacturing industries included in the analysis.¹¹

The impact of the reforms in this scenario is found to be heterogeneous across industries (Table 3). The textile industry is expected to experience the highest productivity gains (+14.5%). Similarly, sizeable increases in productivity are also predicted for metal products (+13.6%); computer, electronic, and optical equipment (+6.9%); and food products, beverages, and tobacco (+4.9%). The difference in the magnitude of the impact estimated across industries is shaped by differences in the intensity in the use of financial services, with industries highly intensive in financial services benefiting more from financial services trade liberalisation than industries that use financial services inputs less intensively.

¹¹ Formally, the productivity change associated with the policy reform that would halve the gap between the Indonesia STRI scores for financial services and the OECD averages is given by the following equation:

$$\% \Delta Y_i = 100 \times \hat{\beta} \times \left\{ \sum_{s \in \{bnk, ins\}} w_{s,i} \times [STRI_s(\text{half OECD average}, 2019) - STRI_s(IDN, 2015)] \right\}$$

Table 3.3. Estimated Productivity Increase Associated with Ambitious Policy Reform

Industry	Productivity Increase (%)
Food products, beverages, and tobacco	+4.9
Textiles, textile products, leather, and footwear	+14.5
Wood and products of wood and cork	+4.9
Pulp, paper, paper products, printing, and publishing	+6.9
Coke, refined petroleum products, and nuclear fuel	+0.2
Chemicals and chemical products	+3.5
Rubber and plastics products	+6.4
Other non-metallic mineral products	+11.6
Basic metals	+10.7
Fabricated metal products	+13.6
Machinery and equipment, not else classified	+12.4
Computer, electronic, and optical equipment	+6.9
Motor vehicles, trailers, and semi-trailers	+3.7
Other transport equipment	+7.2
Manufacturing nec; recycling (including jewellery)	+14.2

Source: Authors' estimates.

Overall, the sector-level analysis presented here suggests a strong positive effect of removing regulatory restrictions to trade in financial services for downstream productivity performance. This is true as an average result within a panel setting covering 15 industries in 47 countries during 2014–2019. The effect in the Indonesian case does not depart from the average estimate in a statistically significant way, and suggests a potential role of liberalising reforms affecting trade in financial services as a tool to increase productivity within the manufacturing sector in Indonesia.

3. Firm-Level Regression Analysis

We now turn to the analysis at the level of the firm. This complements the previous empirical setting at the sector level by providing a tighter focus on the Indonesian case. Performance measured at the firm level offers a more granular assessment than what is feasible with sectoral data. Moreover, it allows investigating whether and how the relationship between regulatory barriers to trade in financial services and downstream performance changes depending on the characteristics of the firm.

3.1. Data and Empirical Strategy

The econometric exercise presented here relies on firm-level data sourced from Indonesia's census of medium and large manufacturing firms (IBS). The IBS data set allows building a firm-year panel database for 2007–2015.¹² Information available in the IBS includes output and employment data used to construct a measure of apparent labour productivity as well as other variables used as controls in the regressions. After merging firm-level data with the STRI, the time coverage of the data set is reduced to the biennium 2014–2015, as the OECD STRI data set does not cover years before 2014. To minimise concerns of external validity raising from what is admittedly a fairly limited time coverage, all estimations in this section are replicated on a longer sample period starting in 2007 by replacing the STRI variables with their counterparts from the FDI Index database. The main patterns of results are confirmed in the FDI Index version of the analysis.

Similarly to the empirical strategy followed in the sector-level exercise, the econometric approach here consists of investigating the relationship between firm-level productivity performance (denote productivity for firm j , active in sector i , located in province p at time t as $y_{j,i,p,t}$) and the degree of trade openness in financial services, weighted by a proxy of the firm's use of financial services as intermediate inputs. Weighted trade openness here is a firm-level and Indonesia-specific version of the variable $STRI_{fin}$ as defined in equation (1) and can be written as

$$STRI_{fin}(j, IDN) = STRI_{bnkIDN,t} * w_{bnk_j} + STRI_{insIDN,t} * w_{ins_j} \quad (3)$$

The variable $STRI_{fin}(j, IDN)$ is calculated as a weighted sum of the STRI scores for Indonesia in the banking and insurance sectors. We proxy firm-level weights (w_{s_j} with $s \in \{bnk, ins\}$) with sectoral measures of services input use. More precisely, input consumption of banking (insurance) services by firm j is captured by the Input–Output technical coefficient for the main sector of affiliation of firm j with respect to banking (insurance) services. Measuring intermediate input consumption at the sectoral level minimises endogeneity concerns that would have been amplified had the weights been measured at the firm level (Arnold et al., 2016).¹³ Input–Output technical coefficients are computed using pre-sample (2010) Indonesian Input–Output data sourced from Statistics Indonesia (BPS) and merged with IBS data on the sectors of the firms' affiliation.

