Sector Prioritisation Study for Foreign Direct Investment Attraction into Indonesia

ARISE+ Indonesia Technical Assistance to BAPPENAS and BKPM in support of 2020-2024 strategic planning

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Sector Prioritisation Study for Foreign Direct Investment Attraction into Indonesia

The study was developed in collaboration with the Investment Planning Division at BKPM and the Trade, Investment and International Economic Cooperation Division at BAPPENAS.

About ARISE Plus-Indonesia

ARISE Plus-Indonesia is a four year technical assistance programme funded by the European Union, that started in January 2019. The programme aims to strengthen the capacity of government institutions and stakeholders on a wide range of areas within international trade, competitiveness and business environment. It is coordinated by BAPPENAS, the Indonesian National Development Planning Ministry, which is also an implementing agency, together with the Ministry of Trade and additional ministries, government agencies and stakeholders that have a direct interest in the areas covered by the Programme.

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Acronyms and abbreviations

APINDO	Asosiasi Pengusaha Indonesia (Indonesian Employers' Association)
ASEAN	Association of Southeast Asian Nations
BAPPENAS	Ministry of National Development Planning
BI	Bank Indonesia
BKPM	Badan Koordinasi Penanaman Modal (Indonesia Investment Coordinating Board)
BLC	Bonded Logistics Centre
BPS	Badan Pusat Statistik (Statistics Indonesia)
CAGR	Compound Annual Growth Rate
CapEx	Capital Expenditure
DNI	Daftar Negatif Investasi (Negative Investment List)
FDI	Foreign Direct Investment
FMCG	Fast-Moving Consumer Goods
GDP	Gross Domestic Product
GoI	Government of Indonesia
ILO	International Labour Organization
JV	Joint Venture
MoI	Ministry of Industry
MPV	Multi-Purpose Vehicle
OECD	Organisation for Economic Co-operation and Development
PE	Private Equity
PPA	Power Purchase Agreement
R&D	Research and Development
Rp.	Indonesian Rupiah
RPJMN	National Medium-Term Development Plan
SEZ	Special Economic Zone
SMK	Sekolah Menengah Kejuruan (Vocational High School)
SNI	Standar Nasional Indonesia (Indonesian National Standards)
SPS	Sector Prioritisation Study
T&L	Transport and Logistics
T&T	Travel & Tourism
UNCTAD	United Nations Conference on Trade and Development
VC	Venture Capital
WEF	World Economic Forum
WTTC	World Travel & Tourism Council
YOY	Year on Year

Executive Summary

This Sector Prioritisation Study (SPS) has been developed by ARISE+ Indonesia at the request of the Ministry of National Development Planning (BAPPENAS) and the Indonesia Investment Coordinating Board (BKPM). At the time of delivering this report, BKPM was developing its five-year strategy which in turn will contribute to the broader National Medium-Term Development Plan (RPJMN) 2020-2024.

Identifying and prioritising sectors for Foreign Direct Investment (FDI) attraction is one of the most important elements of any investment attraction strategy. All over the world, Investment Promotion Agencies (IPAs) often come under pressure from a multitude of peer organisations in government to promote investments in their respective sectors, with the risk that agencies can lose focus, dilute their resources and end up having so many priorities that in reality, there are no priorities.

In the case of Indonesia, the SPS has been designed to assess and classify a broad set of sixteen sectors from two key angles: (i) the benefits FDI in those sectors can bring to Indonesia, and (ii) the attractiveness of Indonesia's sectoral offerings to investors. Further details on the SPS approach and methodology can be found in section 2 of this report.

Beyond prioritising and classifying the sixteen sectors, the SPS also provides a series of both overarching and sector-specific observations, implications and recommendations for BKPM, BAPPENAS and other key entities within the Government of Indonesia (GoI) to consider.

Of the sixteen sectors analysed, eight of them emerged as **priority sectors**, meaning that Indonesia's sectoral offering is competitive and strong, and there are no major obstacles for investment. These eight sectors are as follows:


Tourism


Textiles & Apparel


Digital & Creative


Electronics


Food & Beverage


Automotive


Financial Services


Transport & Logistics

The remaining eight sectors were classified as **high-potential sectors**, meaning that while the benefits FDI in those sectors can bring to Indonesia are also strong, the attractiveness of Indonesia's sectoral offerings to investors are not as strong or competitive as they could or should be, and require some enabling environment issues and policies to be addressed if Indonesia is to achieve its FDI attraction potential in these sectors. The eight sectors in this second category are as follows:


Chemicals


Agriculture


Pharmaceuticals & Medical Devices


Education


Maritime & Fisheries


Cosmetics


Renewable Energy


Downstream Minerals Processing

As can be seen above, both the priority sectors and the high-potential sectors contain a combination of manufacturing- and service-oriented sectors. In the case of the priority sectors for investment, four of the Ministry of Industry's "Making Indonesia 4.0" priority sectors feature in this group, namely: Textiles & Apparel, Food & Beverage, Electronics and Automotive. Beyond manufacturing, tourism was by far the strongest-performing sector overall (as can be seen in the SPS quadrant below), while Digital & Creative, Financial Services and Transport & Logistics also scored sufficiently highly in the 'attractiveness to investors' grouping to make it into the priority sectors category.

From a thematic perspective, **domestic and international market potential emerged as the strongest factor in terms of attractiveness to investors -** an encouraging point, since international research on FDI location determinants shows that (i) domestic market growth potential and (ii) proximity to markets and customers are the top two determinants cited by investors globally for the vast majority of sectors.[1]

Despite this encouraging strength, some notable challenges persist: the two weakest-performing factors across sectors assessed were **(i) the regulatory environment and (ii) infrastructure.**

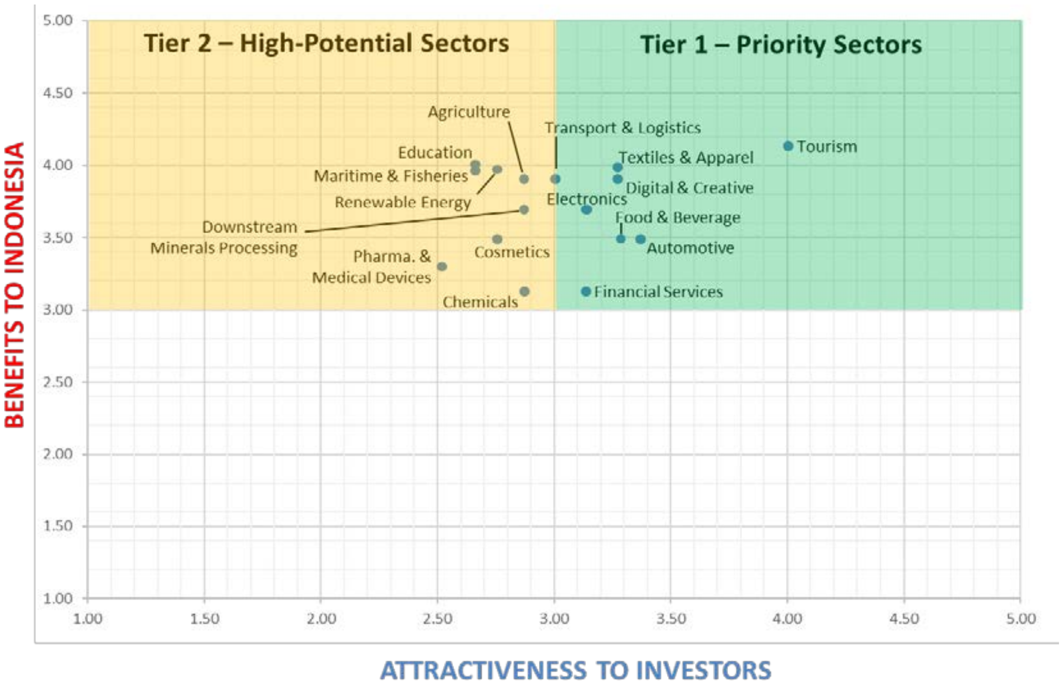
Achieving a more conducive regulatory environment for investment needs to be a GoI priority. 'Regulations or business climate' is one of the top FDI location determinants globally, according to the Financial Times' data[2], and for the SPS sectors, was the third determinant for the majority of sectors. For existing investors in Indonesia, the regulatory and legal environment reportedly remains a major challenge: only 23 percent of European investors surveyed in 2019 were either positive or very positive about the outlook for Indonesia's regulatory and legal environment.[3]

Infrastructure remains another key challenge and competitive weakness for Indonesia when it comes to investment, despite the encouraging progress made over the past five years. Indonesia ranks 71st globally for infrastructure in World Economic Forum's 2018 Global Competitiveness Report, significantly lower than Malaysia (32nd), Thailand (60th), but slightly higher than Vietnam (75th) and the Philippines (92nd).[4]

The third SPS factor where Indonesia tends to underperform across multiple sectors is **labour and skills.** Investors point to a shortage of skilled labour in various SPS sectors, including: Automotive, Renewable Energy, Downstream Minerals Processing and Pharmaceuticals & Medical Devices, among others. And yet this challenge has the potential to become an area of opportunity both for foreign investors and the Indonesian economy, if a more conducive policy framework for investment in education is introduced by the GoI.

As can be seen in the following SPS quadrant, education, despite its substantial market opportunities and potential, still has a low score when it comes to 'attractiveness to investors'. And yet the sector, like others, could 'graduate' during the course of BKPM upcoming five-year strategy, if certain regulatory conditions and other business enabling environment factors were to improve.

[1] FDI location determinants insights from fDi Markets database (Financial Times Ltd.)
[2] Ibid.
[3] Joint European Chambers' Business Confidence Index 2019. Op. Cit.
[4] World Economic Forum's Global Competitiveness Report 2018.



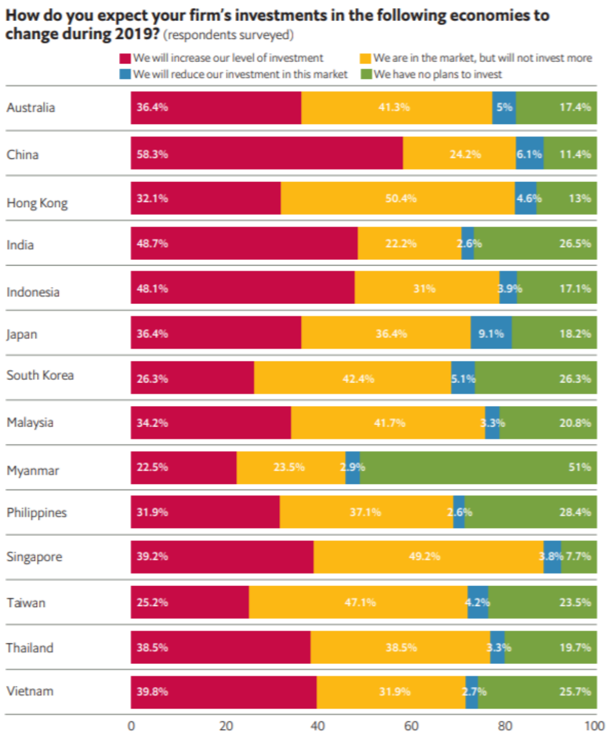
As such, the results and findings of the SPS should be seen as a basis on which to build elements of the five-year strategy, while recognising that sector dynamics both nationally and internationally can change over the period of just a few years or even less, thus warranting potential modifications to the list of priority sectors as part of annual implementation plans during the five-year strategy.

1. Introduction and context

The Government of Indonesia (GoI) has some important decisions to make when it comes to attracting Foreign Direct Investment (FDI) over the coming five years. Following years of progressive growth in implemented FDI, there was a notable drop in FDI (excluding oil and gas and financial services) into Southeast Asia's largest economy between 2017 and 2018, when levels dropped from 430.5 trillion Rp., to 392.7 trillion Rp.[5]

Despite this notable decline, there is nevertheless plenty to be optimistic about when it comes to Indonesia's FDI prospects. A recent investor survey revealed that Indonesia is one of the leading countries in Asia – and the leading ASEAN country – in terms of corporate plans for increased investment in 2019[6]. Meanwhile, 60 percent of existing surveyed European investors already in Indonesia recently said their outlook for their businesses in Indonesia over the coming twelve months was either 'positive' or 'very positive'.[7] Added to this, Indonesia has continued to improve its World Bank Ease of Doing Business (EODB) performance, currently ranking 73rd globally (up from 91st place previously).[8]

Corporate investment plans for 2019, by APAC country:



Source: The Economist Corporate Network: Asia Business Outlook Survey, 2019

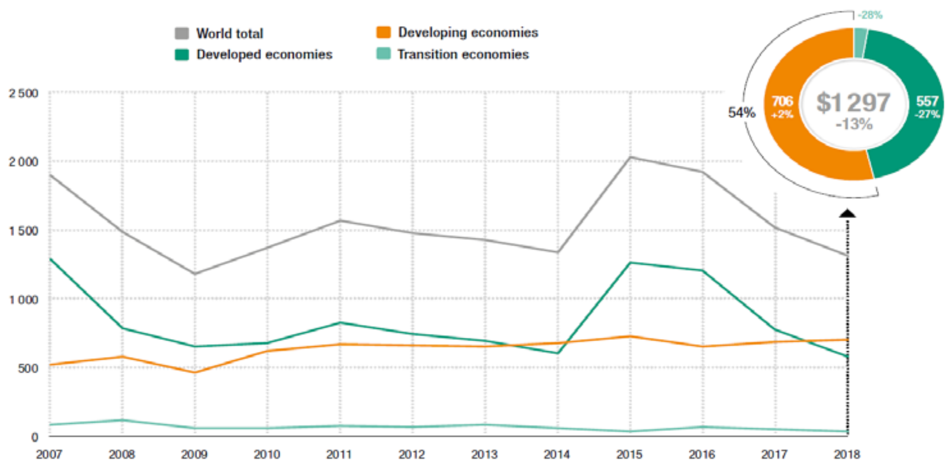
[5] Data from BKPM's Investment Realization Report, 30th April 2019
[6] The Economist Corporate Network: Asia Business Outlook Survey, 2019
[7] Joint European Chambers' Business Confidence Index 2019
[8] World Bank 'Doing Business 2019'

In spite of these encouraging signals and developments, there can be no room for complacency: the fact that Indonesia's **total FDI inflows** covering all sectors actually rose by 6 percent year-on-year between 2017 and 2018 is due in no small part to the global recovery in the oil and gas sector (which is not included in BKPM's figures). However, given the unpredictable and at times volatile nature of commodity prices, the GoI is rightly seeking to encourage private sector investment in more sustainable, value-added and future-oriented sectors that will deliver a host of socio-economic benefits for the country and its people, ranging from more and better-quality jobs – including jobs for women – to skills and technology transfer and increased access to regional and global value chains.

For such types of efficiency-seeking and export-oriented investment in manufacturing and services, foreign investors typically have a variety of location options they can consider, meaning that countries and their Investment Promotion Agencies (IPAs) like BKPM need to be able to **identify and target sectors where the country offers an attractive and competitive value proposition for prospective investors.**

Competitive positioning remains crucial at a time when the global FDI landscape faces challenges. Global FDI inflows in 2018 were at their lowest since the global financial crisis in 2009, while the ongoing US-China trade tensions continue to set alarm bells ringing in corporate boardrooms around the world. And yet not all such challenges necessarily spell doom and gloom for large emerging markets like Indonesia. For the first time since 2014, inflows into developing economies surpassed those into developing economies; in developing Asia, inflows rose by 4 percent in 2018 to reach US$512bn, while Indonesia moved up the global top 20 FDI 'host' (recipient) countries to 16th place (up from 18th in 2017).

Global FDI inflows, 2009-18 (US$):



Source: UNCTAD World Investment Report 2019

Global and regional sectoral trends also need to be taken into consideration. In its 2019 report, the Financial Times' fDi Markets found that in terms of capital investment, coal, oil and gas retained the top spot sector-wise in 2018, followed by real estate and renewable energy. In terms of project numbers, the top three sectors were: (i) software and IT services, (ii) business services and (iii) real estate. Hotels and tourism also performed strongly, registering the greatest year-on-year growth in project numbers (a 120 percent increase on 2017).[9] Meanwhile, in ASEAN, the three sectors in terms of capital investment were (i) renewable energy, (ii) metals and (iii) real estate. In terms of project number however, the top sectors were: (i) software and IT services, (ii) real estate, (iii) business services and (iv) financial services.[10]

ARISE+ Indonesia's technical assistance (TA) on investment comes at an opportune time, as the GoI prepares its new National Medium-Term Development Plan (RPJMN) 2020-2024. As part of this, BKPM's five-year strategy will need to address numerous strategic and operational considerations – including identifying, classifying and prioritising sectors in terms of their FDI potential.

This Investment Sector Prioritisation Study (SPS) for Indonesia has been developed in response to this need, and therefore serves as a tool and reference, enabling BAPPENAS and BKPM to identify top priority sectors that are 'investment-ready' and face either very few or minor issues or constraints. Importantly, the study also classifies those sectors which offer high or promising potential, but which face more significant issues that will need to be addressed by the GoI and its relevant institutions if the country is to fulfill its potential in attracting quality FDI in those sectors.

[9] The fDi Report 2019, fDi Intelligence (Financial Times Ltd.)
[10] fDi Markets database (Financial Times Ltd.)

2. The Sector Prioritisation Study approach and methodology

The Investment Sector Prioritisation Study (SPS) for Indonesia was conducted between June and September 2019 and was developed in order to assess and classify a broad yet manageable number of sectors into two key categories:

1. **Investment-ready 'priority' sectors**, where Indonesia's sectoral offering is competitive and strong, and where there are no major obstacles to investment

2. **High-potential sectors**, where the benefits FDI can bring are also strong, and yet the attractiveness of Indonesia's sectoral offerings to investors are not as strong or competitive as they could or should be, and require some enabling environment issues and policies to be addressed

ARISE+ Indonesia worked closely with BAPPENAS and BKPM to establish a longlist of **sixteen sectors** to be selected for analysis under the SPS. To select these sectors, the following factors were taken into consideration:

- **Assessment and discussions with BKPM on existing priority areas versus new or emerging potential sectors**
- **Discussion with BAPPENAS on priority sectors plus a review of Major Projects (RPJMN 2020-24)**
- **Assessment of the Ministry of Indonesia's 'Making Indonesia 4.0' priority sectors (where FDI might play an important role)**
- **Sectors where FDI is often export-oriented (in line with GoI priority) – both for goods and services**

It is also important to note that while **infrastructure FDI** (roads, airports, seaports, utilities etc.) is important as an 'enabling' sector and therefore remains one of the GoI priority for investment, the decision was taken to focus on other non-infrastructure sectors for this study. As a result, the SPS has been able to focus resources on assessing a wider range of other sectors where mobile investors typically have a greater range of location options and where competitiveness is key.

SELECTED SPS SECTORS	
1. Tourism	9. Renewable Energy
2. Food & Beverage	10. Pharmaceuticals & Medical Devices
3. Chemicals	11. Transport & Logistics
4. Textiles & Apparel	12. Cosmetics
5. Automotive	13. Education
6. Electronics	14. Digital
7. Maritime & Fisheries	15. Financial Service
8. Agriculture	16. Downstream Minerals Processing

Each of these sixteen sectors were assessed on two core pillars: **(i) the benefits FDI can bring to Indonesia and (ii) Indonesia's attractiveness to investors in that sector.** Each of these two pillars in turn has a set of factors that were assessed and subsequently scored. These factors are outlined here:

BENEFITS TO INDONESIA:

Factors for analysis and scoring:

- Contribution to economic growth
- Sustaining / creating employment
- Employment for women (direct / indirect)
- Knowledge / technology transfer
- Potential for domestic linkages
- Boosting exports

ATTRACTIVENESS TO INVESTORS:

Factors for analysis and scoring:

- Domestic and international market potential
- Labour and skills
- Market access
- Regulatory environment
- Existing capabilities (including potential partners)
- Local inputs (resources/products/services)
- Infrastructure (transport, utilities, sites)
- Fiscal regime (including any incentives)

Each factor was then given a score based on the assessments that included a combination of quantitative and qualitative elements, which included:

- Meetings and consultations with more than 20 companies – either through 1-on-1 meetings or group discussions
- Industry position papers
- Domestic datasets (including those from BKPM, BI and BPS)
- International datasets (World Bank, UNCTAD, World Economic Forum, UN Comtrade, Harvard Atlas of Economic Complexity, FAO, OECD, Financial Times' fDi Markets and others)
- Domestic and international sector-focused / thematic reports

A full list of written sources consulted as part of this study can be found in the annex.

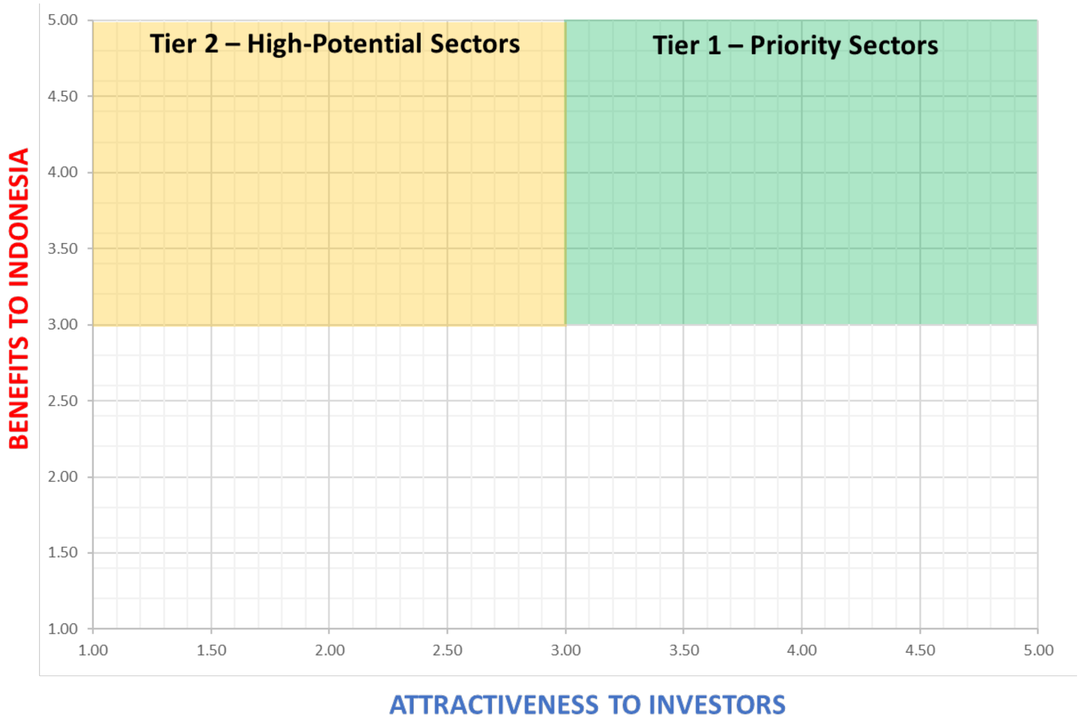
The scores for each factor and each sector were weighted equally and given on a scale of 1 to 5 (with 1 'very negative or very limited', and 5 being 'very positive'.)

1	Very negative / very limited
2	Negative / limited
3	Somewhat positive
4	Positive
5	Very positive

Each score was inserted into a tabular matrix (see below) and colour-coding enabled the generation of an SPS 'heatmap' from which viewers can easily view the various strengths and weaknesses across sectors and across factors.

	BENEFITS FACTORS							ATTRACTIVENESS FACTORS								
	Contribution to Economic Growth	Sustaining / creating employment	Employment for women	Knowledge / technology transfer	Potential for domestic linkages	Boosting exports	BENEFITS SCORE	Domestic / international market potential	Labor & skills	Market access	Regulatory environment	Existing capabilities	Local inputs	Infrastructure	Fiscal regime	ATTRACTIVENESS SCORE
Tourism	3	4	5	4	5	4	4.17	5	3	4	4	5	5	3	3	4.00
Food & Beverage	3	4	3	4	4	3	3.50	4	4	3	2	4	4	2	3	3.25
Textiles & Apparel	3	4	4	4	4	5	4.00	4	4	4	2	4	2	3	3	3.25
Automotive	3	3	2	4	5	4	3.50	4	2	3	3	4	4	3	4	3.38
Electronics	3	3	4	4	4	4	3.67	4	3	3	2	3	3	3	4	3.13
Transport & Logistics	4	4	3	4	4	4	3.83	4	3	3	2	4	3	3	2	3.00
Financial Services	3	3	3	4	3	3	3.17	4	3	3	3	3	3	2	4	3.13
Digital & Creative	4	4	4	4	4	3	3.83	5	3	4	2	3	3	2	4	3.25
Agriculture	4	4	3	4	4	4	3.83	4	3	2	2	3	4	2	3	2.88
Chemicals	3	3	2	4	3	4	3.17	3	3	4	2	3	3	2	4	3.00
Renewable Energy	5	4	3	4	4	4	4.00	4	2	2	2	3	4	2	3	2.75
Maritime & Fisheries	4	4	4	4	4	4	4.00	4	2	3	2	3	3	1	3	2.63
Pharmaceuticals & Medical Devices	3	3	2	4	4	4	3.33	4	2	2	2	2	2	2	4	2.50
Cosmetics	4	3	4	4	3	3	3.50	4	2	4	2	2	2	3	3	2.75
Education	4	4	4	5	4	3	4.00	5	2	2	2	3	2	3	2	2.63
Downstream Minerals Processing	4	4	2	4	4	4	3.67	3	2	4	2	3	4	2	3	2.88

The scores for each factor were then collated to compile average and total scores for (i) benefits to Indonesia and (ii) attractiveness to investors. These two overall scores per sector then enabled each sector to be plotted on the two-axis chart template below.



Those sectors with an overall 'benefits to Indonesia' score of 3 or higher feature in the top half of the quadrant. Those with an overall 'attractiveness to investors' score of 3 or higher feature in the top-right quadrant (tier 1 priority sectors), while those sectors with an attractiveness score of less than 3 feature in the top-left quadrant (tier 2 high-potential sectors).

The overall results, along with detailed scorecards which outline observations, evidence and the rationale for each score, can be found in section 4 of this report.

Beyond the results, the SPS also sets out a series of implications and recommendations for each sector, as well as an overall set of recommendations and conclusions, which can be found in section 5 of this report.

Before moving into the results, the SPS moves on to a series of profiles by sector in section 3. Unlike the scorecards, they provide more of a narrative around each of the sectors and include various quantitative insights – including graphs, charts and tables – not found in the scorecards. As such, readers are encouraged to cross-reference insights contained in both sections 3 and 4.