The main regression equation for the firm-level analysis can be written as

$$Y_{j,i,p,t} = \beta STRI_{fin_{i,t}} + \boldsymbol{\gamma}' \mathbf{T}_{i,t} + \boldsymbol{\delta}' \mathbf{Z}_{j,i,p,t} + \lambda_t + \lambda_i + \lambda_p + \varepsilon_{j,i,p,t} \quad (4)$$

$STRI_{fin}$ captures upstream regulation in financial services trade and is the main regressor of interest. As in equation (2), \mathbf{T} is the vector of tariff controls. \mathbf{Z} is a vector of firm-level control variables built from IBS data; it includes indicators of foreign ownership, exporter and importer

¹² While IBS data are available also for 2016 and 2017, the structure of the data for those years is not directly compatible with the previous vintages.

¹³ We are unable to identify in the IBS data information on firm-level expenditure on banking and insurance services, which prevents us from testing the robustness of our approach.

status, and loan uptake.¹⁴ λ_t , λ_i , and λ_p capture year, sector, and province-specific fixed effect, respectively. Sector fixed effects are generated based on 2-digit ISIC sectors.

The final estimation sample covers 25,201 firms (active across 380 5-digit within 25 2-digit ISIC sectors and 34 provinces) over 2014–2015 for a total of 48,195 observations.

3.2. Results

Table 4 presents the main estimation results obtained by using different batteries of fixed effects. In column (1), we only control for year fixed effects. Province-level fixed effects are added in column (2), while column (3) further includes sector-level fixed effects as specified in the estimating equation (4).

Table 3.4. Baseline Results from Firm-Level Analysis

Variables	(1)	(2)	(3)
Upstream finance STRI ($STRI_{fin}(j, IDN)$)	-35.766*** (9.315)	-23.833*** (8.237)	-17.717* (10.174)
Input tariff	0.011 (0.060)	-0.016 (0.054)	-0.099** (0.042)
Output tariff	-0.028 (0.018)	-0.017 (0.018)	-0.004 (0.009)
Foreign-owned company	0.647*** (0.107)	0.511*** (0.087)	0.394*** (0.095)
Dummy exporter	0.133* (0.077)	0.144*** (0.045)	0.226*** (0.028)
Dummy importer	0.883*** (0.053)	0.848*** (0.054)	0.709*** (0.054)
Dummy loan uptake	0.077*** (0.025)	0.131*** (0.030)	0.100*** (0.028)
Observations	48,195	48,195	48,195
Adjusted R-squared	0.133	0.210	0.289
Number of firms	25,201	25,201	25,201
Year Fixed Effects	Yes	Yes	Yes
Sector Fixed Effects	No	No	Yes
Province F Fixed Effects E	No	Yes	Yes

STRI = Services Trade Restrictiveness Index.

Notes: Robust (sector-year clustered) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' estimates.

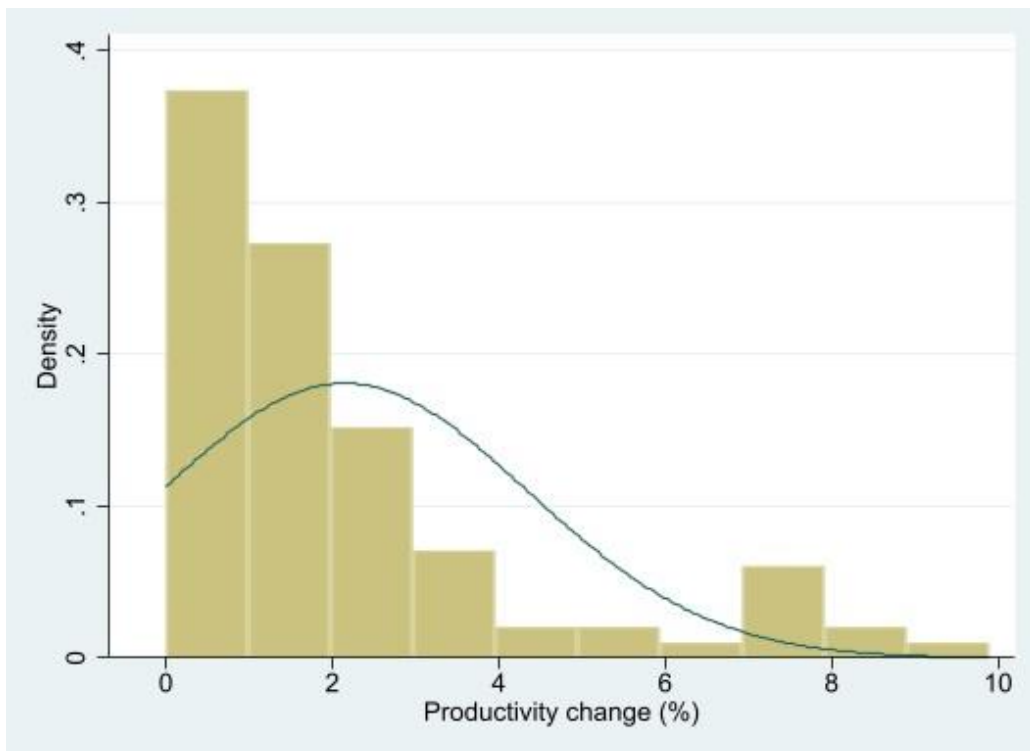
The negative and statistically significant estimates for the coefficient of the key variable of interest $STRI_{fin}(j, IDN)$ indicate that lower regulatory restrictions to services trade in upstream financial services are associated with higher productivity in downstream firms. This result is robust across the three batteries of fixed effects used in Table 3.4, with the estimated