3. Profiles by sector

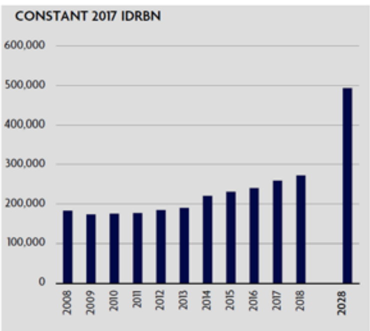
In this section, we profile each of the sectors for the SPS, looking at sector trends at international and Indonesian levels, as well as outlining any key perceived or reported challenges companies (and foreign investors in particular) face when doing business, or seeking to do business, in Indonesia. As such, this section complements the findings and scorings outlined in section 4 of this report.

I. Tourism

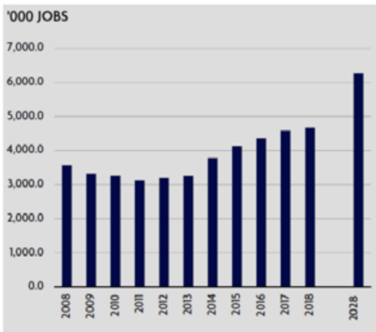
With more than 14,000 islands stretching from the Malay peninsula to the borders of Micronesia in the western Pacific, Indonesia has long been a tourism investment hotspot, and yet its vast potential remains largely untapped. Beyond the well-established tourist hub of Bali and to a lesser extent locations such as Lombok, Yogyakarta and Borobudur, Indonesia's tourism offerings are either nascent, underdeveloped or practically non-existent – despite a swathe of cultural and geographic icons and assets. The GoI has taken some important and encouraging steps to start fulfilling this vast untapped tourism potential, including allowing visa-free travel to visitors from 169 countries, allowing 100 percent foreign ownership in key tourism businesses such as hotels (3 stars and above), restaurants, cafes and bars, and building new airport infrastructure across the archipelago.

Initiatives such as these and others appear to have been paying off. According to the latest report from the World Travel & Tourism Council (WTTC), travel and tourism in Indonesia grew by 7.8 percent in 2017 – double the global average of 3.9 percent.[11] In 2017, the sector's **direct contribution** to Indonesia's GDP was 259,583 bn Rp. (US$19.4 bn), or 1.9 percent. From 2018-2028, this is forecast to rise by 6.1 percent per annum, reaching 494,021 bn Rp. (US$37 bn), or 2.1 percent of GDP, in 2028. In terms of **direct employment**, travel and tourism supported 4.58 million Indonesian jobs in 2017 (or 3.7 percent of total employment) and by 2028, the number of direct jobs is forecast to rise to 6.26 million (4.2 percent of total employment).[12]

Travel & Tourism direct GDP contribution:



Travel & Tourism direct employment:



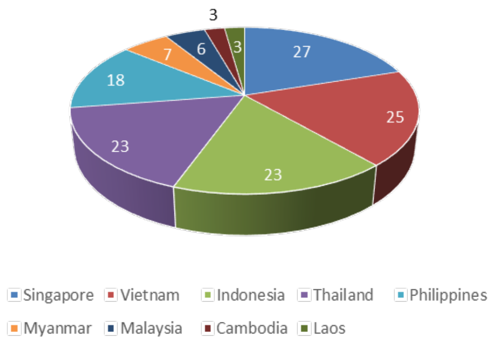
Source: WTTC's Travel & Tourism Economic Impact Indonesia 2018.

[11] World Travel & Tourism Council: Travel & Tourism Economic Impact Indonesia 2018.
[12] Ibid.

When it comes to FDI, BKPM recorded a total value of US$869m in hotels and restaurants in 2018[13], down slightly on the US$1.09bn recorded in 2017[14]. Nevertheless, the global FDI market looks broadly promising: in fact, **hotels and tourism saw the greatest year-on-year growth in project numbers of all sectors in 2018**, with a 120 percent increase on 2017.[15] Within ASEAN, Indonesia's performance is also solid, although arguably underperforming in relation to its potential: from 2014-2018, the country came in third place for the number of recorded projects, behind Singapore and Vietnam.[16]

Global FDI, Tourism & Hotels, 2014-18:

Tourism & Hotels FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

While Indonesia's potential in terms of tourism assets and market growth is undeniably strong, the business enabling environment for the sector, while improving, nevertheless faces some **competitive challenges in areas such as workforce skills, infrastructure and environmental sustainability**. In the World Economic Forum (WEF) 2017 Travel and Tourism Competitiveness Report (TTCR), Indonesia ranked 64th globally on the 'human resources and labour market' pillar. This is significantly behind some ASEAN competitors such as Malaysia (which ranked 22nd), Vietnam (37th), Thailand (40th) and Philippines (50th).[17] On infrastructure, there's been a mixed picture: a major Government drive to develop new airports and upgrade existing ones across the country has vastly improved flight connectivity, while new international routes connecting Indonesia with key global hubs, especially in the Middle East and Europe[18], has further enhanced accessibility from across the globe. When it comes to ground and sea transportation however, the picture is more challenging. Indonesia ranks 69th globally for ground and port infrastructure – which is far behind neighbouring Malaysia (34th) and Singapore (2nd). Beyond the most populous islands of Java and Sumatera (where toll roads are either complete or under construction) road infrastructure is limited elsewhere in the archipelago, although programmes are underway to address and improve this.

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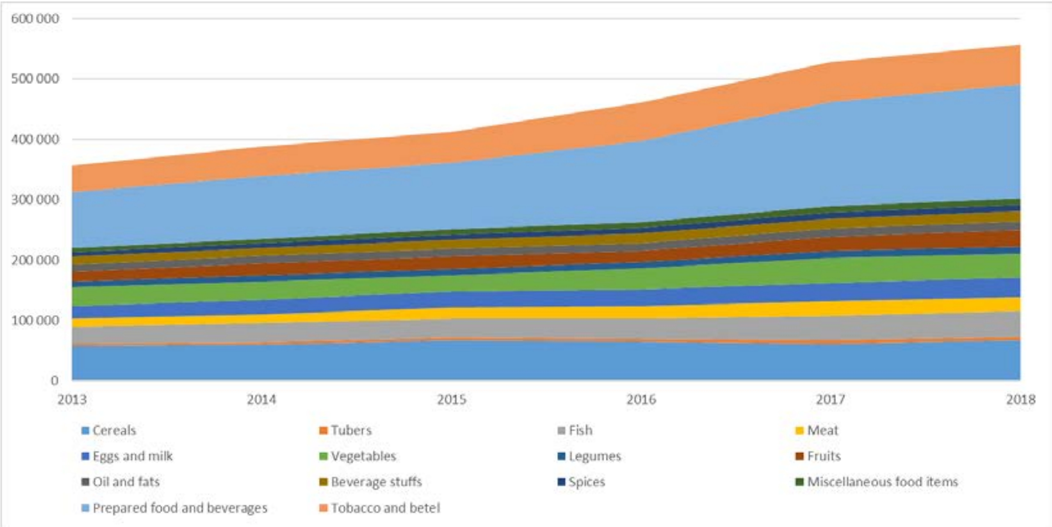
[13] BKPM's 'FDI Realisation based on Sector', January-December 2018.
[14] BKPM's Domestic and FDI Realisation Report, January-December 2017.
[15] fDi Markets database (Financial Times Ltd.)
[16] Ibid.
[17] WEF's Travel & Tourism Competitiveness Report 2017.
[18] Gulf carriers Qatar Airways, Etihad and Emirates have increased flights to the key Indonesian hubs of Jakarta and Denpasar, direct flights to Europe have grown though carriers such as Garuda (with new flights to London), plus European carriers such as KLM.

II. Food & Beverage

Indonesia's food and beverage industry is an important contributor to the country's economy, both in terms of GDP and employment: in 2018, the industry recorded growth of 7.9 percent in 2018, reaching 6.25 percent of GDP, up slightly from the industry's 6.14 percent GDP contribution in 2017 (although the industry's growth rate that year was higher, at 9.2 percent). The Ministry of Industry has predicted that industry growth will gather pace again, with predicted growth of 9 percent in 2019.[19] The industry also remains a significant and growing source of employment: according to BPS data, the number of workers employed in medium and large food and beverage companies alone stood at more than 918,000 in 2015, representing a 27 percent rise over 8 years (722,000 employees were registered back in 2008).[20]

The industry's growth has been largely supported by increasing consumption of food and beverage products: Indonesians' average monthly consumption of food and beverage goods has increased by 56 percent over the past six years, from 356,435 Rp. in 2013 to 556,899 Rp. in 2018.[21] Of the various food and beverage subcategories, prepared food and beverages has seen both the highest levels of expenditure, as well as one of the largest increases over the six years, increasing by 105 percent, from a monthly average of 92,254 Rp. per capita in 2013, to 189,223 Rp. in 2018.[22]

Average monthly expenditure (Rp.) per capita by food type: 2013-2018:



Source: Author's elaboration, based on data from BPS 'Statistics Indonesia' portal.

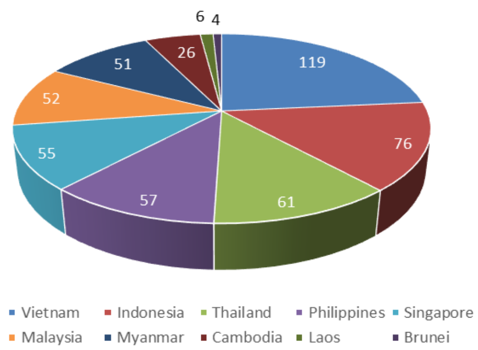
[19] As cited in The Jakarta Post on 02/07/2019: https://www.thejakartapost.com/news/2019/07/02/fb-contribution-to-gdp-steadily-increases.html
[20] BPS data: www.bps.go.id Accessed on: 01/07/2019
[21] Ibid. Accessed on: 31/07/2019
[22] Ibid.

At a broader regional level, the food and beverage market also looks highly promising: in a recent 2019 study by Euromonitor, Asia-Pacific emerges as the number one region globally for expected growth in multiple food and beverage markets, and by 2030 is expected to be the world's biggest market for food and beverage consumption.[23]

Despite this promising growth, when it comes to capital investment, BKPM's data reveals that FDI in the food industry totalled US$1.3bn in 2018[24], representing a significant decline on realisation figures from 2016 and 2017, which were US$2.1bn and US$1.97bn respectively.[25] At a global level, announced CapEx in greenfield food, beverage and tobacco project has also declined slightly in recent years, although the number of greenfield projects recorded by fDi Markets has been rising steadily, suggesting a move towards a greater number of smaller-value projects internationally. Within ASEAN, Vietnam has been the lead recipient of announced greenfield FDI projects in the region, followed by Indonesia.

Global FDI, Food, Beverage & Tobacco, 2014-18:

Food, Beverage & Tobacco Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

From an investment climate and business enabling environment perspective, investors in the sector report a number of challenges and concerns which to some extent explain the decline in realized investment in Indonesia, including local content requirements, site availability and the high-profile Halal Product Assurance Law (hereinafter referred to as the 'Halal Law'), which is set to the food and beverage industry, as well as host of other sectors. With more than 3 million food and beverage products registered in Indonesia, industry representatives are especially concerned about the Halal Law's implementation plan and timings, with persisting doubts around the government's infrastructure readiness in terms of product testing and certification.

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[23] According to the Gulfood Global Industry Outlook Report 2019 by Euromonitor, as reported by Food Navigator Asia: https://www.foodnavigator-asia.com/Article/2019/03/25/Go-to-region-for-food-firms-Asia-Pacific-to-see-fastest-F-B-market-growth-to-2030 Accessed on: 31/07/2019

[24] BKPM's 'FDI Realisation based on Sector', January-December 2018. Op. Cit.

[25] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017.

III. Chemicals

Since the mid-1980s, the global chemicals industry has grown by 7 percent annually.[26] Most of this growth over the past 30 years has been driven by the Asian market, which now accounts for almost half of all global chemical sales.[27] In Indonesia, the chemicals market has replicated this positive growth trend: both imports and exports of chemicals products rose substantially between 2015 and 2018: imports of chemicals (organic and inorganic) rose from US$7.3bn in 2015 to US$9bn in 2018, while exports rose from US$2.7bn to US$4bn over the same four-year period.[28] While Indonesia is therefore still a net importer of chemicals, driven by burgeoning consumer, industrial, agricultural and construction demand, the growth in the country's chemicals exports (48 percent over the four years) far outpaced the growth in imports (23 percent) – an encouraging sign of the Indonesia's potential to become a regional hub for the sector.

Overall, Indonesia's chemicals market had total revenues of US$19.3bn in 2017, representing a compound annual growth rate (CAGR) of 3 percent between 2013 and 2017.[29] This upward trend looks set to continue in the years to come as growth in key related industries ranging from construction and textiles to food & beverages, agriculture and others continue to drive commercial and consumer demand for chemical products in Indonesia.

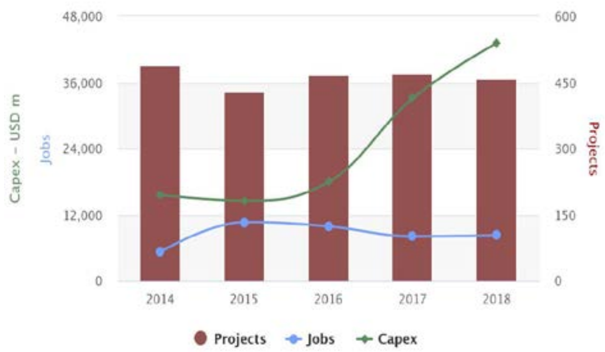
This encouraging growth potential is also underpinned by an abundance of raw materials – including palm oil, rubber, as well as oil and gas reserves – which serve as key inputs into chemicals manufacturing. The size of Indonesia's chemicals workforce has also been on the rise in recent years, with the number of workers in medium and large chemicals businesses increasing by 28 percent from 2008 to 2015, reaching more than 193,600 workers in 2015.[30]

Despite the broader promising sector performance and future signals, when it comes to investment, BKPM's investment realization figures show that FDI in 'chemicals and pharmaceuticals' declined significantly between 2016-2018, from US$2.89bn in 2016, to US$2.58bn in 2017 and just US$1.94bn in 2018.[31]

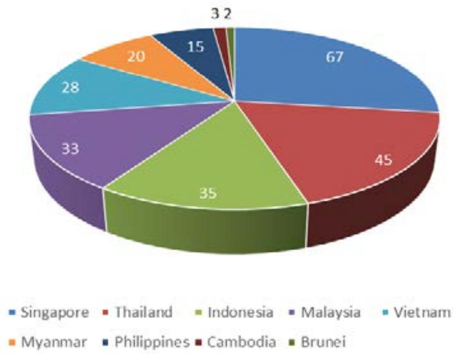
This is in stark contrast to the global FDI trends seen in the chemicals industry in recent years (where global announced FDI CapEx recorded by fDi Markets nearly tripled from US$18bn in 2016 to more than US$43bn in 2018.[32]) Meanwhile, in ASEAN, Indonesia was the third market regionally in terms of announced FDI projects in chemicals, behind Singapore (the distinct leader) and Thailand.

[26] As cited in EuroCham Indonesia's 2019 Position Paper on Chemicals: http://www.eurocham.id/publications
[27] Ibid.
[28] UN Comtrade data portal: https://comtrade.un.org/
[29] As reported by MarketResearch.com in October 2018: https://www.marketresearch.com/MarketLine-v3883/Chemicals-Indonesia-11980074/
[30] BPS data: www.bps.go.id Accessed on: 28/06/2019
[31] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.
[32] fDi Markets database (Financial Times Ltd.)

Global FDI, Chemicals, 2014-18:



Chemicals Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

From an investment climate perspective, chemicals companies have voiced concerns around a variety of current or planned regulations and their impact on the industry. As with numerous other sectors, there are concerns that the Halal Law Law will affect chemicals manufacturers by presenting technical barriers and the law is already causing foreign investors to reconsider their operations. Other industry-specific regulations of concern include those on Hazardous Substances ("B2") and Hazardous and Toxic Substances ("B3"), where there are industry calls for streamlined and efficient reporting systems and other implementation measures. Import restrictions and conditions key products such as industrial salt have also placed burdens on investors in the industry. [33]

In a positive development, regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded to cover 18 'pioneer' industries (including: organic and inorganic base chemical industries and the petrochemical industry). The tax holiday period ranges from 5-20 years, depending on the size of the investment. While this makes some improvements in the attractiveness of Indonesia's sectoral offering to the chemicals industry, issues and concerns around the regulatory framework, its implementation, as well as challenges relating to skilled labour and infrastructure persist and will be need to be addressed in the medium- to longer-term if Indonesia is to truly to realise its FDI attraction potential for the chemicals sector.

IV. Textiles & Apparel

The textiles and apparel sector has long been one of the cornerstones of Indonesia's manufacturing industry and has seen rapid growth in the past couple of years: in 2017, the industry's growth rate was just 3.8 percent[34] (below the country's overall GDP growth of 5.1 percent that year), while in 2018 the growth rate soared to 8.73 percent.[35] The sector's importance to the economy and balance of payments is clear to see: in 2018, the sector was one of the country's largest earners of foreign

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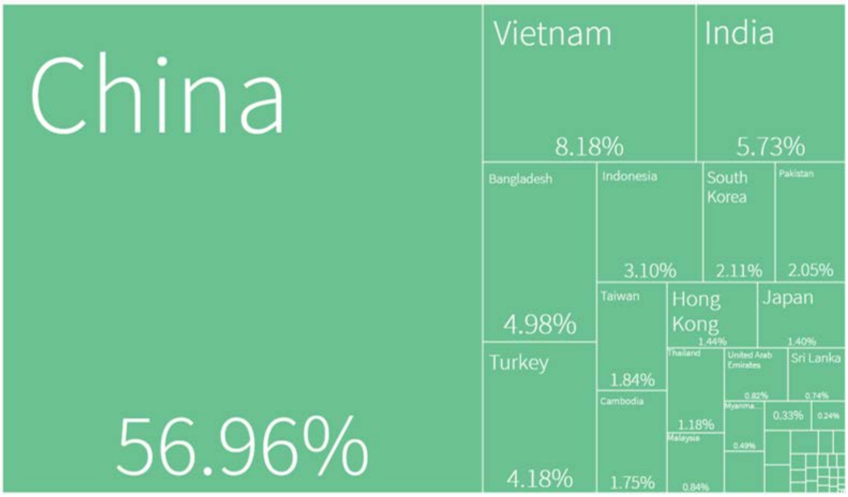
[33] As reported in EuroCham Indonesia's 2019 Position Paper on Chemicals. Op. Cit.
[34] BPS data: www.bps.go.id Accessed on: 28/06/2019
[35] Ibid.

exchange, with exports valued at US$13bn – a 5 percent increase on 2017.[36] The sector is also a highly significant source of employment: as of 2015, there were an estimated 2.37 million employees in textiles and apparel enterprises across Indonesia[37] (with 1.2 million employees in medium and large-scale enterprises, and 1.17 million employees in micro and small-sized businesses.)[38]

Significant investments in the upstream segment of the industry – notably rayon manufacturing – have been an important contributor to the industry's success in Indonesia, which is now one of the world's leading rayon manufacturers.[39]

Yet despite the industry's size and growth dynamics and Indonesia, the country is far from being the region's largest exporter of textiles and garments: data compiled by Harvard's Atlas of Economic Complexity shows that Indonesia accounted for only 3.1 percent of Asia's textiles exports in 2017, with China being by far the dominant exporter.[40] Even with geopolitical tensions, including the US-China trade disputes and a broader sectoral shift toward lower-cost Asian manufacturing centres in South and Southeast Asia, Indonesia came far behind markets such as Vietnam, India and Bangladesh.

Textiles exports from Asia in 2017: country breakdown



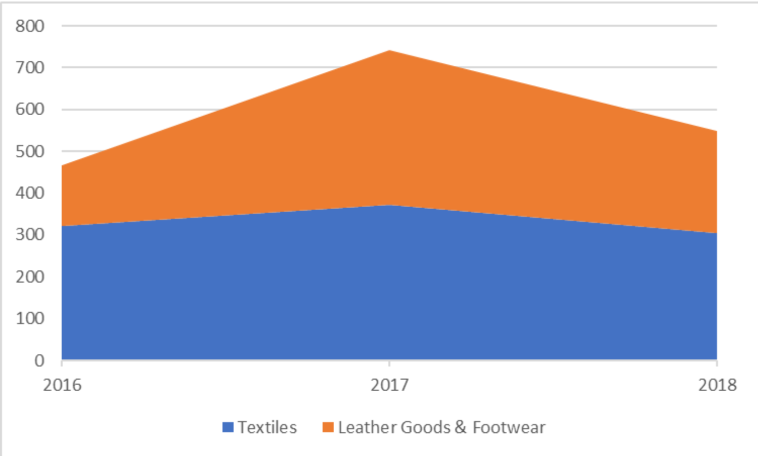
Source: Harvard University's Atlas of Economic Complexity

When it comes to realized investment into the sector, there's been a slightly erratic development in the past few years. In 2016, data from BKPM reveals that FDI in textiles and apparel totalled

[36] As cited in The Jakarta Globe on 24/06/2019: https://jakartaglobe.id/context/textile-indonesias-new-export-darling
[37] BPS data: www.bps.go.id Accessed on: 28/06/2019
[38] Ibid.
[39] As cited in The Jakarta Globe on 24/06/2019. Op. Cit.
[40] Atlas of Economic Complexity, Harvard University's Center for International Development: http://atlas.cid.harvard.edu/

US$465.7m (US$321.3m in textiles and US$144.4m for leather goods and footwear). Investment then increased substantially in 2017, reaching US$741.1m (US$372.2m for textiles and US$368.9m for leather goods and footwear), before dropping to US$549m in 2018 (US$305.4m for textiles and US$243.6m for leather goods and footwear).[41]

FDI realisation in Indonesia: textiles and leather goods & footwear:

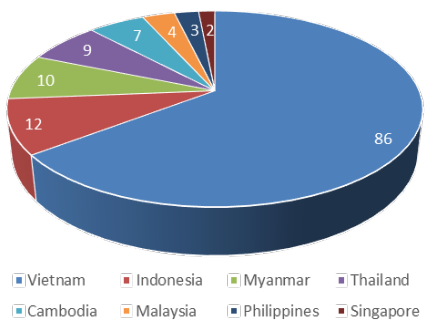


Source: BKPM's Investment Realisation data and reports, 2016-2018

The Indonesian picture to an extent reflects the global picture for textiles, where recorded CapEx in greenfield FDI saw a minor rise in 2017, followed by a modest decline in 2018 (see the chart below). Within ASEAN, the FDI picture bears significant similarities with the export trends, with Vietnam by far the leading recipient of FDI, receiving nearly 65% of ASEAN's textiles FDI projects between 2014-18.[42]

Global FDI, Textiles, 2014-18:

Textiles Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

41 BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.

42 fDi Markets database (Financial Times Ltd.)

From an investment climate perspective, investors in the sector cite a few challenges, including labour and environmental standards (for example in relation to landfills) which are considered to be below those they expect and, in many cases, adhere to internationally. The fact that the current Negative Investment List restricts investment in textile retail businesses to domestic businesses has also been raised as an issue.

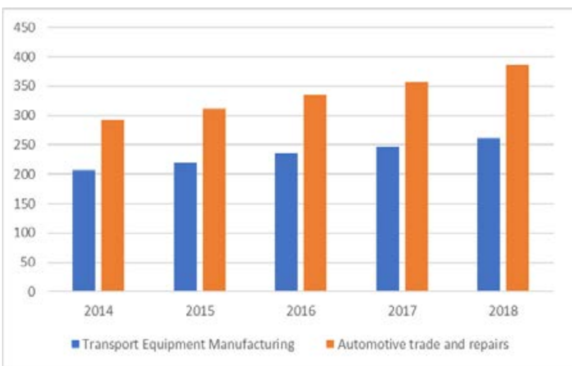
Despite these challenges, concerns and evident regional competition, the textiles and apparel sector looks set to remain both a cornerstone and a driver of Indonesia's broader manufacturing industry.

V. Automotive

The automotive sector is one the pillars of Indonesia's broader manufacturing industry: in 2018, 'transport equipment manufacturing' was valued at 261tn Rp. (US$18.3bn)[43], up from 247tn Rp. (US$17.3bn) in 2017 and 236tn Rp. (US$16.5bn) in 2016. In terms of the numbers of vehicles produced, in 2016, the figure stood at 129,000, while in 2017, the number reached 138,000 vehicles (a YOY growth of 7 percent).[44]

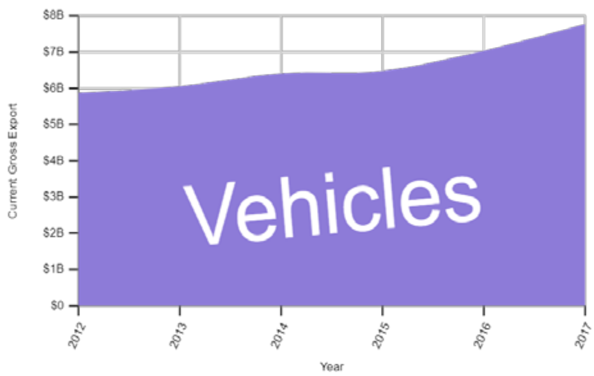
Meanwhile, automotive wholesale and retail trade and repairs totalled 387tn Rp. (US$27bn) in 2018, up from 356tn Rp. (US$25bn) in 2017 and 335tn Rp. (US$23.4bn) in 2016.[45] Growing domestic demand for automobiles and motorcycles[46], coupled with growing levels of vehicle exports, have seen Indonesia's automotive industry flourish in recent years, directly employing around 350,000 workers.[47]

GDP of automotive-related activity (Rp. trillions):



Source: Author's elaboration of Bank Indonesia data

Indonesia's automotive exports (US$ billions):



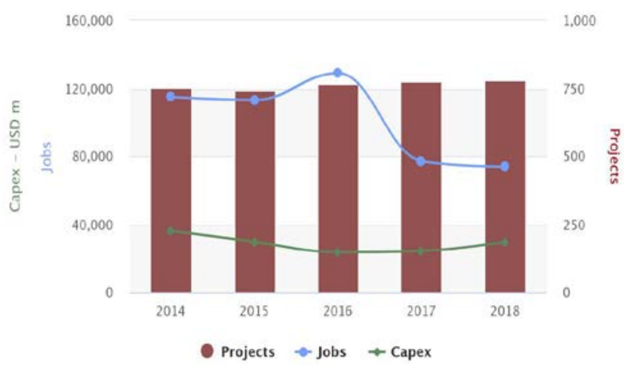
Source: Harvard's Atlas of Economic Complexity

[43] BPS Statistics via Bank Indonesia, accessed: 05/08/2019: https://www.bi.go.id/seki/tabel/TABEL7_1.pdf
[44] As cited in EuroCham Indonesia's 2019 Position Paper on Automotive: http://www.eurocham.id/publications
[45] Ibid.
[46] According to Oxford Business Group's 2018 report on Indonesia, only 4 percent of Indonesian households owned a car in 2016. By 2050, this figure is expected to rise to 30 percent.
[47] As cited in EuroCham Indonesia's 2019 Position Paper on Automotive. Op. Cit.