¹⁴ The dichotomous indicator of foreign ownership takes the value of 1 if foreign ownership is above 50% and 0 otherwise.

coefficients ranging between -17.717 and -35.766 . Moreover, this finding holds qualitatively across a number of robustness tests including (i) expanding the sample period by using the OECD FDI Index as a source of policy data, (ii) controlling for the capital to labour ratio of the firm, and (iii) using alternative measures of productivity performance.¹⁵

Relying on the estimates of Table 3.4, column (3), we can replicate the quantification exercise proposed in the previous section and compute the change in firms' productivity across sectors associated with an ambitious policy reform in Indonesia. In the scenario where Indonesia halves the gap in terms of the STRI score between its regulatory framework in the financial services sector and the OECD average (as measured in 2019), the associated increase in the productivity performance of firms using financial services as intermediate inputs would be up to almost 10%, with an average value of 2%. Figure 3.2 plots the distribution of the productivity increases across sectors of firms' affiliation. The largest productivity increase would be observed in wheat flour production (+9.9%), which is included amongst the industries prioritised by the National Industry Development Master Plan, 2015–2035 (Government of Indonesia, 2015). Other prioritised industries with estimated sizeable productivity increases following the hypothesised ambitious policy reform include medical equipment (+6.3%); meat (+3.8%); manufacturing of carpets, rope, and textiles (+3.8%); knitting mills (+3.7%); footwear (+2.1%); and manufacture of wearing apparel (+1.6%). The lowest productivity increase (below 0.01%) would be instead in the production of rice, native medicine, and salty and dry fish.

Figure 3.3. Estimated Productivity Increase Associated with Ambitious Policy Reform



OECD = Organisation for Economic Co-operation and Development.
Source: Authors' estimates.

¹⁵ Estimation results from robustness tests are not included in the report but are available upon request.

Overall, the results of the firm-level analysis provide micro-level evidence to support and complement the sectoral patterns described in the previous section.

Moreover, firm-level data can be used to investigate whether the relationship between regulatory restrictions to trade in financial services and downstream firms' performance changes across different types of firms. To this end, we estimate a modified version of equation (4) where we include the interaction between the upstream finance STRI ($STRI_{fin}(j, IDN)$) and an indicator capturing relevant features of the firm. We look at two such characteristics: ownership and size.¹⁶ Table 3.5 presents the main estimation results using ownership and size, interacted by the upstream finance STRI. The two interaction terms are introduced separately in columns (1) and (2) and then simultaneously in column (3).

Table 3.5. Heterogeneity Across Firms

Variables	(1)	(2)	(3)
$STRI_{fin}(j, IDN)$	-12.204 (11.025)	-16.440 (10.039)	-13.326 (10.665)
$STRI_{fin}(j, IDN)$ x foreign-owned company	-45.959*** (14.214)		-53.850*** (14.964)
$STRI_{fin}(j, IDN)$ x large company		6.428 (12.721)	21.740* (12.745)
Large company (employment above 90th percentile)		0.105* (0.053)	0.007 (0.053)
Input tariff	-0.099** (0.042)	-0.098** (0.042)	-0.100** (0.042)
Output tariff	-0.004 (0.009)	-0.005 (0.009)	-0.004 (0.009)
Foreign-owned company	0.566*** (0.122)		0.580*** (0.123)
Dummy exporter	0.228*** (0.028)	0.291*** (0.031)	0.212*** (0.028)
Dummy importer	0.714*** (0.055)	0.723*** (0.054)	0.704*** (0.052)
Dummy loan uptake	0.101*** (0.029)	0.101*** (0.029)	0.098*** (0.029)
Observations	48195	48195	48195
Adjusted R-squared	0.291	0.284	0.291
Number of firms	25201	25201	25201
Year Fixed Effects	Yes	Yes	Yes
Sector Fixed Effects	Yes	Yes	Yes
Province FFixed EffectsE	Yes	Yes	Yes

STRI = Services Trade Restrictiveness Index.