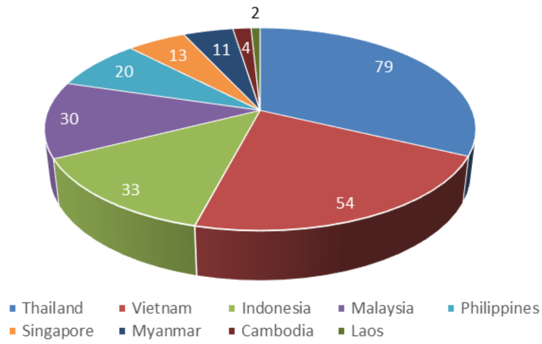
Supporting this encouraging growth is a government commitment to helping further build the country's automotive capabilities by becoming the number one manufacturing hub in ASEAN (overtaking Thailand) and a global base for the world's leading automotive manufacturers.

When it comes to investment, BKPM's data shows that realised FDI in 'motorized vehicle industries and other transportation equipment' totalled US$971m in 2018. At a global level, greenfield FDI project number in automotive have remained largely stable since 2014, at around 750 projects per year, although with a rise in automation, the registered number of jobs has been on the decline since 2016. Within ASEAN, Thailand is by far the largest recipient of greenfield FDI projects in the sector, followed by Vietnam, with Indonesia coming in third place regionally.[48]

Global FDI, Automotive*, 2014-18:



Automotive* FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)
** 'Automotive' covers Automotive Components and OEM*

Investors have also been encouraged by some recent positive moves by the GoI to enhance the business enabling environment for the sector: the CO2 Emissions-Based Taxation Scheme, which many investors (and notably those from European companies) believe will create more a level playing field for cars across all categories, and thus more favourable than the current luxury tax scheme which favours MPVs, where Asian manufacturers dominate the Indonesian market. Investors have also welcomed the government's recent decision to include automotive as an eligible sector for the latest tax holiday scheme (brought about through Economic Policy Package XVI), although there are hopes that this incentive will extended to existing automotive investments in the country. Despite promising industry developments such as these, investors nevertheless point to a number of persisting investment climate challenges, including restrictions on FDI in the automotive retail sector (the current DNI restricts this sector purely to domestic investors), and the Indonesian National Standards (SNI). With the latter, the principal concern is that the policy imposes significant

[48] fDi Markets database (Financial Times Ltd.)

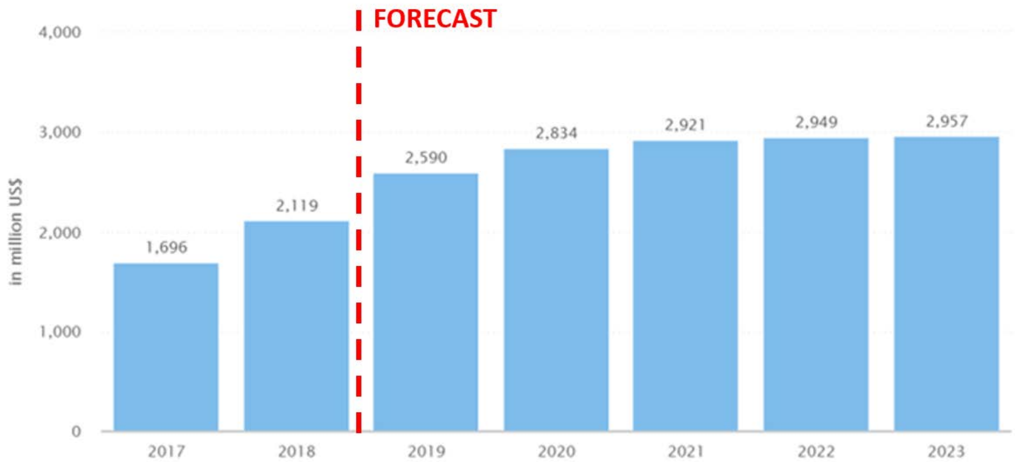
costs and time burdens on automotive businesses – particularly with products such as tyres, wheel rims, glass and lubricants.

These regulatory burdens and issues present challenges for the industry's future, as does the trend towards automation in the sector and the implications this has for jobs. Nevertheless, from an FDI perspective, the automotive sector arguably remains one of Indonesia's industrial success stories, and global trends coupled with burgeoning domestic demand augur well for the sector's future in Indonesia.

VI. Electronics

The global electronics market is growing healthily: in 2018, global revenue in consumer electronics alone reached US$307bn – a 7.7 percent increase on the US$285bn achieved in 2017[49], with growth forecast to continue in the years to come. In Indonesia, with its rapidly growing middle class and a recovery in consumer spending[50], the rate of increase in consumer electronics' revenue has been far higher than the global average, rising by close to 25 percent year-on-year, from US$1.7bn in 2017 to US$2.12bn in 2018[51], with predictions that revenue will grow to US$2.96bn by 2023.[52]

Indonesia's consumer electronics revenue: recent performance and forecast:



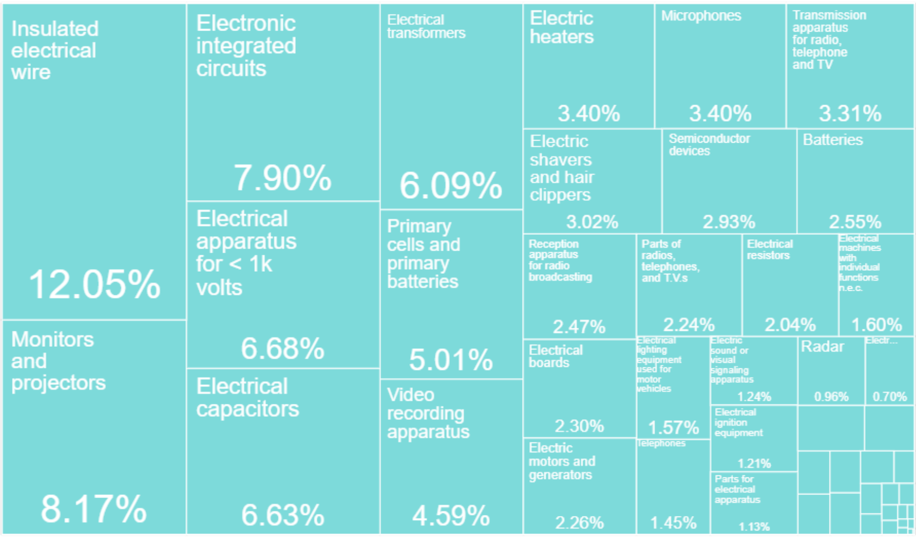
Source: Statista.com – Indonesia's Consumer Electronics Outlook

[49] Statista's Consumer Electronics Outlook, accessed on 05/08/2019: https://www.statista.com/outlook/251/100/consumer-electronics/worldwide
[50] Consumer spending in Indonesia had reached a record high of 1.4 quadrillion Rp. by 2019 – up from less than 1.2 quadrillion in 2015. Data from Trading Economics: https://tradingeconomics.com/indonesia/consumer-spending
[51] Statista's Consumer Electronics Outlook for Indonesia, accessed on 05/08/2019: https://www.statista.com/outlook/251/120/consumer-electronics/indonesia
[52] Ibid.

Supporting the country's growing electronics industry is a workforce which, as of 2015, comprised more than 258,000 employees in medium- and large-scale enterprises manufacturing (i) electrical equipment and (ii) computers, electronics and optical products, plus a further 2,700 workers in micro- and small businesses in those two groupings. [53]

Beyond serving growing consumer demand, Indonesia electronics manufacturing industry has also been increasing its levels of exports in recent years: in 2017, the country's electronics exports totalled US$10.8bn – the second consecutive annual increase following a slump in 2015. Exports have yet to reach their 2011-2012 peak of US$13.1bn, however.[54] Of the US$10.8bn electronics exports in 2017, insulated electrical wire, monitors and projectors and electronic integrated circuits were the three leading subsectors and products.

Electronics exports from Indonesia in 2017: subsector and product breakdown:



Source: Harvard's Atlas of Economic Complexity

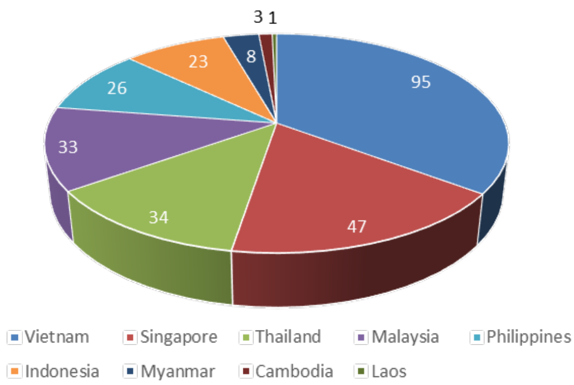
From an investment perspective, realised FDI in "machinery, electronics, medical equipment, electrical tools and precision tools, optical tools and watches" totaled US$1.3bn in 2018. At a global level, greenfield FDI projects in electronic components and consumer electronics have recovered steadily, following a slump in 2016. Estimated jobs created from these projects reached close to 60,000 in 2018, and yet CapEx from these projects declined, suggesting a global trend towards less capital-intensive projects. In ASEAN, the picture has surprisingly been the opposite of the global trend, with greenfield projects, their CapEx and jobs all showing a downward trend. Vietnam has been by far the lead recipient of greenfield projects in recent years, while Indonesia has somewhat

[53] BPS data: www.bps.go.id Accessed on: 28/06/2019
[54] Atlas of Economic Complexity, Harvard University's Center for International Development: http://atlas.cid.harvard.edu/

surprisingly come in only sixth place regionally – behind Singapore, Thailand, Malaysia and the Philippines.[55]

Global FDI, Electronics*, 2014-18:

Electronics* FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)
** 'Electronics' covers Electronic Components and Consumer Electronics*

As with other sectors, investors have cited a couple of challenges regarding the business enabling environment: the SNI covers the electronics industry, imposing costs and time burdens on businesses in the sector. The fact that investment in electronics retail businesses is reserved for domestic investors has been cited by foreign companies as another limitation.

Nevertheless, the GoI has undertaken some encouraging steps to ensure a more conducive environment for the broader electronics sector, including new industrial sites where the sector is one of a few priority sectors, as well as a more attractive tax holiday.

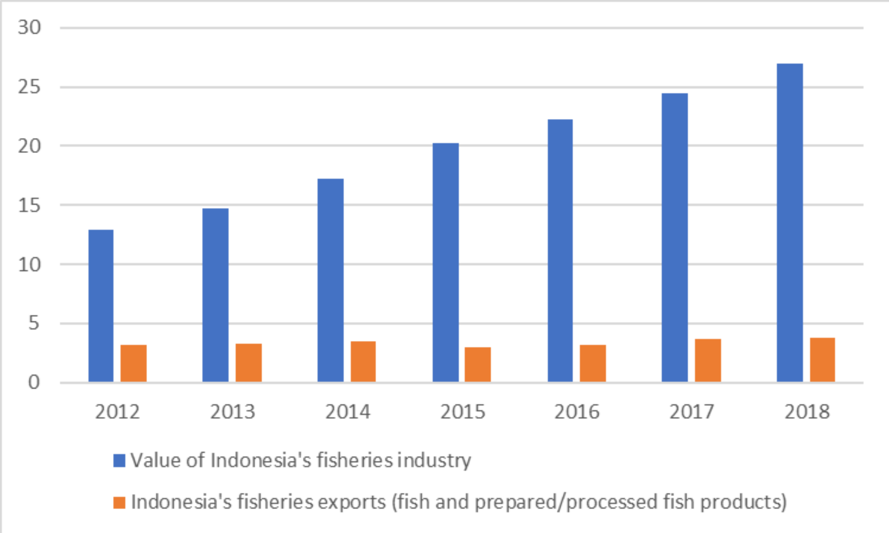
VII. Maritime & Fisheries

Indonesia's fisheries industry has witnessed rapid growth in the past few years, more than doubling in just six years, from 184tn Rp. (US$12.9bn) in 2012, to 386tn Rp. (US$27bn) in 2018[56], representing 2.6 percent of the country's GDP.[57] Similarly, the sector's exports have also risen overall – albeit more modestly and slightly more erratically – over the same period, with the total value of fish and prepared or processed fish product exports rising from US$3.16bn in 2012 to nearly US$3.77bn in 2018.[58] These are encouraging trends, given the sector's importance to employment: as of 2015, 2.7 million Indonesians were formally employed in fisheries (with many more self-employed and

55 fDi Markets database (Financial Times Ltd.)
56 BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
57 Based on Indonesia's GDP totalling US$1.042tn in 2018, as reported by the World Bank.
58 UN Comtrade data portal. Op. Cit. HS codes 03 and 1604.

informal workers in the industry)[59]. Yet given Indonesia's abundant fish stocks and production capabilities (for example, Indonesia is the world's number one producer of tuna), the country is still far away from reaching its potential as a top global supplier of sustainable, processed and other value-added fisheries products.

Indonesia's fisheries industry and export values, 2012-2018 (US$bn):



Source: Author's elaboration based on UN Comtrade data.

When it comes to investment realization, BKPM's data shows that FDI in the fisheries sector remains very limited and has in fact declined in the past couple of years: in 2018, just US$24.3m was invested, compared with US$59.3m in 2017 and US$43.3m in 2016.[60]

From a business enabling environment perspective, there have been some positive developments in recent years. For example, the 2016 DNI enabled foreign investors to own 100 percent of cold storage businesses (up from previous caps of 33 and 67 percent, depending on the location within Indonesia), a move welcomed by European and other foreign investors who have been assessing the sector's opportunities with interest, given the persistent lack of cold chains and cold storage facilities in the country for the fisheries and other FMCG sectors.

Despite the sector's growth and evident potential, some important challenges continue to hinder value-added, export-oriented investment and activity in Indonesia's fisheries industry. From a food safety perspective, there have been cases of salmonella contamination in tuna stocks which has led to instances of exports being refused by key importers such as the USA and Russia.[61] Spatial planning at the subnational level also presents challenges, particularly for aquaculture, with instances of

[59] According to the OECD Stat data: https://stats.oecd.org/Index.aspx?DataSetCode=FISH_EMPL
[60] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.
[61] As reported in *"Strengthening Indonesia's Exports of Fish and Processed Fish Products to Canada"* report, published: January 2018.

industrial zones being given clearance to develop on land upstream from sites allocated to aquaculture, with the evident negative environmental implications this entails.[62] Other regulatory limitations, such as the 100 gross tonnage (GT) cap for fishing vessels, presents challenges for deep-sea fishing, while the current DNI's limitations on fishing enterprises means the activity is reserved solely for domestic investors.

VIII. Agriculture

Agriculture has long been a sector of fundamental importance to Indonesia's socio-economic wellbeing and prosperity: not only is the sector's continued development important in ensuring food security and aspirations for self-sufficiency, it also has the potential to be an important export-earner in a country with such an abundance of agricultural products, including cocoa, palm oil, rubber, coffee, tea, rice and cassava – to name but a few.

And yet the industry's growth, contribution to GDP and source of employment is lower than it has been in previous years and decades: data from BPS show that the percentage of Indonesians working in the sector is decreasing, falling from 55.1 percent in 1990 to 31.9 percent in February 2017.[63] In terms of GDP contribution, the agriculture industry's total value came to 1.41 quadrillion Rp. (US$99bn) in 2018[64] (or 9.5 percent of the country's US$1.042tn GDP that year) – practically no change on the sector's 9.6 percent GDP contribution three years earlier in 2015, when the industry's value totaled US$83bn.[65] The fact is that while the agriculture industry has continued to grow at slower pace than overall GDP in the past couple of years (the sector grew by 3.6 and 3.7 percent in 2017 and 2018 respectively, compared with total GDP growth rates of 5.07 and 5.17 percent in those two years), while other industries, especially services, have grown at a far greater pace.[66]

Nevertheless, agriculture has collectively been Indonesia's number one exporting sector in recent years (replacing minerals following a slump in exports in 2014), and yet as Harvard's Atlas of Economic Complexity reveals, Indonesia's agricultural exports have been dominated by raw materials – most significantly palm oil.

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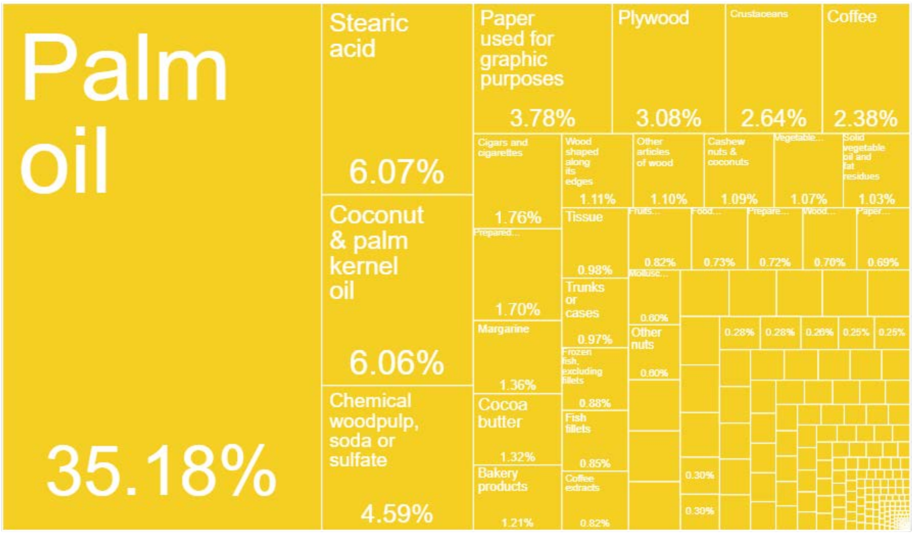
[62] As reported by a Marine and Fisheries specialist at BAPPENAS.
[63] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
[64] Ibid.
[65] Ibid.
[66] Ibid.

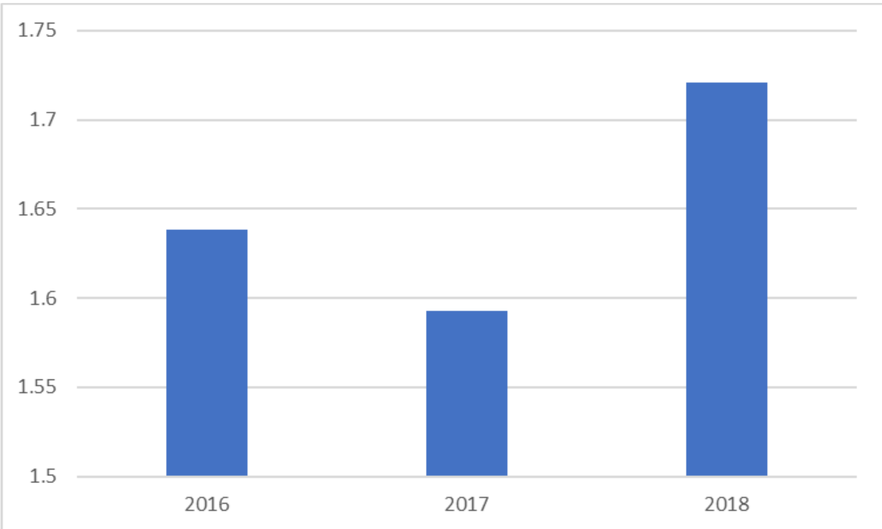
Agricultural exports from Indonesia in 2017: subsector and product breakdown:



Source: Harvard's Atlas of Economic Complexity

In terms of investment, there's been an encouraging rebound in realised FDI in agriculture over the past few years: in 2017, realized FDI in the sector (covering food crops, plantations and livestock) dropped from US$1.64bn to US$1.59bn, but in 2018, investment in the sector rose sharply to reach US$1.72bn.[67]

Agricultural FDI (food crops, plantations and livestock), US$bn – 2016-2018:



Source: Data from BKPM's FDI realization reports

[67] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.

While the agricultural sector is vast, with different subsectors, activities and products facing their own particular business environments and challenges, a couple of issues raised by agribusiness investors are worth noting. Firstly, distribution costs for agricultural produce reportedly remain high, while the availability and quality of warehousing needs to be improved – especially in more remote parts of the archipelago. Foreign ownership restrictions in certain subsectors also remain a concern – notably the 30 percent limitation on FDI in horticulture imposed by the 2010 Horticulture Law (number 13). The lack of a commercialised biotechnology industry in Indonesia has been cited as another shortcoming, but arguably also an area of investment opportunity.

IX. Renewable Energy

Renewable energy is a dynamic sector globally, and furthermore a highly sought-after sector for investment by governments around the world as they seek cleaner, more sustainable sources of energy for their citizens, while striving to achieve their energy mix and carbon emissions reduction ambitions and commitments. Globally, a total of 181 gigawatts (GW) of renewable power was added in 2018, providing an estimated 26 percent of global electricity generation by the end of the year.[68] As can be seen in the following table, overall power capacities increased for all forms of renewables (with the exception of ocean power which remained constant at 0.5GW). However, annual new investment in renewable power and fuels declined slightly, to US$289bn.

Renewable Energy Indicators, 2017-2018:

		2017	2018
INVESTMENT			
New investment (annual) in renewable power and fuels[1]	billion USD	326	**289**
POWER			
Renewable power capacity (including hydropower)	GW	2,197	**2,378**
Renewable power capacity (not including hydropower)	GW	1,081	**1,246**
Hydropower capacity[2]	GW	1,112	**1,132**
Wind power capacity	GW	540	**591**
Solar PV capacity[3]	GW	405	**505**
Bio-power capacity	GW	121	**130**
Geothermal power capacity	GW	12.8	**13.3**
Concentrating solar thermal power (CSP) capacity	GW	4.9	**5.5**
Ocean power capacity	GW	0.5	**0.5**
Bioelectricity generation (annual)	TWh	532	**581**

Source: REN21's "Renewables 2019: Global Status Report"

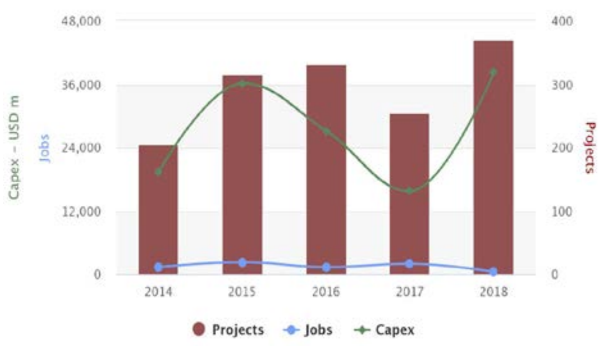
Fortunately, global FDI in renewables has bucked the broader investment trend, to the extent that in 2018, FDI projects in the renewable energy sector hit their highest level since 2008, with 364

[68] *Renewables 2019: Global Status Report,* REN21: https://www.ren21.net/wp-content/uploads/2019/05/gsr_2019_full_report_en.pdf

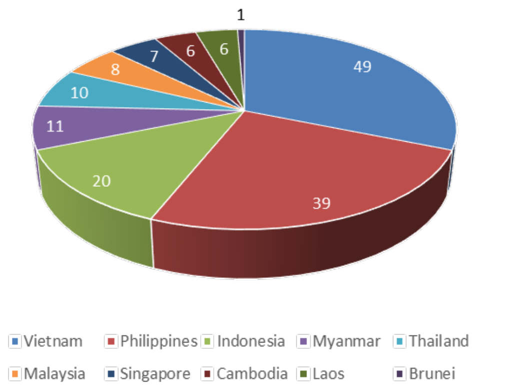
projects recorded globally, while recorded CapEx more than doubled between 2017 and 2018, from US$15.8bn to US$38.2bn[69].

Indonesia's recent performance in attracting renewables FDI has also been highly strong and promising: in 2018, the country took the lead spot not only within ASEAN, but globally, for reported CapEx in renewables, although it should also be noted that this was largely down to Chinas-based Sinohydro's announcement that it would be investing in five hydropower facilities in North Kalimantan.[70] In terms of recorded project numbers between 2014-2018, Vietnam and the Philippines took the top two spots in ASEAN, with Indonesia coming in third place regionally.[71]

Global FDI, Renewable Energy, 2014-18:



Renewable Energy FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

Indonesia's appeal to foreign investors is clear to see when looking at its abundant renewable energy resources: the combined potential power generation from renewables for 2019-2028 is estimated at 424GW[72], and yet renewable energy companies still note a number of challenges when it comes to investing in Indonesia's renewables sector. Market access remains an issue for smaller-scale renewable power generation, with the current DNI limiting FDI in energy projects between 1-10MW to 49 percent. This is seen by many foreign investors consulted as an important barrier, since many operations' power generation capacities fall within this MW range. Another key ask from foreign investors in the sector is for simpler and clearer procedures with predictable pricing and Power Purchase Agreement (PPA) terms to reduce costs and attract investment. The current framework requires what are seen by businesses as costly and time-consuming vendor qualifications, unclear tender procedures and extremely costly PPA negotiations – thus deterring potential investors.

[69] fDi Markets database (Financial Times Ltd.)
[70] Ibid.
[71] Ibid.
[72] According to Indonesia's Electricity Supply Business Plan (RUPTL) 2019-2018, referenced in EuroCham Indonesia's 2019 Position Paper on Energy: http://www.eurocham.id/publications

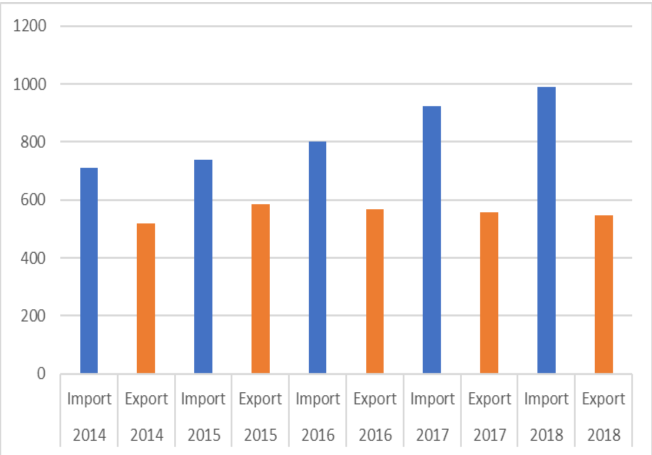
X. Pharmaceuticals & Medical Devices

Unlike some sectors which can see erratic growth trends, and in some cases even boom-and-bust developments, the pharmaceuticals and medical devices sector is set to continue growing globally as populations age, life expectancies increase, and a host of diseases and illnesses become more prevalent. In its latest *Global Health Care Outlook*, Deloitte has predicted that global healthcare expenditures will increase at an annual rate of 5.4 percent between 2017-2022, from US$7.72tn to US$10.06tn.[73]

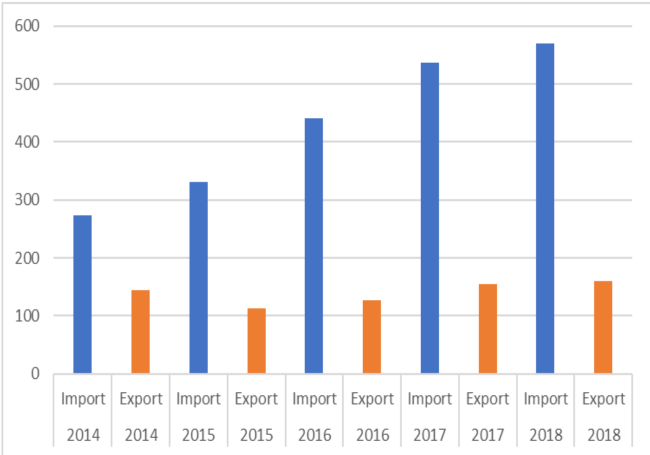
Within ASEAN, Indonesia has the largest pharmaceuticals market, which is expected to be worth US$10.11bn by 2021, according to the market entry consulting firm Cekindo Business International.[74] Meanwhile, Indonesia's medical devices market was worth US$722m in 2016 and is expected to grow by 18 percent in 2019, according to BMI Research from 2018.[75]

Despite Indonesia's vast pharmaceuticals and medical devices market, domestic manufacturing remains limited and the country remains highly dependent on imports. For pharmaceuticals, there has been a growing trade deficit for the past five years, with imports reaching US$990m in 2018 (compared with US$546m in exports – a four year low). With medical devices, the trade deficit has been even more pronounced, with imports more than doubling between 2014-2018 to reach US$659m, while exports have only very modestly increased from US$145m in 2014 to US$159m in 2018. To address the latter trade deficit, industry experts have suggested that Indonesia could seek to enhance its disposable medical devices manufacturing capabilities, in part by seeking to attract more FDI through JVs and other forms of investment.

Indonesia's pharmaceuticals* trade (US$m):



Indonesia's medical devices* trade (US$m):



Source: Author's elaboration based on UN Comtrade data.
** HS codes used for analysis: 30 for pharmaceuticals and 9018 for medical devices.*

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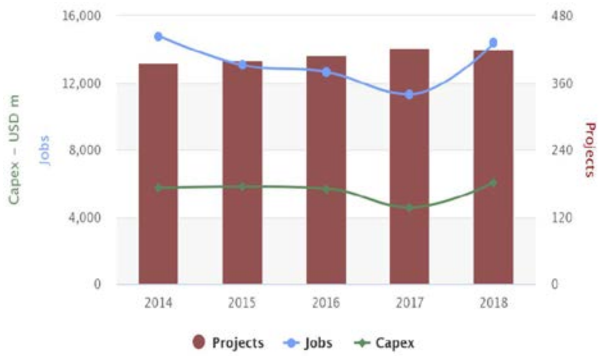
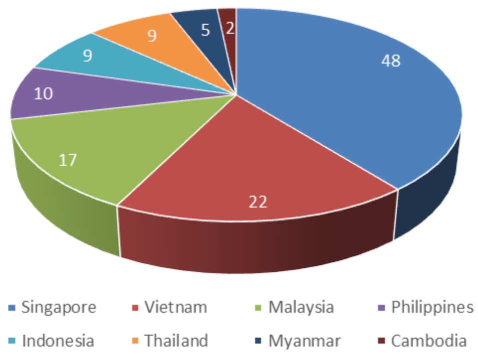
[73] Deloitte's *2019 Global Health Care Outlook,* accessed on 08/08/2019: https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-health-care-sector-outlook.html
[74] Cekindo's website, accessed on 08/08/2019: https://www.cekindo.com/sectors/pharmaceutical-indonesia
[75] Referenced in EuroCham Indonesia's 2019 Position Paper on Pharmaceutical and Medical Technology: http://www.eurocham.id/publications

When it comes to FDI in the pharmaceuticals and medical devices sector, the number of greenfield projects at a global level remained relatively consistent from 2014-2018, at around 400 announced projects per year. In terms of global CapEx and estimated job creation, both saw a dip in 2017, followed by a recovery in 2018. In ASEAN, however, there's been a downward trend in terms of announced project numbers over the five years, with Singapore taking the top spot in terms of project numbers, followed by Vietnam, Malaysia and the Philippines. Indonesia came in only fifth place regionally.

Global FDI, Pharma. & Medical Devices:



Pharma. & Medical Devices FDI Projects, ASEAN, 2014-18



Source: fDi Markets database (Financial Times Ltd.)

In terms of the business enabling environment for the sector, investors point to some key challenges relating to market access, industry-related laws, and access to raw materials. The current DNI imposes a number of restrictions on foreign investors, including: an 85 percent ownership cap on patent medicines manufacturing; a 67 percent cap on medical distribution. Both caps present challenges, not least because there are a limited number of local partners who are able (or willing) to take a minimum 15 percent stake in a patent medicines manufacturing businesses, while the same goes for domestic businesses who can take a minimum 33 percent stake in pharmaceuticals distribution JVs. Investors have also voiced concerns around the Patents Law, which among other provisions requires companies to locally manufacture any products patented in Indonesia within five years of the patent's registration. The Halal Law, referenced in other sector profiles in this study, is also set to affect the pharmaceuticals industry, with the potential to disrupt crucial supplies of medicines, as well as increasing costs.[76] Finally, a lack of vital raw ingredients is cited as an issue by pharmaceuticals manufacturers, with the Indonesian Pharmacists Association reporting that around 95 percent of raw materials for medicine are imported.[77]

[76] Concerns referenced in EuroCham Indonesia's 2019 Position Paper on Pharmaceutical and Medical Technology. Op. Cit.
[77] As of 2016, as cited in The Jakarta Post on 27/01/2016: https://www.thejakartapost.com/news/2016/01/27/kimia-farma-sets-jv-supply-raw-materials.html

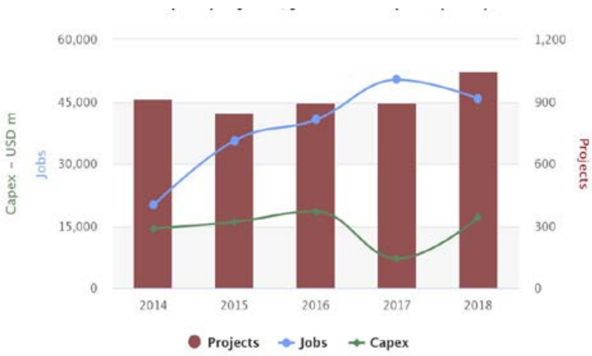
XI. Transport & Logistics

The global outlook for the transport and logistics (T&L) industry is broadly positive, with Research and Markets predicting the industry will grow to US$12.68bn by 2023, achieving a CAGR of 3.49 percent between 2017 and 2023, with the Asia-Pacific region set to be the lead driver of this growth.[78]

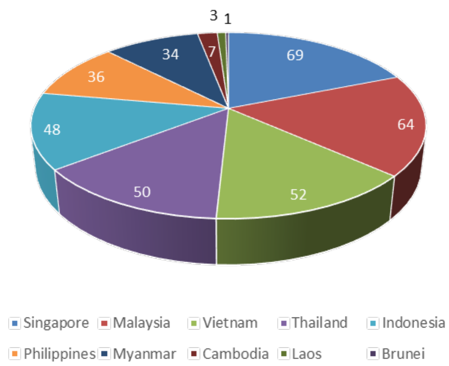
Within the region, Indonesia, with its vast archipelago of more than 14,000 islands, undoubtedly still faces some of the greatest T&L challenges, and yet simultaneously offers some of the region's most promising investment opportunities in this sector. President Joko Widodo's first term from 2014-19 saw a major drive on infrastructure projects across the country which has improved connectivity, and while much more remains to be done on enhancing the country's infrastructure, the progress achieved to date saw Indonesia climb to 46th position globally in the World Bank's Logistics Performance Index in 2018, up from 63rd in 2016.[79] Beyond infrastructure developments, improvements to the ease of arranging international shipments, logistics competencies as well as tracking and tracing capabilities have also contributed to this overall performance improvement.

The sector's regional and global growth is mirrored in recent FDI trends: announced global greenfield FDI projects have risen overall since 2014, while estimated job creation from these announced projects has increased even more sharply. Estimated CapEx has also risen, albeit to a lesser extent. Within ASEAN, Singapore was the lead recipient of T&L FDI projects from 2014-2018, with Indonesia coming in fifth place regionally, behind Malaysia, Vietnam and Thailand. However, in terms of announced CapEx from these FDI projects, Indonesia came second only to Singapore.[80]

Global FDI, Transport & Logistics, 2014-18:



Transport & Logistics FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

[78] Global Logistics Market report cited by PRNewswire on 07/08/2018: https://www.prnewswire.com/news-releases/global-logistics-market-2017-2018--2023---market-is-estimated-to-grow-to-12-6-bn-300708730.html
[79] World Bank's Logistics Performance Index 2018: https://lpi.worldbank.org/
[80] fDi Markets database (Financial Times Ltd.)

When it comes to realized FDI in Indonesia, BKPM's figures show an even more dynamic growth trend, with investment in "transportation, warehouse and telecommunication" more than doubling between 2016-2017, from US$750.2m, to US$1.9bn, and then increasing by a further 63 percent between 2017-2018, to US$3bn.[81]

Indonesia's business environment for the T&L sector has also seen some notable improvements in recent years: the establishment of 76 Bonded Logistics Centers (BLCs) across the country has been welcomed by investors, as has the reduction in minimum capital requirements, although most other ASEAN countries apply much lower investment requirements for foreign freight-forwarding services.[82] The most recent revision to the DNI in 2016 was also broadly seen as a positive development by foreign investors, who saw their ownership cap in freight forwarding and warehousing operations lifted to 67 percent – an increase on the 49 percent cap introduced through the previous DNI in 2014. However, the current DNI provision is still significantly more restrictive than 95 percent cap that existed prior to 2014. And while the improved performance in the World Bank's Logistics Performance Index is encouraging, there's no room for complacency when some of Indonesia's competitors score and rank higher, for example Thailand (32nd), Vietnam (39th) and Malaysia (41st).[83]

Additional areas of concern to investors include the 2 percent withholding tax on freight forwarding services – a burden which requires companies to produce extremely high numbers of withholding tax certificates (given the huge number of daily transactions they typically conduct). Customs clearance processes are also still deemed as being somewhat cumbersome, and penalties are deemed harsh for often minor and even innocent admin errors such as spelling mistakes, along with very tight reporting deadlines.

XII. Cosmetics

The global cosmetics industry is growing steadily and substantially. In January 2019, Zion Market Research published a report which predicted that the global cosmetic products market will grow at a CAGR of slightly more than 7 percent between 2018-2024, reaching a total global value of US$863bn by 2024.[84]

Indonesia reflects the global picture, with a strong and growing cosmetics market, supported to a large extent by the country's 130 million female consumers in particular. Indonesia's cosmetics and toiletries industry recorded close to 12 percent growth in 2017, according to Global Business

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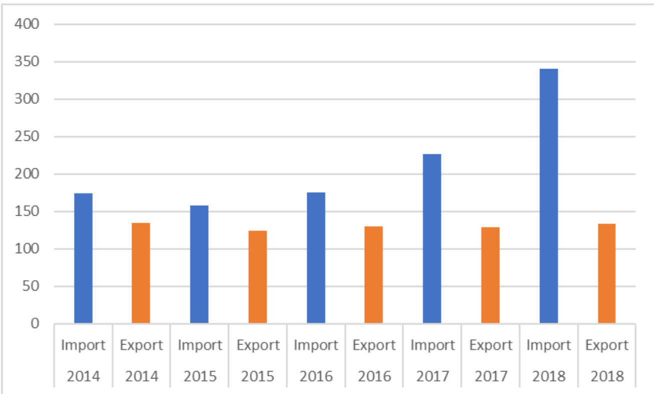
[81] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.
[82] Reported in EuroCham Indonesia's 2019 Position Paper on Transport & Logistics: http://www.eurocham.id/publications
[83] World Bank's Logistics Performance Index 2018. Op. Cit.
[84] Zion Market Research report cited by PR Newswire on 31/01/2019: https://www.globenewswire.com/news-release/2019/01/31/1708263/0/en/Global-Cosmetic-Products-Market-Share-Expected-To-Reach-863-Billion-by-2024-ZMR.html

Indonesia.[85] The country is also well-placed to tap into the global halal cosmetics industry, which is estimated to be worth US$13bn, with an annual growth rate also of 12 percent.[86]

Looking at Indonesia's recent import and export data for cosmetics[87], the country's market demand and potential clear to see, with imports more than doubling over the past four years, from US$158.1m 2015 to US$340.5m in 2018. Meanwhile, exports have remained largely steady at around US$130m annually for the past few years, and while a sizeable (and growing) sectoral deficit therefore persists, Indonesia's cosmetics export levels are still broadly on par with those of Malaysia's and comfortably ahead of those from other ASEAN countries (with the notable exception of Singapore, the region's largest cosmetics exporter).[88]

Indonesia's cosmetics trade (US$m):



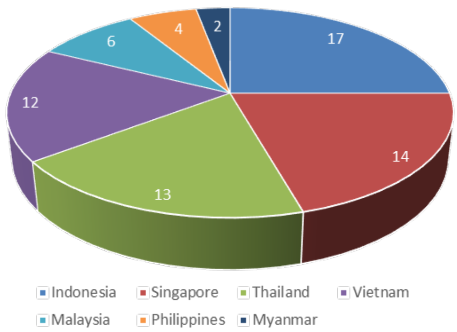
Source: Author's elaboration based on UN Comtrade data. HS code 3304 used.

When it comes to global investment in the sector, the picture has been more challenging, with an overall decline in announced greenfield FDI projects in cosmetics, as well as a decline in their estimated CapEx and job creation. Meanwhile, in ASEAN, there's been a recovery in announced project numbers, although there were still fewer in 2018 than in 2014. Among the ASEAN countries, Indonesia took the top spot in terms of project numbers, closely followed by Singapore and Thailand.[89]

[85] Reported in EuroCham Indonesia's 2019 Position Paper on Cosmetics: http://www.eurocham.id/publications
[86] Ibid. Insight from ResearchGate.
[87] HS code 3304 used: "Cosmetic and toilet preparations; beauty, make-up and skincare preparations (excluding medicaments, including sunscreen or suntan preparations), manicure or pedicure preparations.
[88] Ibid.
[89] fDi Markets database (Financial Times Ltd.)

Global FDI, Cosmetics, 2014-18:

Cosmetics FDI Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

Despite the positive developments Indonesia's cosmetics industry, investors have raised some key concerns when it comes to doing business: chief among them is the anticipated impact of the Halal Law on the industry (a concern shared by a number of other industries), particularly as the law's implementation is scheduled to begin imminently (October 2019) and continue until October 2026. Investor's concerns centre around the GoI's infrastructure readiness to implement the law, as well as a lack of reference lists for cosmetic ingredients.[90] Some investors have also voiced concerns around a number of Indonesia-specific regulations which continue to be applied across the country and which are not in line with the ASEAN Harmonized Cosmetic Regulatory Scheme (AHCRS) or the ASEAN Cosmetic Directive (ACD).[91]

XIII. Education

Indonesia's education industry has the potential to offer a multitude of opportunities and can be seen as a cross-cutting enabling sector that can help address a swathe of skills shortages and other challenges in other sectors ranging from engineering and hospitality, to transport and logistics (T&L). As of 2017, there were around 6 million university students in Indonesia, with the number projected to increase over the next five years.[92] The number of Indonesian students studying overseas is also dramatically on the rise, having increased by 53 percent from 45,000 in 2017 to 69,000 in 2018-19, according to the Institute for International Education (IIE).[93] With this growth in Indonesian student numbers, education is unsurprisingly a hot topic in trade and investment negotiations and other bilateral discussions Indonesia has been having with partners, including Australia (where education has been one of the key sectors negotiated in the recently-signed Indonesia-Australia

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[90] Reported in EuroCham Indonesia's 2019 Position Paper on Cosmetics. Op. Cit.
[91] Ibid.
[92] US export.gov's Indonesia Country Commercial Guide: https://www.export.gov/article?id=Indonesia-Education-and-Training Accessed: 14/08/2019
[93] As reported by ICEF Monitor: https://monitor.icef.com/2019/02/indonesian-outbound-continues-to-grow-with-emphasis-on-regional-destinations/ Accessed: 14/08/2019

Comprehensive Economic Partnership Agreement (IA-CEPA), as well as with the EU and individual European countries such as the UK.

Beyond universities, the vocational education sector offers opportunities and has needs for enhancements and improvements in terms of course offerings and delivery standards. The quality of vocational education has reportedly been low: as of 2018, only 22.3 percent of teachers had sufficient qualifications, according to the education ministry.[94] This is despite a sizeable and growing need for qualified talent in in sectors and disciplines such as engineering, hotel management, marine science and T&L. Foreign foundations are already exploring collaboration initiatives with Indonesian domestic institutions, for example with vocational high schools (SMKs) in areas such as freight-forwarding and logistics, and yet it is the current regulatory restrictions in place that limit foreign interventions to foundations, rather than profit-oriented commercial investments.

Education technology – and e-learning in particular – is another area with significant potential, with Orbis Research predicting that the global e-learning market will grow with a CAGR of 9.5 percent between now and 2026, reaching close to US$400bn by that year.[95] The benefits and opportunities in Indonesia, with its growing middle class and many remote locations, are considerable, and foreign investors are taking an increased interest in the market. In late 2016 for example, global media and education provider Pearson announced a US$2.2m investment through its Affordable Learning Fund (PALF) in Indonesian education technology startup HarukaEdu.[96]

Market access is currently the major issue when it comes to FDI in education: only non-profit foreign entities can establish institutions in Indonesia, and these must be in partnership with local establishments. Foreign investors also report a lack of incentives to encourage the private sector to work with educational institutions in order to develop the systems and curricula which will ultimately produce skilled labour in some of Indonesia's key growth sectors.

Nevertheless, there have been signs that the sector is likely to open up more for FDI in the near future: the GoI has been examining the possibility of allowing education FDI in Special Economic Zones (SEZs), while the aforementioned CEPA recently signed with Australia significantly opens up the Indonesian market for Australian investors in technical and vocational training services (up to 67 percent foreign ownership), and potentially university education in the future.[97]

When it comes to investment, announced greenfield FDI projects in education and training globally were higher in 2018 than they were in 2014, yet still below their five-year peak in 2016. However, the estimated jobs created from these projects reached a five-year high in 2018. Within ASEAN, Singapore has been the lead recipient of education and training FDI, with 21 announced projects

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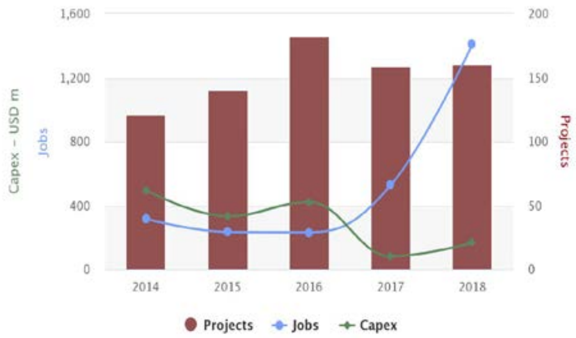
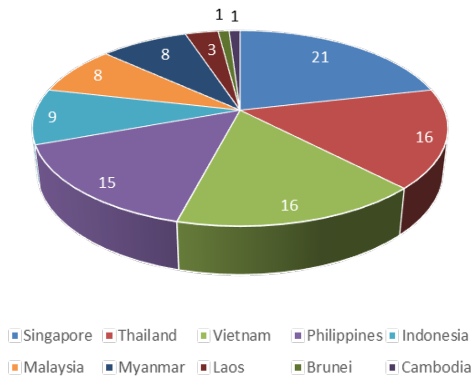
[94] As reported in Oxford Business Group's *Indonesia 2018* report (p.303).
[95] As reported by Reuters on 03/01/2019: https://www.reuters.com/brandfeatures/venture-capital/article?id=72033 Accessed: 14/08/2019
[96] Pearson media announcement from 08/11/2016: https://www.pearson.com/corporate/news/media/news-announcements/2016/11/pearson-affordable-learning-fund-makes-investment-in-indonesian-.html Accessed: 14/08/2019
[97] Australia's Department of Foreign Affairs and Trade (DFAT) website: https://dfat.gov.au/trade/agreements/not-yet-in-force/iacepa/Pages/ia-cepa-key-outcomes-for-australia.aspx Accessed: 14/08/2019

recorded between 2014-18. The other three ASEAN countries with a significant number of projects in the sector were Thailand, Vietnam and the Philippines. Given the current restrictions in Indonesia, the announced projects tended to be in corporate in-house training, recruitment and development centres.[98]

Global FDI, Education & Training, 2014-18:



Education & Training Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

XIV. Digital & Creative

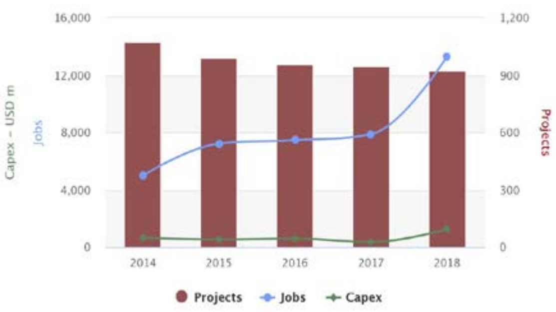
With the fourth-highest number of Facebook users globally and voracious consumer appetite for other social media platforms and apps, Indonesia continues to offer vast potential for the digital and creative cluster. According to recent research, more than 90 percent of Indonesia's internet users access the web through their phones[99], while the country's mobile sector was one of the fastest growing in the world in the decade from 2006-2015, expanding by more than 600 percent.[100] The rapid rise in digital consumption and interaction has not only benefitted the social media space, but e-commerce too: by 2017, 41 percent of Indonesians were buying goods and services online, compared with just 26 percent in 2016, with the Ministry of Communication and Information Technology (KEMKOMINFO) predicting that the country's e-commerce market will grow to US$130bn by 2020[101] (roughly 13 percent of the country's forecast GDP). This boom has seen the emergence of some home-grown e-commerce success stories such as Go-Jek, Tokopedia and Bukalapak, while foreign investors such as Lazada and Shopee have also succeeded in establishing in

[98] fDi Markets database (Financial Times Ltd.)
[99] Research from UK-based digital media research firm We Are Social, cited in Oxford Business Group's *Indonesia 2018* report. Op. Cit.
[100] Ibid.
[101] As reported in ASEAN Briefing (Dezan Shira & Associates), on 14/03/2019: https://www.aseanbriefing.com/news/2019/03/14/indonesias-e-commerce-sector-market-potential-challenges.html
Accessed on 14/08/2019

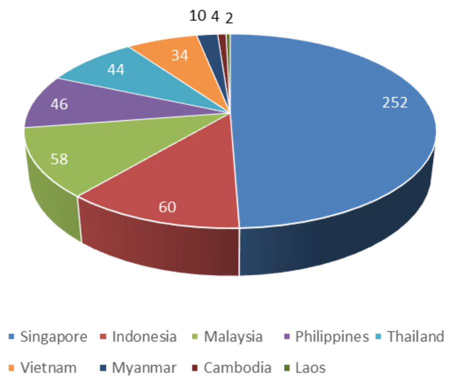
the Indonesian market. This success extends to related creative subsectors such as fashion, which has seen the emergence of domestic companies such as Berrybenka and Hijup.

When it comes to FDI in the creative industries at a global level, announced project numbers have actually fallen in recent years, although the estimated number of jobs created by these projects has increased substantially. At the ASEAN level, Singapore has been by far the lead recipient of announced FDI projects in the creative industries since 2014, with Indonesia coming in second place regionally.[102]

Global FDI, Creative Industries, 2014-18:



Creative Industries Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

While the growth of Indonesia's digital and creative cluster is nothing short of meteoric, investors point to a number of challenges that hinder Indonesia's competitiveness in the sector: the country's geography and infrastructure deficiencies continue to make it difficult for e-retailers to operate across the country (particularly in more remote parts). Slow internet speeds are another problem, with Indonesia lagging far behind other countries in ASEAN and Asia more broadly.[103] There's also a lingering wariness of cashless payments, particularly outside the main urban centres, although this is changing rapidly, aided by products such as GoPay, GrabPay, DOKU and Ayopop. Market access for FDI has also improved: since 2016, 100 percent foreign ownership in e-commerce businesses is allowed, provided that the business invests a minimum of 100bn Rp (with a 49 percent foreign ownership cap for investments below this level).

[102] fDi Markets database (Financial Times Ltd.)

[103] As of June 2019, Indonesia ranked 125th globally for mobile and 117th for fixed broadband in the Speedtest Global Index.

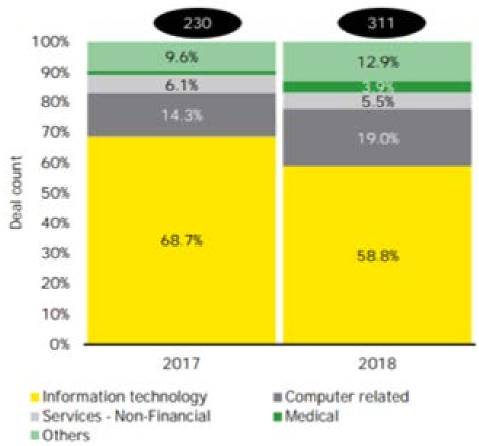
XV. Financial Services

The global financial services (FS) sector has come a long way since the global crisis a decade ago, with the global market forecast to reach a value of more than US$26tn by 2022[104] (greater than the total GDP of the USA today). At a basic level, the FS sector can be divided into three core subsector groupings: (i) lending and payments, (ii) insurance and (iii) investments.