Notes: Robust (sector-year clustered) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' estimates.

¹⁶ Ownership is identified through the dummy defined above, that takes the value of 1 if foreign ownership is larger than 50%. Size instead is captured by a dichotomous indicator that takes the value of 1 if the value employment for the firm is above the 90th percentile of the distribution of firms' employment and 0 otherwise.

The coefficient of the interaction term between upstream finance STRI and the dummy variable for foreign ownership is negative and statistically significant across all estimations presented in Table 3.5. This reflects a stronger positive relationship between liberalisation in upstream financial services and downstream productivity performance for those firms that have at least 50% of foreign ownership. This pattern hints at a higher capacity of foreign-owned firms to benefit from lower restrictions to trade in financial services. Foreign ownership might indeed entail a higher capacity to transform the cost advantages generated by higher access to financial services into productivity-enhancing strategies (these include, for instance, modifying the production technology, sourcing new inputs, or increasing the share of skilled workers in the firm's employment composition).¹⁷ This might be due to higher connectivity with international firms' networks, which increase investment opportunities and knowledge spillovers for Indonesian firms with a share of foreign ownership.

Turning to the interaction between the upstream finance STRI and the indicator for large firms, the positive sign of the estimated coefficient reveals a stronger positive association between removing regulatory restrictions to trade in financial services and firms' performance for medium-sized firms. This pattern is more pronounced and statistically significant in our preferred estimation exercise, whose results are reported in column (3). Our finding confirms, for the specific case of financial services, the more general result established by Rouzet, Benz, and Spinelli (2017) – that restrictions to services trade can have a stronger effect outside the population of the largest firms. Due to the fixed cost nature of many services trade barriers, removing such restrictions will disproportionately benefit those firms that, because of their limited size, had less incentives and resources to pay those fixed costs.

¹⁷ An example of firms taking productivity-enhancing actions in response to (goods) trade policy reforms reducing the cost of their input consumption is discussed by Fiorini, Sanfilippo, and Sundaram (2021) in the context of trade liberalisation in Ethiopia.

Chapter 4

Conclusions and Policy Implications

This report has shown significant potential benefits of further liberalisation of financial services in Indonesia. At the moment, financial services in Indonesia are highly regulated, and a number of important barriers exist that can potentially impede the entry of foreign financial services providers. A carefully executed liberalisation could imply economic benefits that materialise through reducing services trade costs and increased productivity in downstream industries.

Based on the OECD STRI, Indonesia is amongst the most restrictive economies in the Asia-Pacific region and South Asia in commercial banking and insurance services. The STRI is a regulatory database and a composite index that records and measures barriers to services trade across 22 services sectors and 50 economies globally.

Financial services providers can serve foreign markets in two main ways: through cross-border exports (Mode 1) or by establishing agencies, branches, or subsidiaries in the host country (Mode 3). In the case of Mode 1 services trade, financial institutes usually continue to be supervised by their home country regulators. Many emerging markets, including Indonesia, do not allow cross-border trade in most commercial banking or insurance activities, including lending, deposit-taking, life insurance, and non-life insurance.

Mode 3 services trade is possible in Indonesia with some restrictions. For example, fully owned subsidiaries of foreign companies are not allowed in Indonesia, forcing most financial services companies that seek to enter the Indonesian market to initiate joint ventures with local companies. Other restrictions occur to the movement of natural persons and economic needs testing. Compared with other emerging economies, especially in Asia, the restrictions in Indonesia mostly come from foreign entry barriers. Amongst favourable conditions in Indonesia's banking regulations are non-discriminatory taxes, transparent regulations, and granting due process to foreign providers.

A reform to close half of the gap with the best-performing country in each sector will reduce more than one-third of Indonesia's current level of regulatory restrictiveness to services trade. The impact is most pronounced in some sectors that are crucial inputs for other services and manufacturing activities. In the commercial banking sector, services trade costs could fall by almost 60%, while insurance services could benefit from more than 40% trade cost reductions. An exercise to see the impact of this further liberalisation on value added per employee (productivity) indicates an increase of 8% on average in Indonesia's manufacturing sector. As one of the major industries in Indonesia, the textile industry is expected to experience quite a high productivity gain (+3.8%) along with medical equipment (+6.3%), meat (+3.8%), knitting mills (+3.7%), and footwear (+2.1%). These types of industries typically provide jobs for the majority of low-income groups in Indonesia.

Careful reform in these areas could significantly reduce the level of services trade costs in Indonesia, with beneficial spillover effects to downstream businesses and consumers. To protect the stability of Indonesia's financial sector, any reform efforts should proceed gradually and pay careful attention to potential vulnerabilities in the financial sector.

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