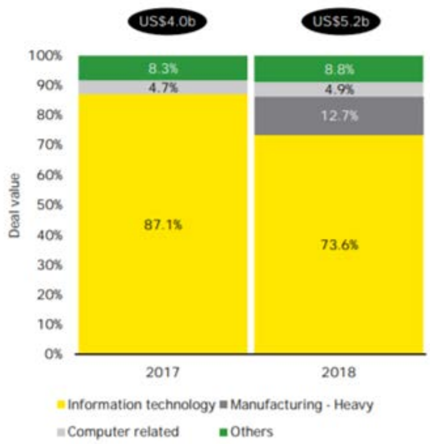
The latter subsector grouping – investments – is of particular interest to Southeast Asia's booming start-ups and unicorns landscape, with US$14.1bn worth of announced deals across the region from private equity (PE) and Venture Capital (VC) firms in 2018.[105] However the total value of deals was down on 2017's figures, with PE witnessing a sharp decline from US$17.5bn to US$8.9bn , while VC increased from US$4.1bn to US$5.2bn.[106]

When it came to the sectoral focuses of PE and VC deals in Southeast Asia, the IT sector was by far the dominant sector for VC – both in terms of deal numbers and their total value, as can be seen in the charts below. Indonesian tech unicorns were the top two performers in terms of funds raised in 2018, with Go-Jek attracting US$1.5bn and Tokopedia US$1.1bn.[107]

VC deal count by sector in Southeast Asia:



VC deal value by sector in Southeast Asia:



Source: EY's Private Equity Briefing: Southeast Asia, May 2019.

The focus sectors for PE in Southeast Asia were substantially different, however. In terms of deal counts, there was a far more broad and extensive distribution of sectors. When it came to deal values, utilities and transportation/distribution were the dominant sectors in 2017, although 2018 saw a wider distribution of sectors.[108]

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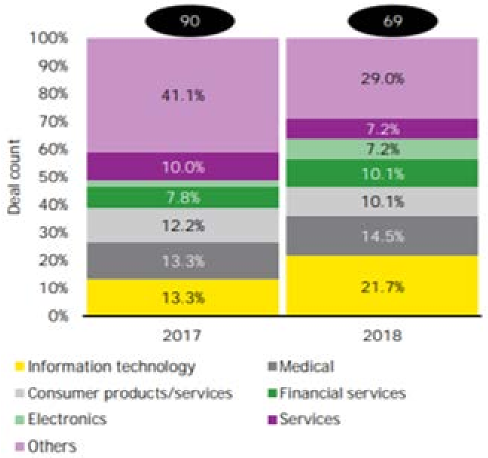
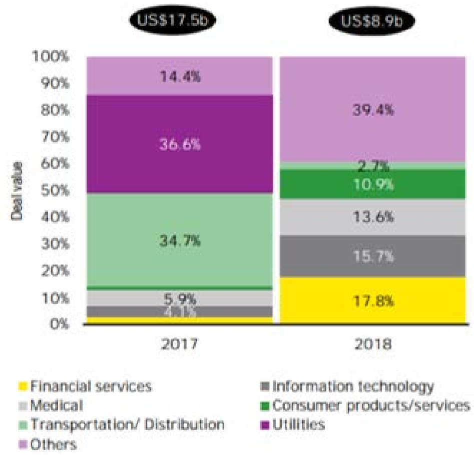
[104] According to a report from The Research Company, published January 2019: https://www.thebusinessresearchcompany.com/report/financial-services-global-market-report Accessed: 15/08/2019
[105] According to EY's Private Equity Briefing: Southeast Asia, May 2019: https://www.ey.com/sg/en/industries/private-equity/ey-private-equity-briefing-southeast-asia Accessed: 15/08/2019
[106] Ibid.
[107] Ibid.
[108] Ibid.

PE deal count by sector in Southeast Asia:



PE deal value by sector in Southeast Asia:



Source: EY's Private Equity Briefing: Southeast Asia, May 2019.

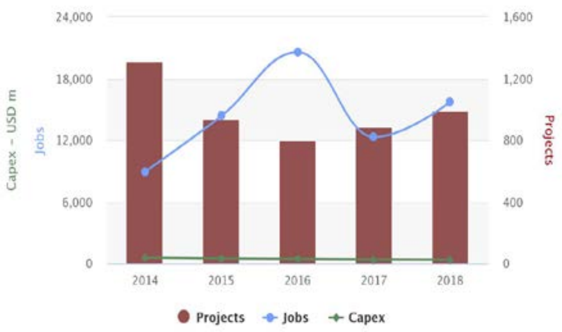
As key sectors such as FinTech, E-Commerce and others continue to grow in Indonesia, the opportunities for VC, PE and other investment firms – and the benefits they can bring to Indonesia's start-up and broader entrepreneurial landscape – look set to continue.

Meanwhile, the insurance sector, while offering plenty of opportunities for growth in tandem with Indonesia's growing economy and expanding middle class consumer base, nevertheless evokes concerns from some companies, including their ability to attract the right talent (with capacities to innovate and support product development), as well as challenges in the distribution channels that impair insurance companies' abilities to compete.[109] It is also felt by industry representatives that the substantial growth in digital and data-based tools which can help the industry grow is not being taken up as quickly as in other industries.[110] Despite these challenges, Indonesia's insurance sector continues to offer medium- to longer-term growth potential, with the average per capita insurance premium standing at 1.5m Rp. (around US$105) by mid-2018 – still a relatively low amount compared to figures in emerging peer markets in Southeast Asia.[111]

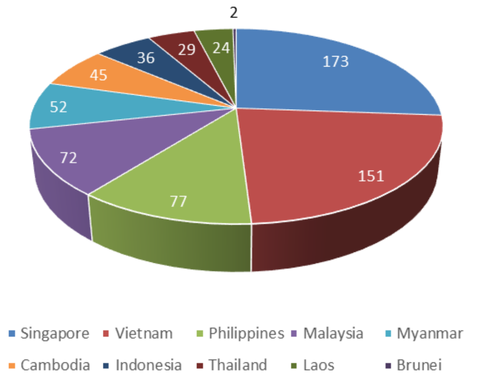
When it comes to FDI in the FS sector more broadly, the recent trends paint an encouraging picture overall, with announced greenfield projects at a global level having risen steadily since 2016 (although the global project count in 2018 was still lower than in 2014). In ASEAN, Singapore was the lead recipient of FDI projects between 2014-18, while Indonesia arguably punched below its weight, given it only came in seventh place regionally.[112]

[109] PwC's Insurance in Indonesia CFO Survey, February 2019: https://www.pwc.com/id/en/our%20services/financial-services/insurance-in-indonesia-2019-20feb.pdf Accessed: 15/08/2019
[110] Ibid.
[111] As reported by Indonesia Investments on 23/05/2018: https://www.indonesia-investments.com/finance/financial-columns/indonesia-caps-foreign-ownership-in-insurance-companies-at-80/item8812? Accessed: 15/08/2019
[112] fDi Markets database (Financial Times Ltd.)

Global FDI, Financial Services, 2014-18:



Financial Services Projects, ASEAN, 2014-18:



Source: fDi Markets database (Financial Times Ltd.)

While access to finance has broadly improved in Indonesia, as recognised in the World Bank's 2019 Doing Business report, SMEs in particular, along with promising start-ups, still struggle to access much-needed capital. The FS sector will therefore continue to offer both significant opportunities for investors, and important benefits for domestic businesses in Indonesia.

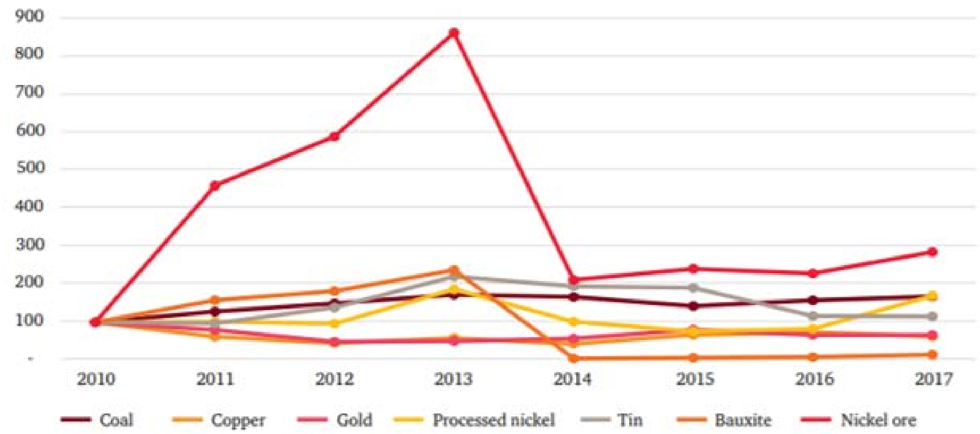
XVI. Downstream Minerals Processing

As with other commodities industries, the mining sector is often unpredictable and at times volatile. The global mining sector has recently been witnessing a recovery, with rising commodity prices, following a difficult few years of market downturn and commodity price volatility. And yet as the industry recovers, experts point to some key trends which will shape the sector's future prospects, including automation, digital innovation and big data.

Indonesia has some of the world's most important mineral reserves, including copper, gold, tin, bauxite, and nickel. The country is the world's largest nickel producer, the second-largest tin producer (with roughly one third of the world's total production), the fifth-largest coal producer and the sixth-largest gold producer.

In terms of year-on-year production, there have been some encouraging trends in recent years, with production levels of nickel ore, processed nickel, coal and bauxite all seeing an increase between 2016 and 2017.

Indonesia's mineral production trends (base year, 2010 = 100):

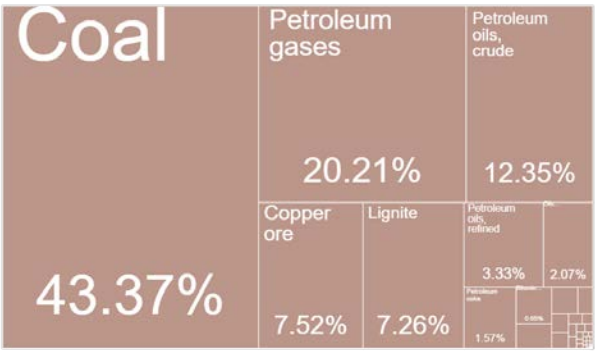


PwC's Mining in Indonesia Report 2018, using data from Indonesia Coal Mining Association, U.S. Geological Survey, plus PwC Analysis.

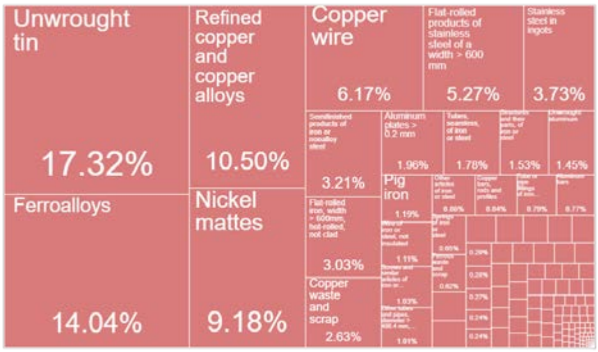
The collective value of the "metal ore mining" and "other mining and quarrying" subsectors stood at 337.5tn Rp. (US$23.7bn) in 2018[113], or roughly 2.3 percent of Indonesia's GDP that year. This represents a notable increase in the industry's value compared with the turbulent period a few years ago (in 2014, the two subsectors had a collective value of 269.8tn Rp. (US$18.9bn).[114] The industry also has a track record of being a significant employer: as of 2015, more than 1.12m people were employed in "basic metals" manufacturing and "other non-metallic mineral products".[115]

With such vast mineral resources and an industry that plays an important role in the country's economy, the GoI understandably seeks to support its further development and sophistication through downstream activities such as smelting and other processing activities.

Indonesia's minerals exports breakdown, 2017:



Indonesia's metals exports breakdown, 2017:



Source: Harvard's Atlas of Economic Complexity

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[113] BPS Statistics via Bank Indonesia, accessed: 05/08/2019. Op. Cit.

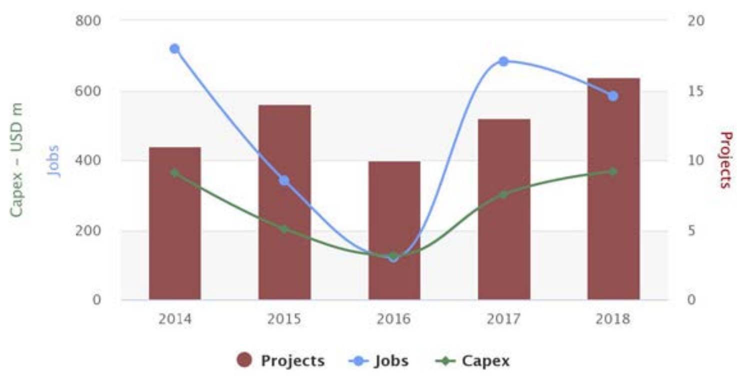
[114] Ibid.

[115] Data from BPS. Op. Cit. For the two subsectors, there were 865,800 workers in micro and small enterprises, and 255,000 employees in medium and large enterprises.

The 2009 Law on Mining and Coal Mining established the overarching legal framework for the sector, with subsequent regulations stipulating the need for investors to process minerals within Indonesia and banning unprocessed ore exports (the latter was announced in 2014 and has since been relaxed to a degree). Following the 2014 ban, there was some FDI in developing smelters, in return for which companies were permitted to continue exporting concentrates, as long as they also paid increased export duties. The export restrictions were relaxed in early 2017 – a move which has received a mixed response from investors: on the one hand, there have been stakeholders who feel that such policy U-turns undermine confidence in Indonesia's regulatory stability and consistency, and is particularly unfortunate for those firms that invested heavily in developing smelters and related facilities. On the other hand, some corporate stakeholders believe the easing of export restrictions should inject a new lease of life into the industry in some key parts of the country, such as Kalimantan and Sumatera.

At a global FDI level, there would appear to be plenty to play for, with announced greenfield FDI projects in minerals 'manufacturing' (i.e. processing), and their estimated total CapEx, rising steadily since 2016. Within ASEAN, the number of announced projects captured by fDi Markets has been limited since 2014, although it is important to note that of the projects announced, Indonesia was not the dominant recipient country (despite its vast mineral resources). Vietnam, Malaysia and the Philippines have also had announced FDI projects since 2014.

Global FDI, Minerals Processing*, 2014-18:



*Source: fDi Markets database (Financial Times Ltd.) * the activity filter used was 'manufacturing.'*

Despite the opportunities offered by the downstream mining sector, the key concerns for investors in Indonesia remain regulatory uncertainties and the lack of coordination between central and regional governments, according to PwC's Advisor for Energy, Utilities and Mining.[116] In May 2019, the Ministry of Energy and Mineral Resources (MEMR) temporarily revoked the export permits of five mining firms on the ground that they had failed to demonstrate any progress in developing

[116] According to PwC's Sacha Winzenried, speaking to Oxford Business Group for its *Indonesia 2018* report. Op. Cit.

smelters.[117] Such cases, while arguably justified given the prevailing regulations, nevertheless sound the alarm for other minerals companies considering downstream processing activities in the country.

[117] As reported in The Jakarta Post on 07/05/2019: https://www.thejakartapost.com/news/2019/05/07/indonesia-temporarily-revokes-export-permits-of-five-mining-companies.html Accessed: 16/08/2019

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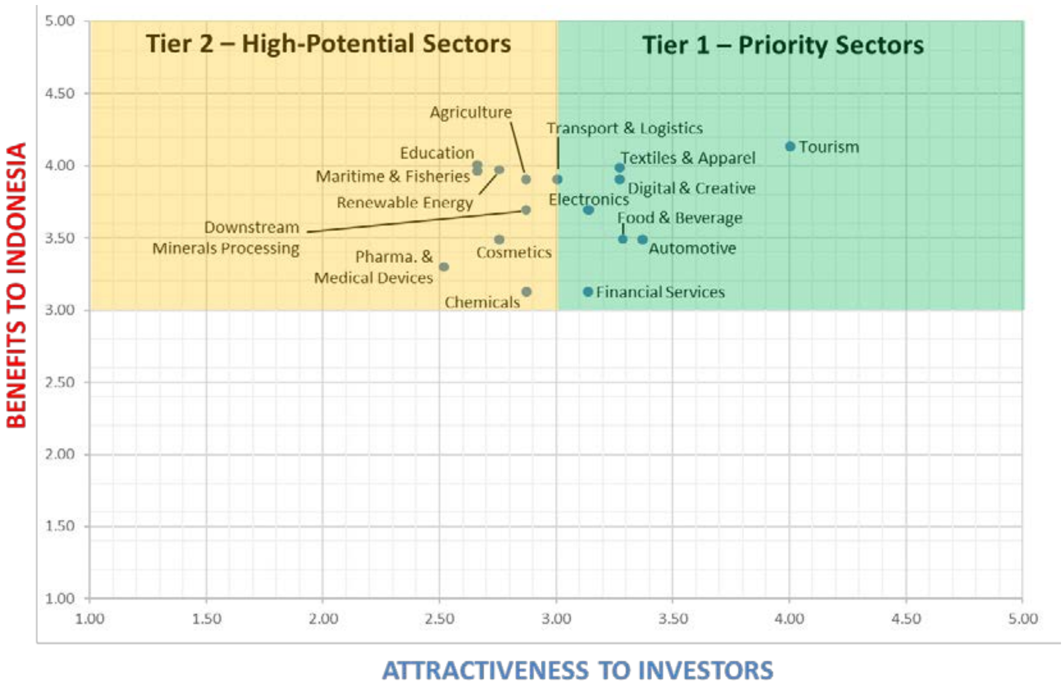
4. Sector Prioritisation Study results and scorecards

As referenced in section 2 of this report on the SPS approach and methodology, each of the sixteen sectors were assessed in detail, using a combination of quantitative and qualitative inputs and insights. In addition to the narrative profiles outlined in the previous section, two scorecards were developed for each of the sectors – one for 'benefits to Indonesia', the other for 'attractiveness to investors'.

The scorecards are structured so as to give observations and evidence for each of the factors being assessed and scored. Given that each of the factors have equal weightings for the purpose of this study, the averages for the two sets of factors were taken to establish two overall scores per sector: one for 'benefits to Indonesia' and one for 'attractiveness to investors.'

An average score of 3 or higher on benefits to Indonesia ensured that sector was in the upper half of the SPS quadrant, while an average score of 3 or higher on attractiveness to investors ensured that sector was in the right half of the quadrant.

As can be seen in the SPS results quadrant below, a total of eight sectors had an average score of 3 or higher for both the benefits and attractiveness dimensions, meaning that they qualified for classification as a tier one priority sector. The remaining eight sectors all had an average benefits score of 3 or higher, yet their attractiveness scores were below 3, meaning that they were classified as tier 2 high-potential sectors.



While the SPS quadrant clearly maps out the overall results of the sixteen sectors, the following heatmap provides a more in-depth visualisation which shows the respective strengths and weaknesses both of each sector, as well as each factor that was assessed. This section then provides the detailed scorecards for each of the sectors.

	BENEFITS FACTORS: Contribution to Economic Growth	Sustaining / creating employment	Employment for women	Knowledge / technology transfer	Potential for domestic linkages	Boosting exports	BENEFITS SCORE	ATTRACTIVENESS FACTORS: Domestic / international market potential	Labor & skills	Market access	Regulatory environment	Existing capabilities	Local inputs	Infrastructure	Fiscal regime	ATTRACTIVENESS SCORE
Tourism	3	4	5	4	5	4	4.17	5	3	4	4	5	5	3	3	4.00
Food & Beverage	3	4	3	4	4	3	3.50	4	4	3	2	4	4	2	3	3.25
Textiles & Apparel	3	4	4	4	4	5	4.00	4	4	4	2	4	2	3	3	3.25
Automotive	3	3	2	4	5	4	3.50	4	2	3	3	4	4	3	4	3.38
Electronics	3	3	4	4	4	4	3.67	4	3	3	2	3	3	3	4	3.13
Transport & Logistics	4	4	3	4	4	4	3.83	4	3	3	2	4	3	3	2	3.00
Financial Services	3	3	3	4	3	3	3.17	4	3	3	3	3	3	2	4	3.13
Digital & Creative	4	4	4	4	4	3	3.83	5	3	4	2	3	3	2	4	3.25
Agriculture	4	4	3	4	4	4	3.83	4	3	2	2	3	4	2	3	2.88
Chemicals	3	3	2	4	3	4	3.17	3	3	4	2	3	3	2	4	3.00
Renewable Energy	5	4	3	4	4	4	4.00	4	2	2	2	3	4	2	3	2.75
Maritime & Fisheries	4	4	4	4	4	4	4.00	4	2	3	2	3	3	1	3	2.63
Pharmaceuticals & Medical Devices	3	3	2	4	4	4	3.33	4	2	2	2	2	2	2	4	2.50
Cosmetics	4	3	4	4	3	3	3.50	4	2	4	2	2	2	3	3	2.75
Education	4	4	4	5	4	3	4.00	5	2	2	2	3	2	3	2	2.63
Downstream Minerals Processing	4	4	2	4	4	4	3.67	3	2	4	2	3	4	2	3	2.88

A. Tourism

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Direct contribution to GDP in 2017 was 1.9 percent – expected to reach 2.1 percent by 2028.[118] Total contribution to GDP (including indirect) was 5.8 percent in 2017 – expected to reach 6.6 percent of GDP by 2028.[119]	3
Sustaining / creating employment	The T&T industry **directly employed** 4.58 million people in Indonesia in 2017 (3.7 percent of total employment). By By 2028, the number of direct jobs is forecast to rise to 6.26 million (4.2 percent of total employment).[120] In terms of **total employment (including indirect employment)**, the T&T industry supported 12.24 million jobs in 2017 (10 percent of total employment). By 2028, the total number of jobs supported by the industry is expected to grow to nearly 17 million jobs (11.4 percent of total employment).[121]	4
Employment for women (direct / indirect)	As of 2017, close to 50 percent of workers in Indonesia's T&T industry were women. This is higher than the overall representation of women in Indonesia's workforce (just under 40 percent).[122] More than half of the tourism enterprises in Indonesia are run by women.[123]	5
Knowledge / technology transfer	FDI in hotel and resort development for the mid-range market and above can help to bring international best practices, hotel management standards and operational techniques across the hotel's various functions, and help to improve the	4

[118] World Travel & Tourism Council: Travel & Tourism Economic Impact Indonesia 2018. Op. Cit.
[119] Ibid.
[120] Ibid.
[121] Ibid.
[122] World Travel & Tourism Council: Driving Women's Success, March 2019: https://www.wttc.org/-/media/files/reports/2019/driving-womens-success-2019.pdf
[123] Ibid.

	productivity, skillsets and overall efficiency of a hotel's staff at multiple levels. Given a reported lack of quality skillsets in some areas of hotels and hospitality (e.g. food and beverage service), more foreign investment in such mid-range hotel operations, coupled with a greater domestic drive on tourism and hospitality schooling, could help to raise industry standards.	
Potential for domestic linkages	There is substantial potential for FDI in tourism enterprises (especially hotels and resorts) to benefit domestic tourism businesses right across the value chain, including small family-run businesses (e.g. shops, restaurants, tour guides, transport providers etc.), tourist attractions, as well as domestic businesses in related sectors (e.g. agribusiness, catering etc.).	5
Boosting exports	In 2017, Indonesia generated 192.6bn Rp. in visitor exports. By 2028, visitor exports are expected to nearly double – reaching more than 370bn Rp.[124]	4
	OVERALL BENEFITS SCORE:	**4.17**

ATTRACTIVENESS TO INVESTORS		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Domestic and international market potential	Indonesia's T&T market is forecast to grow by 6.1 percent per annum from 2018-2028, with a predicted total value of 494tn Rp. (US$37bn) by 2028.[125] T&T is a high-growth sector for global FDI: in 2018, 'hotels and tourism' was the leading sector for year-on-year growth in announced greenfield FDI project numbers (a 120 percent increase on 2017).[126]	5
Labour and skills	In terms of quantity, there's plenty of semi-skilled and lower-skilled labour to support the industry. There are some competitive weaknesses in terms of labour quality and efficiency, however – particularly at management level, with the issue of the 'best and	3

[124] World Travel & Tourism Council: Travel & Tourism Economic Impact Indonesia 2018. Op. Cit.
[125] Ibid.
[126] fDi Markets database (Financial Times Ltd.)

	brightest' often being lured to better-paid positions in other markets such as the Middle East, according to one industry stakeholder. In the World Economic Forum (WEF) 2017 Travel and Tourism Competitiveness Report (TTCR), Indonesia ranked 64th globally on the 'human resources and labour market' pillar. This is significantly behind some ASEAN competitors such as Malaysia (which ranked 22nd), Vietnam (37th), Thailand (40th) and Philippines (50th).[127]	
Market access	The current DNI is broadly more favourable towards tourism FDI: several activities are open 100 percent, such as hotels (3-stars and above) restaurants, bars, cafes and sports centers. Other subsectors are partially open to FDI. FDI minimum capital requirement rules (i.e. 10bn Rp, with 2.5bn Rp in paid-up capital, in each province where there's an operation) present a challenge for some smaller-scale foreign investors, however.	4
Regulatory environment	Broadly, the regulatory environment has been highly conducive to attracting more tourism, and by extension is favourable to investment too (e.g. Presidential Regulation no.21/2016 on Exemptions of Visit Visa, which raised the total number of visa-free countries to 169.) Industry stakeholders have reported that hotel owners sometimes struggle to obtain or renew key licenses and permits.	4
Existing capabilities (including potential partners)	A strong and fast-growing **domestic investor base** in the T&T industry: DDI in 'hotels and restaurants' grew nearly fivefold between 2016 and 2018, rising from 1.56tn Rp. in 2016, to 9.1tn Rp. in 2018.[128]	5
Local inputs (resources, products, services)	Natural tourism assets and 'resources' abound throughout the archipelago. In many of the priority development destinations identified by the GoI (including the '10 new Balis') there's sufficient food products, handicrafts and other products, although in some cases (but by no means all) these – along with some services –	5

[127] WEF's Travel & Tourism Competitiveness Report 2017. Op. Cit.
[128] BKPM Investment Realization Reports: 2016, 2017 and 2018. Op. Cit.

	have yet to reach high-level international standards (e.g. boat transfers, ground transportation service providers etc.)	
Infrastructure (transport, utilities, sites)	A mixed picture: GoI's drive to develop new airports and upgrade existing ones across the country has vastly improved flight connectivity. Indonesia now ranks 36th globally for air transport infrastructure. This is still behind Thailand (20th) and Malaysia (21st) but well ahead of Vietnam (61st) and Philippines (65th).[129] When it comes to ground and sea transportation however, the picture is more challenging. Indonesia ranks 69th globally for ground and port infrastructure – which is far behind neighbouring Malaysia (34th) and Singapore (2nd).[130]	3
Fiscal regime (including any incentives)	Indonesia's Import duty facility (which provides a two-year exemption) includes the tourism sector.	3
	OVERALL ATTRACTIVENESS SCORE:	**4.00**

B. Food & Beverage

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	In 2018, the food & beverage (F&B) industry contributed 6.25 percent to Indonesia's GDP, up slightly from the 6.14 percent GDP contribution in 2017.[131] However, BKPM's data reveals that FDI in the food industry totalled US$1.3bn in 2018[132], representing a significant decline on realisation figures from 2016 and 2017, which were US$2.1bn and US$1.97bn respectively.[133]	3

[129] WEF's Travel & Tourism Competitiveness Report 2017. Op. Cit.
[130] Ibid.
[131] As cited in The Jakarta Post on 02/07/2019. Op. Cit.
[132] BKPM's 'FDI Realisation based on Sector', January-December 2018. Op. Cit.
[133] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017.

Sustaining / creating employment	Medium and large food and beverage companies alone employed more than 918,000 people in 2015, representing a 27 percent rise over 8 years (722,000 employees were registered back in 2008).[134]	4
Employment for women (direct / indirect)	Lack of statistical evidence on employment for women in the sector in Indonesia. However, at a global level, research from McKinsey has found that the F&B industry relatively more balanced in terms of gender composition.[135] However, fewer women tend to make it to more senior managerial levels within the industry.	3
Knowledge / technology transfer	Foreign investors have a strong track record in supporting innovation in the sector in Indonesia (including R&D). Companies such as Givaudan, Tetra Pak, Unilever and others all have knowledge-intensive operations in Indonesia. FDI in F&B can make an important contribution to the 'Making Indonesia 4.0' agenda.	4
Potential for domestic linkages	Positive track record of track record of foreign investors such as Frisian Flag, Unilever and others working with local suppliers to enhance skills for agricultural product supplies.	4
Boosting exports	Indonesia's F&B exports totalled US$29.9bn in 2018, compared with US$31.8bn in 2017.[136] GAPMMI's Chairman has stated that foreign standards and safety requirements limited export levels. FDI in the sector can help to address such challenges, however.	3
	OVERALL BENEFITS SCORE:	**3.50**

[134] BPS data: www.bps.go.id Accessed on: 01/07/2019
[135] As reported in The Jakarta Post on 20/04/2018: https://www.thejakartapost.com/life/2018/04/20/companies-strive-to-help-women-break-glass-ceiling.html Accessed: 19/08/2019
[136] As reported in The Jakarta Post on 23/02/2019 :https://www.thejakartapost.com/news/2019/02/23/indonesia-seeks-boost-food-beverage-exports.html Accessed: 19/08/2019

ATTRACTIVENESS TO INVESTORS		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Domestic and international market potential	Asia-Pacific is currently the number one region globally for expected growth in multiple food and beverage markets, and by 2030 is expected to be the world's biggest market for food and beverage consumption.[137] Indonesians' average monthly consumption of food and beverage goods has increased by 56 percent over the past six years, from 356,435 Rp. in 2013 to 556,899 Rp. in 2018.[138]	4
Labour and skills	No major issues identified in terms of workforce availability. Benchmarking data on F&B manufacturing costs reveals that Indonesia has the second-lowest collective labour costs among the ASEAN-5 for a typical F&B manufacturing facility.[139]	4
Market access	F&B manufacturing generally doesn't have foreign ownership limitations (with a few exceptions – e.g. alcohol, food crop cultivation). F&B retail is currently fully closed for FDI.	3
Regulatory environment	Halal Law – investor concerns around the implementation plan and timing vs. the government's infrastructure readiness in terms of testing and certification Local content requirements and import restrictions cause numerous problems for foreign investors in the sector: industrial salt import restrictions and requirements; inconsistencies and unpredictability of import rules and quotas on other key products – e.g. sugar and maize.	2
Existing capabilities (including potential partners)	A large and growing domestic industry, with a wealth of potential partners. As of 2015, BPS had registered more than 6,800 large and medium-sized F&B companies.[140]	4

[137] According to the Gulfood Global Industry Outlook Report 2019 by Euromonitor, as reported by Food Navigator Asia. Op. Cit.
[138] BPS data: www.bps.go.id Accessed on: 01/07/2019
[139] fDi Benchmark database (Financial Times Ltd.) The 'ASEAN-5' comprised: Indonesia, Malaysia, Thailand, Vietnam and The Philippines. Only Vietnam's labour costs were lower.
[140] BPS data: www.bps.go.id Accessed on: 19/08/2019

	Domestic investment has increased significantly in the past few years: in 2016, DDI in the food industry totaled 32tn Rp. In 2017, it shot up to 38.5tn Rp., while in 2018 it increased very modestly to 39tn Rp.[141]	
Local inputs (resources, products, services)	Indonesia has an abundance of many agricultural products to support the F&B manufacturing industry (CPO, cocoa, coffee, rice, tropical spices etc.)	4
Infrastructure (transport, utilities, sites)	Lack of available sites beyond Java reported by investors. Industrial estates are often a preferred option (to avoid land disputes or issues of unavailability outside estates), but there are reportedly not enough estates beyond Java. Indonesia ranks 71st globally for infrastructure in WEF's 2018 GCR, with delays to transporting goods a particular issue for the F&B industry (given that perishable products represent a core input group.)	2
Fiscal regime (including any incentives)	F&B manufacturers can (and do) benefit from incentives under the SEZ program, which offers tax reductions of between 20-100 percent for periods of up to 25 years. Raw material imports are also exempt from VAT.	3
	OVERALL ATTRACTIVENESS SCORE:	**3.25**

C. Chemicals

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Indonesia's chemicals market had total revenues of US$19.3bn in 2017, representing a compound annual growth rate (CAGR) of 3 percent between 2013 and 2017.[142]	3

[141] BKPM Investment Realization Reports: 2016, 2017 and 2018. Op. Cit.
[142] As reported by MarketResearch.com in October 2018: https://www.marketresearch.com/MarketLine-v3883/Chemicals-Indonesia-11980074/

Sustaining / creating employment	The number of workers in medium and large chemicals businesses (including foreign or partially foreign-owned businesses) increased by 28% from 2008-2015 (reaching more than 193,600 workers in 2015.[143]	3
Employment for women (direct / indirect)	Limited evidence that the chemicals industry is either a large or growing source of employment for women in Indonesia: as of 2018, just 16.5 percent of Indonesian female workers were employed in the industrial cluster.[144]	2
Knowledge / technology transfer	FDI can bring international best practices and standards to chemicals manufacturing. Companies such as BASF, Clariant and DuPont have either R&D or other knowledge- and technology-intensive operations and initiatives in Indonesia, either through their own businesses or in collaboration with Indonesian universities	4
Potential for domestic linkages	Foreign chemicals companies are encouraged (and in some cases required) to procure materials, goods and services from local domestic suppliers.	3
Boosting exports	Exports of chemicals (organic and inorganic) rose from US$2.7bn to US$4bn between 2015 and 2018.[145]	4
	OVERALL BENEFITS SCORE:	**3.17**

ATTRACTIVENESS TO INVESTORS		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Domestic and international market potential	The Asian market now accounts for almost half of all global chemical sales.[146] Indonesia's imports of chemicals (organic and inorganic) rose from US$7.3bn in 2015 to US$9bn in 2018.[147]	3

143 BPS data: www.bps.go.id Accessed on: 01/07/2019

144 World Bank Open Data: https://data.worldbank.org/indicator/SL.IND.EMPL.FE.ZS?locations=ID Accessed: 19/08/2019

145 UN Comtrade data portal. Op. Cit.

146 EuroCham Indonesia's 2019 Position Paper on Chemicals. Op. Cit.

147 UN Comtrade data portal. Op. Cit.

Labour and skills	Growing chemicals workforce, which as of 2015 comprised more than 257,000 workers (more than 193,600 employees in medium and large enterprises, and more than 63,800 workers in small and micro-sized chemicals enterprises.) Benchmarking data on chemicals manufacturing costs reveals that Indonesia has the second-lowest collective labour costs among the ASEAN-5 for a typical chemicals plant.[148] However, there are reports of persistent skills gaps and shortages in areas such as chemical engineering.	2
Market access	Chemicals manufacturing doesn't generally have any foreign ownership limitations.	4
Regulatory environment	Some industry concerns around the regulations / draft regulations on Hazardous Substances ("B2") and Hazardous and Toxic Substances ("B3"), with calls for streamlined and efficient implementation measures Halal Law – concerns that it will affect chemicals manufacturers by presenting technical barriers and is already causing foreign investors to reconsider their operations	2
Existing capabilities (including potential partners)	As of 2015, there were 1,075 medium and large-sized chemicals firms registered in Indonesia.[149] As of 2016, the chemicals sector represented 13 percent of Indonesia's total manufacturing value added. In Malaysia it was 10 percent; the Philippines 7 percent; Vietnam only 5 percent, while in Singapore it was 27 percent.[150]	3
Local inputs (resources, products, services)	Abundant raw materials such as palm oil and rubber support Indonesia's chemicals industry. However, a lack of domestically produced intermediary chemicals inputs means an ongoing high reliance on imports.	3
Infrastructure (transport, utilities, sites)	Indonesia ranks 71st globally for infrastructure in WEF's 2018 GCR. While this is an improvement on previous rankings, it's still significantly behind Singapore (1st),	2

[148] fDi Benchmark database (Financial Times Ltd.) The 'ASEAN-5' comprised: Indonesia, Malaysia, Thailand, Vietnam and The Philippines. Only Vietnam's labour costs were lower.
[149] BPS data: www.bps.go.id Accessed on: 19/08/2019
[150] World Bank's World Development Indicators (WDI): http://wdi.worldbank.org/table/4.3 Accessed: 19/08/2019

	Malaysia (32nd), Thailand (60th), although ahead of Vietnam (75th) and the Philippines (92nd).	
Fiscal regime (including any incentives)	Regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded to cover 18 'pioneer' industries (including: organic and inorganic base chemical industries and the petrochemical industry). The tax holiday period ranges from 5-20 years, depending on the size of the investment.	4
	OVERALL ATTRACTIVENESS SCORE:	**3.00**

D. Textiles & Apparel

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	In 2017, the industry's growth rate was just 3.8 percent[151] (below the country's overall GDP growth of 5.1 percent that year), while in 2018 the growth rate soared to 8.73 percent. In 2018, the industry was worth 168.5tn Rp (US$11.8bn), or 1.1 percent of total GDP. [152]	3
Sustaining / creating employment	As of 2015, there were an estimated 2.37 million employees in textiles and apparel enterprises across Indonesia – with 1.2 million employees in medium and large-scale enterprises, and 1.17 million employees in micro and small-sized businesses.[153]	4

[151] BPS data: www.bps.go.id Accessed on: 28/06/2019
[152] Ibid.
[153] Ibid.

	However, a 2016 ILO study on ASEAN found that more than 60 percent of salaried jobs multiple sectors – including in textiles and clothing – are at threat and possibly could be lost to automation.[154]	
Employment for women (direct / indirect)	In September 2017, the ILO reported that the female share of employment in the industry is falling in Indonesia. Nevertheless, women constitute the majority of the industry's workforce (58 percent as of 2017). At the same time, wages in the industry continue to rise, and more so for women than men.[155]	4
Knowledge / technology transfer	High-tech and innovative companies such as vertically-integrated textiles and garment manufacturers Sritex and others have been identified as potential to support the development of Indonesia's Industry 4.0 roadmap in textiles and apparel. The Ministry of Industry is reportedly working with more than 860 firms on a link and match programme to partner with vocational schools to provide knowledge transfer, curriculum advice, and apprenticeships.[156]	4
Potential for domestic linkages	Foreign investors work with a wide range of domestic firms in the upstream and midstream segments of the value chain (including fibre-making, spinning, weaving, knitting, dyeing etc.)	4
Boosting exports	In 2018, the sector was one of the country's largest earners of foreign exchange, with exports valued at US$13bn – a 5 percent increase on 2017.[157] The Indonesian Textile Association (API) estimates the value of Indonesian textile exports can reach Rp 444 trillion (US$31bn) by 2025.[158]	5
	OVERALL BENEFITS SCORE:	**4.00**

[154] ILO's Indonesia Jobs Outlook 2017: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/publication/wcms_613628.pdf Accessed: 20/08/2019.
[155] ILO's Indonesia Garment and Footwear Sector Bulletin, September 2017: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/publication/wcms_625195.pdf Accessed: 20/08/2019
[156] EuroCham study: Transforming Indonesia's Economy toward Industry 4.0. Published July 2019.
[157] As cited in The Jakarta Globe on 24/06/2019: https://jakartaglobe.id/context/textile-indonesias-new-export-darling
[158] As cited in The Jakarta Globe on 29/03/2019: https://jakartaglobe.id/context/apr-plots-indonesian-viscoserayon-to-take-over-world-fashion/

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	By 2025, the global textile market size is projected to be worth US$1.23tn, expanding at a CAGR of 4.24 percent, according to a study by Grand View Research, with Asia Pacific set to register the highest CAGR.[159] In Indonesia, the growth of the textile and apparel industry was the highest recorded in the first quarter of 2019, at just under 19 percent.[160]	4
Labour and skills	Indonesia's labour productivity (defined as GVA per employee) has been ranked higher than competing countries such as Vietnam India, Vietnam, Cambodia and Pakistan, yet lower than Thailand and the Philippines.[161] Around 70 percent of Indonesian workers in the industry are secondary school-educated or higher, compared with just 37 percent in Vietnam.[162] Benchmarking data on textiles manufacturing costs reveals that Indonesia has the lowest collective labour costs among the ASEAN-5 for a typical textiles manufacturing plant.[163]	4
Market access	Textiles and apparel manufacturing don't generally have any foreign ownership limitations. However, textile retail investment and textile machine rental investment are currently reserved solely for domestic businesses.	4
Regulatory environment	Investors in the sector cite a few challenges, including environmental standards (for example in relation to landfills) which are considered to be below those they expect and, in many cases, adhere to internationally.	2

[159] Grand View Research, April 2019: https://www.grandviewresearch.com/press-release/global-textile-market
[160] Based on data from Indonesia's Ministry of Industry, cited by Antara News: https://en.antaranews.com/news/125328/indonesias-textile-and-clothing-industrys-growth-reaches-18-percent Accessed: 20/08/2019
[161] Cited by the ILO's Indonesia Garment and Footwear Sector Bulletin, September 2017. Op. Cit. Using World Bank WDI data.
[162] Ibid.
[163] fDi Benchmark database (Financial Times Ltd.) The 'ASEAN-5' comprised: Indonesia, Malaysia, Thailand, Vietnam and The Philippines. Across ASEAN, only Myanmar's labour costs were lower.

Existing capabilities (including potential partners)	As of 2015, there were 4,972 medium- and large-sized companies and 538,656 micro- and small-sized companies in the textiles and apparel sector.[164] DDI in the textiles and leather goods & footwear industries shot up from 3.28tn Rp. in 2016, to 8.06tn Rp. in 2017, before dropping down to 3.88tn Rp. in 2018.[165]	4
Local inputs (resources, products, services)	There's a wide range of domestic firms active in the upstream and midstream segments of the value chain (including fibre-making, spinning, weaving, knitting, dyeing, printing, finishing etc.) However, investors have raised concerns about using domestic suppliers subcontracting work to factories which do not comply with legal labour standards.	2
Infrastructure (transport, utilities, sites)	In July 2019, the GoI gave the green light for new industrial SEZs to be developed on Java to support priority industries – including textiles.[166]	3
Fiscal regime (including any incentives)	Textiles and garments investors potentially qualify for tax allowances of up to 30 percent of the investment value (5 percent reduction per year, over 6 years).	3
	OVERALL ATTRACTIVENESS SCORE:	**3.25**

E. Automotive

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	In 2018, 'transport equipment manufacturing' was valued at 261tn Rp. (US$18.3bn), up from 247tn Rp. (US$17.3bn) in 2017 and 236tn Rp. (US$16.5bn) in 2016.[167]	3

[164] BPS data: www.bps.go.id Accessed on: 28/06/2019
[165] BKPM Investment Realization Reports: 2016, 2017 and 2018. Op. Cit.
[166] As reported by The Jakarta Post on 23/07/2019: https://www.thejakartapost.com/news/2019/07/23/govt-to-allow-java-to-add-more-special-economic-zones-for-industry.html Accessed: 20/08/2019
[167] BPS Statistics via Bank Indonesia, accessed: 05/08/2019: https://www.bi.go.id/seki/tabel/TABEL7_1.pdf

Sustaining / creating employment	The automotive industry directly employs around 350,000 workers.[168] However, a 2016 ILO study on ASEAN found that more than 60 percent of salaried jobs in automotive and some other manufacturing sectors are at threat and possibly could be lost to automation.[169]	3
Employment for women (direct / indirect)	Limited evidence that the automotive industry is either a large or growing source of employment for women in Indonesia: as of 2018, just 16.5 percent of Indonesian female workers were employed in the industrial cluster.[170]	2
Knowledge / technology transfer	Foreign investors in the automotive sector (e.g. Toyota) have already been identified by the MoI as having the potential to transfer knowledge and technology with players in the Indonesian automotive sector as part of the Industry 4.0 programme.	4
Potential for domestic linkages	Numerous Indonesian MSMEs already operate (or have operated) as contract manufacturers to local and foreign companies in the automotive sector (e.g. PT Cipta Kreasi Prima Muda, PT Eka Swastya, PT Muarateweh Spring, PT Srirejeki Perdana Steel and numerous others).[171] Such linkages look set to continue.	5
Boosting exports	Indonesia's total exports of vehicles totalled US$7.77bn in 2017, increasing from US$6.41bn 3 years earlier (in 2014).[172]	4
	OVERALL BENEFITS SCORE:	**3.50**

[168] As cited in EuroCham Indonesia's 2019 Position Paper on Automotive. Op. Cit.
[169] ILO's Indonesia Jobs Outlook 2017. Op. Cit.
[170] World Bank Open Data: https://data.worldbank.org/indicator/SL.IND.EMPL.FE.ZS?locations=ID Accessed: 19/08/2019
[171] A more extensive list of Indonesian automotive parts MSMEs that supply foreign and domestic automotive companies can be found in UNCTAD's ASEAN Investment Report 2016: https://unctad.org/en/PublicationsLibrary/unctad_asean_air2016d1.pdf
[172] Harvard Atlas of Economic Complexity. Op. Cit.

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	Domestic demand automobiles and motorcycles is forecast to grow rapidly: as of 2016, only 4 percent of Indonesian households owned a car. By 2050, this figure is expected to rise to 30 percent.[173] Automotive wholesale and retail trade and repairs totalled 387tn Rp. (US$27bn) in 2018, up from 356tn Rp. (US$25bn) in 2017 and 335tn Rp. (US$23.4bn) in 2016.[174]	4
Labour and skills	As recently as 2016, APINDO reported that many automotive SMEs were operating only at half of optimal capacity due to a lack of skilled worker, with shortages of engineers, technicians, welders, cutters, mechanics and workers in components factories.[175]	2
Market access	Current DNI provisions restrict FDI in vehicle retail (currently reserved solely for domestic ownership), while automobile maintenance and repair is capped at 49% foreign ownership. Investments in two- and three-wheeled motor vehicle components and fittings businesses require partnerships with domestic companies.	3
Regulatory environment	The CO2 emissions-based tax scheme has been broadly welcomed by investors (especially from the EU) who believe it will create a more level playing field for cars across all categories (and thus more favourable than the current luxury tax scheme which favours MPVs)[176] Investors concerned that Indonesian National Standards (SNI) impose significant costs and time burdens on automotive businesses – particularly with products such as tyres, wheel rims, glass and lubricants.[177]	3

[173] As reported in Oxford Business Group's 2018 report on Indonesia. Op. Cit.
[174] BPS Statistics via Bank Indonesia. Op. Cit.
[175] As reported in The Jakarta Post on 01/11/2016: https://www.thejakartapost.com/news/2016/11/01/talent-shortage-casts-shadow-on-top-sectors.html Accessed: 20/08/2019
[176] As reported in EuroCham Indonesia's 2019 Position Paper on Automotive. Op. Cit.
[177] Ibid.

Existing capabilities (including potential partners)	In 2016, the number of vehicles produced stood at 129,000, while in 2017, the number reached 138,000 vehicles (a YOY growth of 7 percent).[178]	4
Local inputs (resources, products, services)	As of 2015, there were 412 medium- and large-sized companies and 2,366 micro- and small-sized companies in the 'motorized vehicles, trailers and semi-trailers' sector grouping.[179]	4
Infrastructure (transport, utilities, sites)	In July 2019, the GoI gave the green light for new industrial SEZs to be developed on Java to support priority industries – including automotive.[180] This can be seen as a welcome move, since the Indonesian Automotive Industry Association (GAIKINDO) recently noted that that it has become difficult to find large-sized land for new factories east of Jakarta due to the influx of many businesses over the past years. Land prices have also reportedly increased dramatically in recent years.[181]	3
Fiscal regime (including any incentives)	The automotive sector is among the 18 'pioneer' industries eligible for the latest tax holiday incentive, which ranges from 5-20 years, depending on the size of the investment. Investors consulted welcome this provision. However, industry representatives also hope this tax holiday will be extended to *existing* automotive investors that expand their investments.[182]	4
	OVERALL ATTRACTIVENESS SCORE:	**3.38**

[178] Ibid.
[179] BPS data: www.bps.go.id Accessed on: 28/06/2019
[180] As reported by The Jakarta Post on 23/07/2019. Op. Cit.
[181] As reported by Indonesia Investments on 02/04/2018: https://www.indonesia-investments.com/business/industries-sectors/automotive-industry/item6047? Accessed: 20/08/2019
[182] As reported in EuroCham Indonesia's 2019 Position Paper on Automotive. Op. Cit.

F. Electronics

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	In 2018, electronics manufacturing[183] was worth 257.7tn Rp. (US$18bn), or 1.7 percent of Indonesia's GDP that year. Year-on-year growth in the sector (1.9 percent) was lower than overall GDP growth, however.	3
Sustaining / creating employment	As of 2015, Indonesia's electronics-related workforce comprised more than 258,000 employees in medium- and large-scale enterprises manufacturing (i) electrical equipment and (ii) computers, electronics and optical products, plus a further 2,700 workers in micro- and small businesses in those two groupings. [184] However, a 2016 ILO study on ASEAN found that more than 60 percent of salaried jobs in electronics and some other manufacturing sectors are at threat and possibly could be lost to automation.[185]	3
Employment for women (direct / indirect)	According to a 2018 study, women constitute the majority of Indonesia's electronics sector workforce.[186]	4
Knowledge / technology transfer	Foreign investors in the electronics sector (e.g. Schneider Electric) have already been identified by the MoI as having the potential to transfer knowledge and technology with players in the Indonesian electronics sector as part of the Industry 4.0 programme.	4
Potential for domestic linkages	South Korean electronics companies have been referenced as contributing to the development of the electronics parts and components industry in ASEAN, although to date, Vietnam and its domestic firms have been the dominant beneficiaries of	4

[183] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit. 'Electronics' included under 'Fabricated Metal Products, Computers, Optical Products and Electronic Devices'
[184] BPS data: www.bps.go.id Accessed on: 28/06/2019
[185] ILO's Indonesia Jobs Outlook 2017. Op. Cit.
[186] Electronics Watch: Regional Risk Assessment, Electronics Industry, Indonesia. Published December 2018: http://electronicswatch.org/regional-risk-assessment-electronics-industry-indonesia-december-2018_2554862.pdf Accessed: 21/08/2019

	Korean electronics FDI, with Vietnam becoming a manufacturing hub for Korean electronics firms.[187]	
Boosting exports	In 2017, Indonesia's electronics exports totalled US$10.8bn – the second consecutive annual increase following a slump in 2015. Exports have yet to reach their 2011-2012 peak of US$13.1bn, however.[188]	4
	OVERALL BENEFITS SCORE:	**3.67**

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	In in 2018, global revenue in consumer electronics alone reached US$307bn – a 7.7 percent increase on the US$285bn achieved in 2017[189]. In Indonesia, the rate of increase in consumer electronics' revenue has been far higher than the global average, rising by close to 25 percent year-on-year, from US$1.7bn in 2017 to US$2.12bn in 2018[190], with predictions that revenue will grow to US$2.96bn by 2023.[191]	4
Labour and skills	Labour availability is broadly good at semi- and lower-skilled levels. Indonesia has the second lowest labour costs among the ASEAN-5 for a typical consumer electronics manufacturing plant, and the third lowest labour costs for a typical electronic components manufacturing plant.[192]	3
Market access	The electronics retail subsector remains fully closed to FDI. Manufacturing in the sector is open, however.	3

[187] UNCTAD's ASEAN Investment Report 2016. Op. Cit.
[188] Atlas of Economic Complexity, Harvard University's Center for International Development: http://atlas.cid.harvard.edu/
[189] Statista's Consumer Electronics Outlook. Op. Cit.
[190] Statista's Consumer Electronics Outlook for Indonesia, accessed on 05/08/2019: https://www.statista.com/outlook/251/120/consumer-electronics/indonesia
[191] Ibid.
[192] fDi Benchmark database (Financial Times Ltd.) The 'ASEAN-5' comprised: Indonesia, Malaysia, Thailand, Vietnam and The Philippines.

Regulatory environment	Local content requirements continue to pose challenges for some subsectors of the electronics industry (e.g. smartphones, laptops and tablets). Indonesia's SNI policy covers the electronics industry, reportedly imposing costs and time burdens on businesses in the sector.	2
Existing capabilities (including potential partners)	As of 2015, there were 365 medium- and large-sized companies in the 'electronic goods, computers and optical products' category.[193] The consumer electronics segment is broadly deemed to be the country's most developed electronics subsector, while the industrial electronics segment is developing (driven be an expanding telecommunications sector). The electronic components segment is still perceived as weaker and heavily reliant on imports.[194]	3
Local inputs (resources, products, services)	There were 306 micro- and small-sized companies in the 'electronic goods, computers and optical products' category as of 2015.[195]	3
Infrastructure (transport, utilities, sites)	Electronics manufacturing is currently heavily concentrated in a small number of locations (e.g. Batam, Bekasi, Depok and Surabaya), and while many of these clusters are well-developed and connected, site availability and costs tend to be high. In July 2019, the GoI gave the green light for new industrial SEZs to be developed on Java to support priority industries – including electronics.[196]	3
Fiscal regime (including any incentives)	Regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded and now covers 18 'pioneer' industries, including certain electronic components.[197] The tax holiday period ranges from 5-20 years, depending on the size of the investment.	4
	OVERALL ATTRACTIVENESS SCORE:	**3.13**

193 BPS data: www.bps.go.id Accessed on: 28/06/2019
194 Electronics Watch: Regional Risk Assessment, Electronics Industry, Indonesia. Op. Cit.
195 Ibid.
196 As reported by The Jakarta Post on 23/07/2019. Op. Cit.
197 Including: electronic and telematics devices main components (e.g. semiconductor wafers, backlight for liquid crystal displays, electrical drivers or displays), robotic components for engine manufacturing and components for electrical power generation engines.

G. Maritime & Fisheries

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Indonesia's fisheries industry has witnessed rapid growth in the past few years, more than doubling in just six years, from 184tn Rp. (US$12.9bn) in 2012, to 386tn Rp. (US$27bn) in 2018[198], representing 2.6 percent of the country's GDP.[199]	4
Sustaining / creating employment	As of 2015, 2.7 million Indonesians were formally employed in fisheries (with many more self-employed and informal workers in the industry)[200].	4
Employment for women (direct / indirect)	As of 2013, the agricultural and fisheries sector accounted for about 32.8 percent of total female informal employment.[201] FDI in the sector could potentially help to raise the level and quality of formal employment.	4
Knowledge / technology transfer	FDI can bring much-needed techniques and technologies in crucial areas such as cold storage, flash-freezing, vacuum packing and other areas.	4
Potential for domestic linkages	Fisheries processing investment, including export-oriented investment, could support a variety of local businesses across the value chain, including catching, aquaculture and distribution.	4
Boosting exports	Fisheries export levels have largely been stagnant in recent years, despite rapid growth in the overall value of the industry. From 2012-2018, Indonesia's exports of fish and prepared/processed fish products only increased by 19 percent, from US$3.16bn to US$3.77bn.[202] FDI in the sector could help improve Indonesia's export quality infrastructure and better access GVCs.	4
	OVERALL BENEFITS SCORE:	**4.00**

[198] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
[199] Based on Indonesia's GDP totalling US$1.042tn in 2018, as reported by the World Bank.
[200] According to the OECD Stat data: https://stats.oecd.org/Index.aspx?DataSetCode=FISH_EMPL
[201] Women's Economic Participation in Indonesia report, June 2017. Published by the Australia Indonesia Partnership for Economic Governance (AIPEG)
[202] UN Comtrade data portal. Op. Cit. HS codes 03 and 1604.

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	An FAO report from June 2019[203] found that trade tensions have been affecting markets this year, although tight supply is set to keep fisheries prices up. Ongoing US-China trade tensions potentially offer market opportunities for Indonesia – especially in large and high-potential sectors such as fisheries.	4
Labour and skills	Despite the large number of people working in the industry, there are many fishermen and other industry workers who are insufficiently skilled to meet the requirements and standards of the international fisheries market.	2
Market access	The current DNI enables foreign investors to own 100 percent of cold storage businesses (up from previous caps of 33 and 67 percent, depending on the location within Indonesia). Some areas (e.g. fishing) remain closed to FDI, however.	3
Regulatory environment	Regulatory restrictions such as the 100 gross tonnage (GT) limit for fishing vessels presents challenges for deep-sea fishing. Issues of non-compliance with food safety standards in some target export markets.	2
Existing capabilities (including potential partners)	In 2016, DDI in fisheries came to only 2.6bn Rp. (US$183,000) from 19 projects, compared with US$43.3m of FDI that year. In 2017, DDI rose substantially to 33bn Rp. (US$2.3m) from 30 projects, while in 2018, it reached 87.6bn Rp (US$6.1m) from 41 projects.	3
Local inputs (resources, products, services)	The national fish stock was estimated to be 7.3 million tonnes in 2015, increasing to 12.54 million tonnes in 2017[204] Indonesia is the world's leading producer of tuna.	3

[203] FAO's GLOBEFISH - Information and Analysis on World Fish Trade, published 25/06/2019: http://www.fao.org/in-action/globefish/market-reports/resource-detail/en/c/1199622/ Accessed: 21/08/2019
[204] As reported by Indonesia Expat on 21/07/2019: https://indonesiaexpat.biz/featured/national-fish-stock-increased-minister-sinks-over-500-fishing-vessels/ Accessed: 21/08/2019

	Despite the extensive stocks, there have been some major SPS issues (e.g. cases of salmonella contamination in tuna stocks which has led to instances of exports being refused by key importers such as the USA and Russia.[205])	
Infrastructure (transport, utilities, sites)	Lack of electricity and water supplies, plus key infrastructure (especially road access) remains an issue, particularly in Eastern Indonesia. Spatial planning at the subnational level can present challenges, particularly for aquaculture, with instances of industrial zones being given clearance to develop on land upstream from sites allocated to aquaculture, with the evident negative environmental implications this entails.[206]	1
Fiscal regime (including any incentives)	SEZs in Bitung and Morotai offer incentives for investment in fisheries processing, including a tax holiday ranging from 5-20 years, depending on the size of the investment. Beyond this, a recent report by California Environmental Associates notes a lack of other government incentives for investment in sustainably-managed fisheries.[207]	3
	OVERALL ATTRACTIVENESS SCORE:	**2.63**

H. Agriculture

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	The agriculture industry's total value came to 1.41 quadrillion Rp. (US$99bn) in 2018[208] (or 9.5 percent of the country's US$1.042tn GDP that year) – practically no	4

[205] As reported in *"Strengthening Indonesia's Exports of Fish and Processed Fish Products to Canada"* report, published: January 2018.
[206] As reported by a Marine and Fisheries specialist at BAPPENAS.
[207] California Environmental Associates: 'Trends in Marine Resources and Fisheries Management in Indonesia', 2018: https://www.packard.org/wp-content/uploads/2018/08/Indonesia-Marine-Report-Executive-Summary-08.07.2018.pdf Accessed: 04/09/2019
[208] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.

	change on the sector's 9.6 percent GDP contribution three years earlier in 2015, when the industry's value totaled US$83bn.[209] In terms of FDI, there was encouraging rebound in realised agriculture FDI (crops, plantations and livestock) in 2018, when investment rose sharply to reach US$1.72bn, up from US$1.59bn in 2017.[210]	
Sustaining / creating employment	Agriculture is a major source of formal and informal employment in Indonesia. However, the percentage of Indonesians working in the sector is decreasing, falling from 55.1 percent in 1990 to 31.9 percent in February 2017.[211]	4
Employment for women (direct / indirect)	Agriculture constitutes a slightly lower proportion of female employment in Indonesia than the overall average. As of 2018, 28.5 percent of employed women were working in the sector.[212]	3
Knowledge / technology transfer	FDI in agribusiness can bring value-added activities to the agriculture and agribusiness sector, as well as new or more sophisticated and sustainable technologies and techniques (e.g. hydroponics and irrigation) to enhance crop yields.	4
Potential for domestic linkages	Foreign investors also have a track record of sourcing produce and products from local suppliers and working directly with farmers to help improve yields and productivity (e.g. PT Frisian Flag Indonesia ran a programme engaging with 10,000 dairy farmers in Java).	4
Boosting exports	Agriculture has collectively been Indonesia's top exporting sector in recent years (replacing minerals following a slump in exports in 2014), and yet agricultural exports have been dominated by raw materials – most significantly palm oil. FDI can play a key role in enabling greater levels of agri-processing both for domestic and international markets, and to help the sector move further up the value chain.	4
	OVERALL BENEFITS SCORE:	**3.83**

[209] Ibid.
[210] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.
[211] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
[212] World Bank Data portal: https://data.worldbank.org/topic/agriculture-and-rural-development?locations=ID

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	Indonesia's agriculture industry has continued to grow at slower pace than overall GDP in the past couple of years (the sector grew by 3.6 and 3.7 percent in 2017 and 2018 respectively, compared with total GDP growth rates of 5.07 and 5.17 percent in those two years).[213] More broadly, Southeast Asia is playing an increasingly important role in world agro-food trade. The region has increasingly become a net agro-food exporter. With growing agro-food exports and imports, the region's producers and consumers are both more exposed to international markets and more reliant on these as a source of income and food.[214]	4
Labour and skills	Despite the large number of people working in agriculture, there's plenty of scope (and a need) for skills enhancement across agricultural subsectors and the value chain. Nearly a quarter of agricultural worker also have second jobs (often due to issues of seasonality).[215] The average years of education for agriculture workers is 5.6 years (the lowest of all sector groupings).[216] Cost-wise, Indonesian agricultural labour remains competitive. For example, data shows that Indonesia the second lowest labour costs for a typical grain processing plant among the ASEAN-5.[217]	3
Market access	FDI in plantations of 25ha or more and without processing units is capped at 95 percent, while horticultural businesses can have no more than 30 percent FDI.	2

[213] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
[214] As referenced in the joint FAO-OECD report "Agricultural Outlook 2017-2026", Chapter 2 - Southeast Asia: Prospects and Challenges: http://www.fao.org/3/a-bt099e.pdf Accessed: 22/08/2019
[215] ILO's Indonesia Jobs Outlook 2017. Op. Cit.
[216] Ibid.
[217] fDi Benchmark database (Financial Times Ltd.) The 'ASEAN-5' comprised: Indonesia, Malaysia, Thailand, Vietnam and The Philippines.

Regulatory environment	The 2010 Horticulture Law and 2014 Plantations Law continue to pose challenges for foreign investors in that subsector in terms of the foreign ownership caps on new investment.	2
Existing capabilities (including potential partners)	A large and growing domestic investor base: DDI in food crops, plantations and livestock increased from 663 projects worth 21.4tn Rp. (US$1.5bn) in 2016, to 737 projects totalling 31.2tn Rp. (US$2.2bn) in 2018.[218] Investors note the lack of a commercialised biotechnology industry in Indonesia as a shortcoming, but it's also a potential area of investment opportunity, if the GoI gives it the right support in terms of industrial development.	3
Local inputs (resources, products, services)	An abundance of crops (e.g. cocoa, CPO, rice, coffee, tea etc.), some with multiple harvests annually, to support the agribusiness sector.	4
Infrastructure (transport, utilities, sites)	Investors cite the need for lower distribution costs in agribusiness, as well as improvements to warehousing solutions - especially in remote areas.	2
Fiscal regime (including any incentives)	SEZs in Sei Mangkei, Tanjung Api-Api, Sorong and others offer incentives for investment in agriprocessing, including a tax holiday ranging from 5-20 years, depending on the size of the investment.	3
	OVERALL ATTRACTIVENESS SCORE:	**2.88**

I. Renewable Energy

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Globally, FDI projects in renewable energy in 2018 hit their highest level since 2008, while recorded CapEx more than doubled between 2017 and 2018, from	5

[218] BKPM's Domestic and FDI Realisation Reports, January-December 2016 and 2017, and 'FDI Realisation based on Sector', January-December 2018. Op. Cit.

	US$15.8bn to US$38.2bn[219]. In 2018, Indonesia took the top spot globally for reported FDI CapEx in renewables. FDI in renewables can also support Indonesia's green economy agenda, helping the country to achieve its target of reducing CO2 emissions to just 29 percent of their current levels by 2027.	
Sustaining / creating employment	The global renewable energy sector reportedly employed 11 million people in 2018, compared with just 7.3 million jobs in 2012. In 2018, 60 percent the sector's global workforce was based in Asia.[220]	4
Employment for women (direct / indirect)	At a global level, 32 percent of renewable energy jobs are reportedly held by women.[221]	3
Knowledge / technology transfer	Foreign renewable energy companies (especially from markets such as Europe, North Asia and the Americas) can bring expertise and technology to support and help accelerate the development of Indonesia's renewables industry.	4
Potential for domestic linkages	Renewable energy firms can (and do) work local Indonesian partners and suppliers (exploration firms, contractors, equipment and service providers etc.)	4
Boosting exports	Investment in biodiesel can make a significant contribution to Indonesia's energy independence and benefit Indonesia's trade balance.	4
	OVERALL BENEFITS SCORE:	**4.00**

[219] fDi Markets database (Financial Times Ltd.)
[220] International Renewable Energy Agency (IRENA): Renewable Energy and Jobs, Annual Report 2019: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jun/IRENA_RE_Jobs_2019-report.pdf
[221] Ibid.

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	Globally, a total of 181 gigawatts (GW) of renewable power was added in 2018, providing an estimated 26 percent of global electricity generation by the end of the year.[222] Indonesia controls around 40 percent of the world's geothermal reserves.	4
Labour and skills	Investors note that's there's still a lack of highly trained and specialised workers in critical areas such as engineering and advanced manufacturing. Labour costs in renewable energy technology in Indonesia are either more attractive or on par with other key markets in South-East Asia, and significantly more attractive than other emerging market geothermal hotspots such as Mexico.[223]	2
Market access	The current DNI limits FDI in energy projects between 1-10MW to 49 percent. This is seen by many foreign investors consulted as an important barrier, since many operations' power generation capacities fall within this MW range.	2
Regulatory environment	Investors would welcome simpler and clearer procedures with predictable pricing and PPA terms to reduce costs and attract investment. The current framework requires costly and time-consuming vendor qualifications, unclear tender procedures and extremely costly PPA negotiations – thus deterring potential investors.	2
Existing capabilities (including potential partners)	A growing domestic investor base. DDI in "electricity, gas and water supply" has risen from 472 projects collectively investing 22.8tn Rp. (US$160m) in 2016, to 560 projects with a total of 37.3tn Rp. (US$262m) in 2018.	3

[222] *Renewables 2019: Global Status Report,* REN21: https://www.ren21.net/wp-content/uploads/2019/05/gsr_2019_full_report_en.pdf
[223] fDi Benchmark database (Financial Times Ltd.)

Local inputs (resources, products, services)	Indonesia's combined power generation potential from renewables for 2019-2028 is estimated at 424GW.[224]	4
Infrastructure (transport, utilities, sites)	Investors believe connectivity remains a challenge, with renewable energy resources are often far away from where the highest levels of demand are.	2
Fiscal regime (including any incentives)	Current incentives for renewable energy include a 30 percent reduction in net income out of total investment (for 6 years, at 5 percent per year). Some investors have suggested the GoI could provide special pricing incentives for operating reserves provided through renewables.[225]	3
	OVERALL ATTRACTIVENESS SCORE:	**2.75**

J. Pharmaceuticals & Medical Devices

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	The sector only represents around 6 percent of Indonesia's GDP.[226] FDI growth in the sector has also been relatively stagnant globally since 2014, with only a modest increase in the number of greenfield projects and their collective estimated CapEx levels.[227]	3
Sustaining / creating employment	The sector currently only employs a very small percentage of Indonesia's workforce (as of 2015, a total of just over 70,000 people were employed in the sector).[228]	3

[224] According to Indonesia's Electricity Supply Business Plan (RUPTL) 2019-2018, referenced in EuroCham Indonesia's 2019 Position Paper on Energy. Op. Cit.
[225] As voiced by EuroCham Indonesia's Energy Working Group.
[226] According to Cekindo, Indonesia's pharmaceuticals market is worth around US$6bn.
[227] As per fDi Markets data. Op. Cit.
[228] BPS data: www.bps.go.id Accessed on: 28/06/2019

Employment for women (direct / indirect)	Lack of statistical evidence on employment for women in the sector in Indonesia. However, at a global level, there are reports of women being underrepresented both at the senior professional and management level in pharmaceuticals.[229] At a regional (Asia-Pacific) level, women have generally been underrepresented in the broader manufacturing sector (accounting for less than 40 percent of employees in the sector in 2017.)[230]	2
Knowledge / technology transfer	FDI in pharmaceuticals and medical devices is typically knowledge-intensive and involved high degrees of knowledge- and technology transfer. For example, Bayer Indonesia has recently been training 15 SMK students on mechatronics at its factory in Cimanggis.	4
Potential for domestic linkages	As of 2015, there were 256 large- and medium-sized companies and 4,990 small- and micro-sized businesses in the 'pharmaceuticals and medicines' category.[231] There's also a track record of foreign investors partnering with domestic players such as Kimia Farma, a state-owned pharmaceutical producer and distributor which reportedly owns more than 700 pharmacies, more than 300 health clinics, and 43 laboratories.	4
Boosting exports	FDI in pharmaceuticals and medical devices manufacturing could contribute to reducing the trade deficits in both subsectors: for pharmaceuticals, imports reached US$990m in 2018 (compared with US$546m in exports – a four year low). With medical devices, the trade deficit has been even more pronounced, with imports more than doubling between 2014-2018 to reach US$659m, while exports have only very modestly increased from US$145m in 2014 to US$159m in 2018.	4
	OVERALL BENEFITS SCORE:	**3.33**

[229] As reported by the International Society for Pharmaceutical Engineering (ISPA) in late 2016.
[230] According to the ILO's 'Asia-Pacific Employment and Social Outlook 2018 report: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-bangkok/documents/publication/wcms_649885.pdf Accessed: 02/09/2019
[231] BPS data: www.bps.go.id Accessed on: 28/06/2019

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	Deloitte has predicted that global healthcare expenditures will increase at an annual rate of 5.4 percent between 2017-2022, from US$7.72tn to US$10.06tn.[232] Indonesia has the largest pharmaceuticals market in ASEAN – it is expected to be worth US$10.11bn by 2021, according to the market entry consulting firm Cekindo Business International.[233] Meanwhile, Indonesia's medical devices market was worth US$722m in 2016 and is expected to grow by 18 percent in 2019, according to BMI Research from 2018.[234] The Universal Healthcare Coverage programme (JKN) has been an important driver of the domestic market's growth and potential.	4
Labour and skills	The number of workers in the 'pharmaceuticals, medicinal and botanical' manufacturing sector remained largely unchanged between 2008-2015. The workforce is dominated by large- and medium-sized companies, with 58,348 employees in 2015 (versus 60,000 in 2008), while there were 11,932 workers in small- and micro-sized businesses (versus 9,465 in 2008).[235] Shortages of relevant skilled workers in engineering – including pharmaceutical and medical engineering – remains a challenge, and foreign investors are collaborating with SMKs and other education institutions to give students practical training and provide feedback on existing curricula to those institutions.	2
Market access	Pharmaceuticals raw materials and active pharmaceutical ingredients is now open 100 percent for FDI. However, the current DNI continues to impose a number of restrictions on foreign investors, including an 85 percent ownership cap on patent medicines manufacturing and a 67 percent cap on medical distribution. Both caps present challenges, not least because investors report a limited number of local	2

[232] Deloitte's *2019 Global Health Care Outlook,* accessed on 08/08/2019: https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-health-care-sector-outlook.html
[233] Cekindo's website, accessed on 08/08/2019: https://www.cekindo.com/sectors/pharmaceutical-indonesia
[234] Referenced in EuroCham Indonesia's 2019 Position Paper on Pharmaceutical and Medical Technology: http://www.eurocham.id/publications
[235] BPS data: www.bps.go.id Accessed on: 28/06/2019

	partners who are able (or willing) to take a minimum 15 percent stake in a patent medicines manufacturing businesses, while the same goes for domestic businesses who can take a minimum 33 percent stake in pharmaceuticals distribution JVs.	
Regulatory environment	Investors have voiced concerns about the Patents Law, which among other provisions requires companies to locally manufacture any products patented in Indonesia within five years of the patent's registration. The Halal Law, referenced in other sector profiles in this study, is also set to affect the pharmaceuticals industry, with the potential to disrupt crucial supplies of medicines, as well as increasing costs. Local Content Requirements are another area of concern.	2
Existing capabilities (including potential partners)	Domestic manufacturing of pharmaceuticals and medical devices remains limited and the country remains highly dependent on imports. As per the market access assessment, there are reportedly a limited number of domestic businesses able or willing to take minority stakes in pharmaceuticals and medical devices JVs.	2
Local inputs (resources, products, services)	A lack of vital raw ingredients has been raised as an issue by pharmaceuticals manufacturers, with the Indonesian Pharmacists Association reporting that around 95 percent of raw materials for medicine are currently imported.[236]	2
Infrastructure (transport, utilities, sites)	SEZs such as Bitung in Sulawesi have been dedicated to a few select industries, including pharmaceuticals, although connectivity in Eastern Indonesian sites such as these remain a challenge. There are numerous industrial estates with important pharmaceuticals activity (e.g. Lippo Cikarang, Batamindo etc.) although tenancy rates and conditions are often less competitive than in some competing countries such as Vietnam. In addition, many healthcare product distributors have commented that Indonesia currently lacks the necessary infrastructure to deliver small product quantities on a cost-effective basis.[237]	2

[236] As of 2016, as cited in The Jakarta Post on 27/01/2016: https://www.thejakartapost.com/news/2016/01/27/kimia-farma-sets-jv-supply-raw-materials.html
[237] As reported in GBR's Indonesia Pharmaceuticals 2015 report: https://www.gbreports.com/wp-content/uploads/2015/04/Indonesia_Pharmaceuticals2015_IE.pdf Accessed: 03/09/2019

Fiscal regime (including any incentives)	Regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded and now covers 18 'pioneer' industries, including the manufacturing of pharmaceutical raw materials, irradiation equipment, and electro-medical or electrotherapy equipment. The tax holiday period ranges from 5-20 years, depending on the size of the investment.	4
	OVERALL ATTRACTIVENESS SCORE:	**2.50**

K. Transport & Logistics

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	In 2018, Indoneisa's 'transport and storage' sector was worth 797tn Rp. (US$56bn) – 5.4 percent of the country's GDP that year[238], up from 735tn Rp. (US51.6bn) in 2017. Globally, FDI in transport and logistics has risen since 2014 in terms of project numbers. Estimated CapEx has also increased, albeit to a lesser extent. From a qualitative perspective, FDI in T&L can contribute to commercial connectivity and trade across the archipelago and enable growth in exports.	4
Sustaining / creating employment	Estimated job creation from announced greenfield FDI projects in the T&L sector increased substantially between 2014-2018, rising from 20,011 jobs in 2014, to 45,680 jobs in 2018.[239]	4
Employment for women (direct / indirect)	Indonesian female workers in the "transport and other blue-collar workers" category reportedly comprised 25 percent of the category's total workforce in 2016.[240]	3

[238] BPS Statistics via Bank Indonesia. Accessed: 05/08/2019. Op. Cit.
[239] fDi Benchmark database (Financial Times Ltd.)
[240] ILO's Indonesia Jobs Outlook 2017. Op. Cit.

	In middle- and upper-income Asia, women constitute a smaller proportion of the 'transport, storage and communication' workforce compared with men.[241]	
Knowledge / technology transfer	Existing track record and plans by foreign T&L businesses and their foundations to collaborate with SMKs on vocational education programmes (e.g. for freight-forwarding).	4
Potential for domestic linkages	Given the requirements for foreign distributors to either partner with (or form JVs with) Indonesian distribution companies as set out in the current DNI, the potential for domestic linkages in the T&L sector is substantial.	4
Boosting exports	FDI in T&L can play a key role in enhancing Indonesia's capabilities and competitiveness as a transport and logistics hub for exports.	4
	OVERALL BENEFITS SCORE:	**3.83**

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	The global outlook for the transport and logistics (T&L) industry is broadly positive, with Research and Markets predicting the industry will grow to US$12.68bn by 2023, achieving a CAGR of 3.49 percent between 2017 and 2023, with the Asia-Pacific region set to be the lead driver of this growth.[242]	4
Labour and skills	As of 2016, there were 34.4 million workers in the "transport and other blue-collar workers" category.[243] There's a reported lack of knowledge in some areas of logistics (e.g. supply chain planning and forecasting), with many skills being developed informally 'on-the-job'. For this reason, some investors are collaborating with SMKs on vocational training initiatives for the sector.	3

[241] ILO Stat: https://www.ilo.org/ilostat. Accessed: 11/09/2019.
[242] Global Logistics Market report cited by PRNewswire on 07/08/2018: https://www.prnewswire.com/news-releases/global-logistics-market-2017-2018--2023---market-is-estimated-to-grow-to-12-6-bn-300708730.html
[243] ILO's Indonesia Jobs Outlook 2017. Op. Cit.

Market access	The DNI's revision in 2016 was broadly seen as a positive development by T&L investors, who saw the ownership cap in freight forwarding and warehousing operations lifted to 67 percent – an increase on the 49 percent cap introduced through the previous DNI in 2014. However, the current DNI provision is still significantly more restrictive than 95 percent cap that existed prior to 2014.	3
Regulatory environment	The reduction in minimum capital requirements for the FDI in the T&L sector has been welcomed by foreign investors, although most other ASEAN countries apply much lower investment requirements for foreign freight-forwarding services.[244] Customs clearance processes are still deemed as being somewhat cumbersome, and penalties are deemed harsh for often minor and even innocent administrative errors such as spelling mistakes, along with very tight reporting deadlines.	2
Existing capabilities (including potential partners)	Improvements to the ease of arranging international shipments, logistics competencies as well as tracking and tracing capabilities have contributed to Indonesia's overall performance improvement in the World Bank's Logistics Performance Index.	4
Local inputs (resources, products, services)	Port and airport capabilities and service providers are broadly improving, while the number of domestic distribution companies is broadly deemed sufficient (although in some advanced sectors such as medical devices, challenges have been raised by foreign companies about the reliability and competencies of domestic companies when it comes to transporting and installing their devices).	3
Infrastructure (transport, utilities, sites)	The establishment of 76 Bonded Logistics Centers (BLCs) across the country has been welcomed by investors. The GoI's major drive on infrastructure projects across the country has improved connectivity, and while much more remains to be done on enhancing the country's infrastructure, the progress achieved to date saw Indonesia climb to 46th position globally in the World Bank's Logistics Performance Index in 2018, up from 63rd in 2016.[245] However, there's no room for complacency, when some of Indonesia's	3

[244] Reported in EuroCham Indonesia's 2019 Position Paper on Transport & Logistics. Op. Cit.
[245] World Bank's Logistics Performance Index 2018: Op. Cit.

	competitors score and rank higher, for example Thailand (32nd), Vietnam (39th) and Malaysia (41st).[246]	
Fiscal regime (including any incentives)	The 2 percent withholding tax on freight forwarding services is seen by T&L investors as a burden since it requires companies to produce extremely high numbers of withholding tax certificates (given the huge number of daily transactions they typically conduct).	2
	OVERALL ATTRACTIVENESS SCORE:	**3.00**

L. Cosmetics

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Indonesia's cosmetics and toiletries industry recorded close to 12 percent growth in 2017, according to Global Business Indonesia. The added value of the cosmetics industry in 2019 increased to Rp7.64 trillion (US$544m), with the growth of the cosmetics industry above 7 percent. The cosmetics industry is one of the priority industries that is seen by the GoI as having a major role driving the economy.[247]	4
Sustaining / creating employment	The cosmetics industry supports 75,000 direct jobs and 600,000 jobs indirectly.[248]	3
Employment for women (direct / indirect)	Based on Jobplanet surveys and research, the manufacturing grouping industry - which includes cosmetics - absorbs the most female workers.[249]	4

[246] Ibid.
[247] Based on Government Regulation No. 14 of 2015 concerning the 2015-2035 National Industrial Development Master Plan (RIPIN).
[248] According to the Ministry of Industry: https://kemenperin.go.id/artikel/17920/Industri-Kosmetik-dan-Jamu-Mampu-Serap-15-Juta-Tenaga-Kerja---Dunia-Usaha
[249] https://beritagar.id/artikel/gaya-hidup/industri-dan-bidang-profesi-yang-ramah-perempuan

Knowledge / technology transfer	Cosmetics companies such as Kao, L'Oréal, Shiseido, Nestlé Skin Care and Avon have a track record of investing in R&D projects in emerging markets such as Brazil, China and Thailand, while German fragrance company Düllberg Konzentra announced the establishment of an R&D center in Indonesia in 2018.[250]	4
Potential for domestic linkages	Indonesian SMEs represent 95 percent of the country's cosmetics industry.[251] Foreign investors could be an important source of business for these and other domestic suppliers.	3
Boosting exports	Exports have remained largely steady at around US$130m annually for the past few years, and while a sizeable (and growing) sectoral deficit therefore persists, Indonesia's cosmetics export levels are still broadly on par with those of Malaysia's and comfortably ahead of those from other ASEAN countries[1].	3
	OVERALL BENEFITS SCORE:	**3.50**

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	It's predicted that the global cosmetic products market will grow at a CAGR of slightly more than 7 percent between 2018-2024, reaching a total global value of US$863bn by 2024.[252] Indonesia reflects the global picture, with a strong and growing cosmetics market, supported to a large extent by the country's 130 million female consumers in particular. Indonesia's cosmetics and toiletries industry recorded close to 12 percent growth in 2017, according to Global Business Indonesia.[253]	4

[250] https://www.perfumerflavorist.com/networking/news/company/Dullberg-Konzentra-Opens-Indonesian-RD-Center-498925851.html
[251] https://kemenperin.go.id/artikel/18957/Industri-Kosmetik-Nasional-Tumbuh-20
[252] Zion Market Research report cited by PR Newswire on 31/01/2019: https://www.globenewswire.com/news-release/2019/01/31/1708263/0/en/Global-Cosmetic-Products-Market-Share-Expected-To-Reach-863-Billion-by-2024-ZMR.html
[253] Reported in EuroCham Indonesia's 2019 Position Paper on Cosmetics: http://www.eurocham.id/publications

	Indonesia is also well-placed to tap into the global halal cosmetics industry, which is estimated to be worth US $13bn, with an annual growth rate also of 12 percent.	
Labour and skills	Investors in the industry reportedly see a skills deficit in Indonesia, where workers' skills to not fully match industry standards and requirements.	2
Market access	No restrictions on foreign ownership when it comes to cosmetics production. However, cosmetics retail businesses are fully reserved for domestic investors.	4
Regulatory environment	Investor's concern center around the GoI's infrastructure readiness to implement the halal law in the industry, as well as a lack of reference lists for cosmetic ingredients. Some investors have also voiced concerns around a number of Indonesia-specific regulations which continue to be applied across the country and which are not in line with the ASEAN Harmonized Cosmetic Regulatory Scheme (AHCRS) or the ASEAN Cosmetic Directive (ACD). "Country specific" regulations can disrupt export activities because companies from various countries have their own standards to be met. As a result, additional burdens such as complexity and costs are ultimately imposed on consumers in the form of higher product prices, which can make Indonesia less competitive than other ASEAN countries.[254]	2
Existing capabilities (including potential partners)	The number of domestic investors is still small. Examples of local companies include Wardah and Mustika Ratu. Local companies have started to develop.[255] At present the cosmetics industry in Indonesia is still limited to formulation and mixing or compounding.[256]	2
Local inputs (resources, products, services)	Around 90% of the raw materials for cosmetic products still need to be imported.[257]	2

[254] https://kemenperin.go.id/artikel/17920/Industri-Kosmetik-dan-Jamu-Mampu-Serap-15-Juta-Tenaga-Kerja---Dunia-Usaha
[255] Based on insights from BKPM officers.
[256] https://kemenperin.go.id/artikel/17920/Industri-Kosmetik-dan-Jamu-Mampu-Serap-15-Juta-Tenaga-Kerja---Dunia-Usaha
[257] As reported in Eurocham Indonesia's 2019 Position Paper on Cosmetics. Op. Cit.

	However, community trends to use natural products (back to nature) are opening up opportunities for the emergence of natural cosmetic products such as spa products originating from Bali.	
Infrastructure (transport, utilities, sites)	Available sites are concentrated mainly on Java and Batam, where utilities and connectivity are broadly sound, yet tenancy costs are often higher. There are few alternatives beyond these two locations.	3
Fiscal regime (including any incentives)	Government Regulation (PP) No. 45/2019 stipulates that companies conducting R&D in Indonesia could obtain tax deductions of up to 300 percent from their R&D activities. Indonesia's Import duty facility (which provides a two-year exemption) includes the cosmetics sector.	3
	OVERALL ATTRACTIVENESS SCORE:	**2.75**

M. Education

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Direct contribution to economic growth is likely to be limited: FDI in higher/vocational institutions is not typically as capital-intensive as many other sectors: global CapEx levels from announced FDI projects in the sector has declined overall since 2014, totalling US$165m in 2018 (compared with US$494m in 2014).[258] However, the indirect, medium- to longer-term contribution to economic growth could be substantial, through retained talent who stay in Indonesia and earn higher wages, great consumption and tax contributions, versus the risk of a brain drain from students who don't return to Indonesia after graduating overseas.	4

[258] fDi Markets database. Op. Cit.

Sustaining / creating employment	The indirect impact and benefits of FDI in education on employment in numerous industries will be far more substantial than the direct employment impact.	4
Employment for women (direct / indirect)	Given the wide-ranging indirect impact and benefits of FDI in education, women in a wide range of industries can benefit from greater employment prospects thanks to the enhanced and improved education programs foreign entities could bring. In middle- and upper-income Asia, women constitute a greater proportion of the 'education' workforce compared with men.[259]	4
Knowledge / technology transfer	FDI in the sector can bring world-class teaching, research and development standards and practices to the recipient country. FDI in e-learning could also help students in more remote parts of Indonesia to access world-class education resources.	5
Potential for domestic linkages	FDI from foreign institutions often partner with domestic institutions. In Indonesia this is already happening, although due to regulatory restrictions this typically happens through companies' foundations. For example, one foundation linked to an existing foreign investor in Indonesia is already exploring collaboration initiatives with an SMK on freight-forwarding and logistics vocational education. In the e-learning space, global media and education provider Pearson announced a US$2.2m investment in 2016 through its Affordable Learning Fund (PALF) in Indonesian education technology startup HarukaEdu.[260]	4
Boosting exports	Directly, Indonesian education services exports are unlikely to be enhanced through FDI, as foreign investors in the sector seeking to access the domestic market. Indirectly however, FDI from international universities and other institutions can play an important role in enhancing workforce skills and boosting exports in a wide range of sectors.	3
	OVERALL BENEFITS SCORE:	**4.00**

[259] ILO Stat: https://www.ilo.org/ilostat. Op. Cit.

[260] Pearson media announcement from 08/11/2016: https://www.pearson.com/corporate/news/media/news-announcements/2016/11/pearson-affordable-learning-fund-makes-investment-in-indonesian-.html Accessed: 14/08/2019

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	As of 2017, there were around 6 million university students in Indonesia, with the number projected to increase over the next five years.[261] The number of Indonesian students studying overseas is also dramatically on the rise, having increased by 53 percent from 45,000 in 2017 to 69,000 in 2018-19, according to the Institute for International Education (IIE).[262] Education technology – and e-learning in particular – is another area with significant potential, with Orbis Research predicting that the global e-learning market will grow with a CAGR of 9.5 percent between now and 2026, reaching close to US$400bn by that year.[263]	5
Labour and skills	The quality of vocational education in Indonesia has reportedly been low: as of 2018, only 22.3 percent of teachers had sufficient qualifications, according to the education ministry.[264] For higher education, it's noteworthy that no Indonesian institution features among the top 200 universities globally.[265]	2
Market access	Currently the major issue when it comes to FDI in education: only non-profit foreign entities can establish institutions in Indonesia. However, there have been strong signals that the sector will open up for FDI in the near future.	2

[261] US export.gov's Indonesia Country Commercial Guide. Op. Cit.
[262] As reported by ICEF Monitor. Op. Cit.
[263] As reported by Reuters on 03/01/2019: https://www.reuters.com/brandfeatures/venture-capital/article?id=72033 Accessed: 14/08/2019
[264] As reported in Oxford Business Group's *Indonesia 2018* report (p.303).
[265] According to QS World University Rankings 2020: https://www.topuniversities.com/university-rankings/world-university-rankings/2020 Accessed: 26/08/2019. The highest-ranking Indonesian institution on the 2020 list was Universitas Indonesia (ranked 296th).

Regulatory environment	Market access is the major issue: current regulations also stipulate that any foreign entity's involvement in the education sector must be in partnership with local establishments.	2
Existing capabilities (including potential partners)	According to Cekindo, there are more than 3,400 higher education institutions in Indonesia, with the most popular fields of study including business, IT, accounting, finance, life sciences, linguistics and engineering.	3
Local inputs (resources, products, services)	The key 'inputs' for the education sector are teachers, lecturers and professors. As per the 'labour and skills' factor above, there are currently issues around quality and qualification levels.	2
Infrastructure (transport, utilities, sites)	In addition to opening up the sector for FDI more broadly, the GoI has been considering the GoI has been examining the possibility of facilitating education FDI in Special Economic Zones (SEZs).	3
Fiscal regime (including any incentives)	Foreign investors report a lack of incentives to encourage the private sector to work with educational institutions in order to develop the systems and curricula which will ultimately produce skilled labour in some of Indonesia's key growth sectors.	2
	OVERALL ATTRACTIVENESS SCORE:	**2.63**

N. Digital & Creative

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Global greenfield FDI in the creative industries cluster nearly doubled in terms of announced CapEx between 2014-2018, rising from US$641m to US$1.25bn.	4

	The Ministry of Communication and Information Technology (KEMKOMINFO) has predicted that the country's e-commerce market will grow to US$130bn by 2020[266] (roughly 13 percent of the country's forecast GDP).[267]	
Sustaining / creating employment	As in many other countries, the digital and creative cluster is having a transformative impact on employment in Indonesia. It is the key driving force behind on-demand work and the rise of the gig economy. McKinsey recently estimated that digital technologies have the potential to create 3.7 million jobs in Indonesia by 2025.[268]	4
Employment for women (direct / indirect)	According to recent ILO estimates, there are more than 35 million non-working female citizens between the ages of 15 and 64 in Indonesia. McKinsey recently estimated that with online platforms, 3 percent of this population could gain employment, adding 1 million people to the country's workforce.[269]	4
Knowledge / technology transfer	FDI in the digital and creative industries can bring new innovations and enhanced efficiencies in areas such as product development, data analytics, sales and customer services. It can also play an important role in supporting the development of the Making Indonesia 4.0 agenda.	4
Potential for domestic linkages	FDI in the digital and creative sector can create online platforms that enable MSMEs and independent craftsmen and women to access new customers.	4
Boosting exports	At present, much of the FDI in the sector is oriented towards the booming domestic market, although foreign investors such as Lazada and Shopee could enable Indonesian producers to access overseas markets – particularly elsewhere in ASEAN (given the regional footprints of these investors).	3
	OVERALL BENEFITS SCORE:	**3.83**

266 As reported in ASEAN Briefing (Dezan Shira & Associates), on 14/03/2019. Op. Cit.
267 fDi Markets database. Op. Cit.
268 McKinsey & Company: "Unlocking Indonesia's digital opportunity", October 2016: https://www.mckinsey.com/~/media/McKinsey/Locations/Asia/Indonesia/Our%20Insights/Unlocking%20Indonesias%20digital%20opportunity/Unlocking_Indonesias_digital_opportunity.ashx Accessed: 29/08/2019
269 Ibid.

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	More than 90 percent of Indonesia's internet users access the web through their phones[270], while the country's mobile sector was one of the fastest growing in the world in the decade from 2006-2015, expanding by more than 600 percent.[271] The rapid rise in digital consumption and interaction has not only benefitted the social media space, but e-commerce too: by 2017, 41 percent of Indonesians were buying goods and services online, compared with just 26 percent in 2016.	5
Labour and skills	While there's an abundance of labour for roles such as drivers, couriers and customer service agents, higher-skilled talents such as software developers and programming engineers are reportedly in shorter supply.[272]	3
Market access	Market access for FDI has improved: since 2016, 100 percent foreign ownership in e-commerce businesses is allowed, provided that the business invests a minimum of 100bn Rp (with a 49 percent foreign ownership cap for investments below this level).	4
Regulatory environment	Indonesia was the world's fourth most restrictive country for digital trade, according to the European Centre for International Political Economy.[273] Beyond market access, the requirement for foreign companies to establish data centres in Indonesia, or use domestic data centre providers[274], is deemed restrictive by some foreign investors.	2

[270] Research from UK-based digital media research firm We Are Social, cited in Oxford Business Group's *Indonesia 2018* report. Op. Cit.
[271] Ibid.
[272] World Bank blog: "Paving the way for a thriving digital economy in Indonesia", 16/05/2018: https://blogs.worldbank.org/eastasiapacific/paving-way-thriving-digital-economy-indonesia Accessed: 29/08/2019.
[273] European Centre for International Political Economy (ECIPE): Digital Trade Restrictiveness Index 2018: https://ecipe.org/wp-content/uploads/2018/05/DTRI_FINAL.pdf
274 Government Regulation No. 82/2012. In early 2019, there were indications that this requirement might be relaxed.

Existing capabilities (including potential partners)	Indonesia's growing digital landscape includes providers of e-commerce, media distribution, ride-sharing and FinTech.	3
Local inputs (resources, products, services)	More than 60 percent of Indonesian MSMEs are online, but only about 15 percent have online ordering and payment systems.[275]	3
Infrastructure (transport, utilities, sites)	Infrastructure deficiencies continue to make it difficult for e-retailers to operate across the country (particularly in more remote parts). Slow internet speeds are another problem, with Indonesia lagging far behind other countries in ASEAN and Asia more broadly.[276]	2
Fiscal regime (including any incentives)	Regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded to cover 18 'pioneer' industries, including the digital economy. The tax holiday period ranges from 5-20 years, depending on the size of the investment.	4
	OVERALL ATTRACTIVENESS SCORE:	**3.25**

O. Financial Services

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	Globally, the total and per-project average CapEx levels from greenfield FDI projects in the FS sector has seen a downward trend since 2018. Total estimated CapEx from announced projects stood at US$358m in 2018 (down from US$560m in 2014).[277]	3

275 SMEs powering Indonesia's success, Deloitte, August 2015, 2.deloitte.com. As reported in McKinsey's "The Digital Archipelago" report, August 2018: https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Asia%20Pacific/The%20digital%20archipelago%20How%20online%20commerce%20is%20driving%20Indonesias%20economic%20development/The-digital-archipelago-Executive-summary.ashx Accessed: 29/08/2019

276 As of June 2019, Indonesia ranked 125th globally for mobile and 117th for fixed broadband in the Speedtest Global Index.

277 fDi Markets database. Op. Cit.

	Indirectly, investment in FS – particularly in areas such as VC and PE – could provide much-needed access to finance for some of Indonesia's promising young start-ups, which in turn have the potential to contribute significantly to the country's economic growth (see scorecard N on 'Digital & Creative' sector).	
Sustaining / creating employment	The FS sector is one of the highest-paying sectors in Indonesia.[278] Emerging FS subsectors such as VC, PE, Insurance and Islamic Finance are set to generate and sustain employment: in the case of Islamic Finance, an estimated 11,000 new bankers will be needed by 2023.[279]	3
Employment for women (direct / indirect)	The gender pay gap in the FS sector in Indonesia is reportedly one of the smallest (0.5 percent, in favour of male workers).[280] In middle- and upper-income Asia, women constitute a slightly higher proportion of the 'financial and insurance activities' workforce compared with men.[281]	3
Knowledge / technology transfer	FDI in FS subsectors such as investment firms (VC and PE) and insurance can bring world-class practices and digital technologies to the sector.	4
Potential for domestic linkages	Domestic suppliers and service providers in areas such as ICT, corporate real estate and related services stand to benefit from FDI in the FS sector.	3
Boosting exports	In 2017, Indonesia's insurance and finance exports totalled US$722m, compared with US$416m in 2016 US$302m in 2015.	3
	OVERALL BENEFITS SCORE:	**3.17**

[278] According to the ILO's Indonesia Jobs Outlook 2017. Op. Cit.
[279] As reported by GBG Indonesia in 2018: http://www.gbgindonesia.com/en/education/article/2018/indonesia_s_banking_and_finance_higher_education_sector_adapt_or_be_left_behind_11861.php Accessed: 30/08/2019
[280] Ibid.
[281] ILO Stat: https://www.ilo.org/ilostat. Op. Cit.

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	The global FS sector is forecast to reach a value of more than US$26tn by 2022.[282] Indonesia's insurance subsector continues to offer medium- to longer-term growth potential, with the average per capita insurance premium standing at 1.5m Rp. (around US$105) by mid-2018 – still a relatively low amount compared to figures in emerging peer markets in Southeast Asia.[283] The total value of VC and PE deals in Southeast Asia was down on 2017's figures, with PE witnessing a sharp decline from US$17.5bn to US$8.9bn, while VC increased from US$4.1bn to US$5.2bn.[284] As key sectors such as FinTech, E-Commerce and others continue to grow in Indonesia, the opportunities for VC, PE and other investment firms – and the benefits they can bring to Indonesia's start-up and broader entrepreneurial landscape – look set to continue.	4
Labour and skills	A larger proportion of Indonesians were studying business, finance and ICT compared with other ASEAN countries, according to an ILO survey conducted in 2016.[285] However, some analysts have found that Indonesian higher education institutions are behind the curve when it comes to banking and finance education, with a lack of practical business skills resulting in a widening deficit of skilled middle managers in the sector.[286]	3

[282] According to a report from The Research Company, published January 2019: https://www.thebusinessresearchcompany.com/report/financial-services-global-market-report Accessed: 15/08/2019

[283] As reported by Indonesia Investments on 23/05/2018: https://www.indonesia-investments.com/finance/financial-columns/indonesia-caps-foreign-ownership-in-insurance-companies-at-80/item8812? Accessed: 15/08/2019

[284] Ibid.

[285] According to the ILO's Indonesia Jobs Outlook 2017. Op. Cit.

[286] As reported by GBG Indonesia in 2018. Op. Cit.

Market access	FDI in investment finance and VC companies is currently capped at 85 percent, while FDI in insurance companies (including reinsurance) is capped at 80 percent. FDI in banking remains subject to a special license from the OJK.	3
Regulatory environment	Beyond market access, the rules on employing foreign workers in the banking sector have been relaxed in recent years. OJK's Regulation No.37/2017 enabled a greater number of functions that can be performed by expatriates, including treasury, risk management, information technology, lending and financing, investor and customer relations, marketing, and finance functions.	3
Existing capabilities (including potential partners)	Recent data shows that Indonesia has 119 banks (of which 10 are foreign-owned and 12 are JVs), while Indonesia's insurance industry comprises 141 companies. There are reportedly more than 200 additional financing companies, including VC firms and infrastructure financing companies.[287]	3
Local inputs (resources, products, services)	There's no reported shortage of domestic service providers to the FS industry in Indonesia, with a wide range of ICT, corporate real estate and related service providers.	3
Infrastructure (transport, utilities, sites)	Slow internet speeds remain a problem, with Indonesia lagging far behind other countries in ASEAN and Asia more broadly.[288] In terms of cybersecurity (a key consideration for the FS sector), Indonesia ranked 41st globally and 9th within the Asia-Pacific region in the 2018 Global Cybersecurity Index, behind Malaysia and Thailand, but ahead of Vietnam and the Philippines.[289]	2
Fiscal regime (including any incentives)	Regulation "PMK-150" on renewed tax holiday provisions, introduced in November 2018, was expanded to cover 18 'pioneer' industries, including the digital economy. This could therefore apply to investors in the FinTech subsector. The tax holiday period ranges from 5-20 years, depending on the size of the investment.	4
	OVERALL ATTRACTIVENESS SCORE:	**3.13**

[287] ILO's Assessment of the Indonesian Financial Services Sector, August 2015: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/meetingdocument/wcms_396166.pdf Accessed: 30/08/2019.
[288] As of June 2019, Indonesia ranked 125th globally for mobile and 117th for fixed broadband in the Speedtest Global Index.
[289] International Telecommunication Union's 2018 Cybersecurity Index: https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf Accessed: 30/08/2019

P. Downstream Minerals Processing

BENEFITS TO INDONESIA		
FACTOR	**OBSERVATIONS & EVIDENCE**	**SCORE**
Contribution to economic growth	The collective value of the "metal ore mining" and "other mining and quarrying" subsectors stood at 337.5tn Rp. (US$23.7bn) in 2018[290], or roughly 2.3 percent of Indonesia's GDP that year. This represents a notable increase in the industry's value compared with the turbulent period a few years ago (in 2014, the two subsectors had a collective value of 269.8tn Rp. (US$18.9bn).[291] Globally, announced greenfield FDI projects in minerals 'manufacturing' (i.e. processing), and their estimated total CapEx, have risen steadily since 2016.[292]	4
Sustaining / creating employment	The industry has a track record of being a significant employer: as of 2015, more than 1.12 million people in Indonesia were employed in "basic metals" manufacturing and "other non-metallic mineral products".[293]	4
Employment for women (direct / indirect)	In middle- and upper-income Asia, women constitute a far lower proportion of the 'mining and quarrying' workforce compared with men. The number of men working in the industry (around 5 million) is more than five times greater than the number of women (around 970,000 as of 2017).[294] Indirectly, the industry can support employment for women (e.g. catering services, work clothing and protective gear etc.)	2
Knowledge / technology transfer	Many skills in the natural resource sector are transferable to other sectors, for example skills in mechanical engineering, civil engineering, mechanics and electrical installation.	4

[290] BPS Statistics via Bank Indonesia, accessed: 05/08/2019. Op. Cit.
[291] Ibid.
[292] fDi Markets database (Op. Cit.)
[293] Data from BPS. Op. Cit. For the two subsectors, there were 865,800 workers in micro and small enterprises, and 255,000 employees in medium and large enterprises.
[294] ILO Stat: https://www.ilo.org/ilostat. Op. Cit.

Potential for domestic linkages	Smelting operations and other downstream minerals processing activities can procure a wide range of goods and services from domestic suppliers, including catering, uniforms and protective gear, security, certain types of machinery available domestically, and other areas.	4
Boosting exports	The restrictions on exporting unprocessed ore were relaxed in 2017, which improved prospects for overall export levels, while FDI in downstream minerals processing can boost value-added exports such as ferro-nickels. Indonesia's exports of ferro-alloys and ferro-nickels more than quadrupled between 2015-2018, rising from US$330m to US$1.136bn.[295]	4
	OVERALL BENEFITS SCORE:	**3.67**

ATTRACTIVENESS TO INVESTORS		
FACTOR		
Domestic and international market potential	At present, the international market is largely buoyant, although like other commodities industries, it can be somewhat volatile and subject to fluctuations.	3
Labour and skills	As of 2015, 29.6 percent of Indonesian employees in the 'mining and quarrying' sector had a diploma or degree.[296] However, a 2016 report co-authored by Singapore Management University and JP Morgan found that there was 'a large and persistent skills gap' in mining and a number of other sectors.[297]	2
Market access	No significant market access issues identified.	3
Regulatory environment	Key concerns for investors in Indonesia remain regulatory uncertainties and the lack of coordination between central and regional governments, according to	2

[295] UN Comtrade data. Op. Cit.
[296] ADB: Analysis of Trends and Challenges in the Indonesian Labor Market, 2015: https://www.adb.org/sites/default/files/publication/182935/ino-paper-16-2016.pdf Accessed: 12/09/2019.
[297] *Managing Skills Challenges in ASEAN-5,* October 2016: https://ink.library.smu.edu.sg/cgi/viewcontent.cgi?article=2891&context=soe_research Accessed: 12/09/2019.

	PwC's Advisor for Energy, Utilities and Mining.[298] In May 2019, the Ministry of Energy and Mineral Resources (MEMR) temporarily revoked the export permits of five mining firms on the ground that they had failed to demonstrate any progress in developing smelters.[299] Such cases, while arguably justified given the prevailing regulations, nevertheless sound the alarm for other minerals companies considering downstream processing activities in the country.	
Existing capabilities (including potential partners)	In terms of year-on-year production, there have been some encouraging trends in recent years, with production levels of nickel ore, processed nickel, coal and bauxite all seeing an increase between 2016 and 2017.[300]	3
Local inputs (resources, products, services)	Indonesia has some of the world's most important mineral reserves, including copper, gold, tin, bauxite, and nickel. The country is the world's largest nickel producer, the second-largest tin producer (with roughly one third of the world's total production), the fifth-largest coal producer and the sixth-largest gold producer.	4
Infrastructure (transport, utilities, sites)	Inadequate infrastructure (such as power, road, rail and ports) for supporting downstream processing facilities in many parts of the country has been highlighted as an area of concern by investors.[301]	2
Fiscal regime (including any incentives)	Industry representatives would welcome more tailored incentives for the sector, such as tax holidays, to acknowledge the sector's capital-intensive nature, with lengthy payback periods. Meanwhile, the government's move to lower export levies for mining companies that are willing to commit to developing processing / refining facilities is welcomed by industry.[302]	3
	OVERALL ATTRACTIVENESS SCORE:	2.88

[298] According to PwC's Sacha Winzenried, speaking to Oxford Business Group for its *Indonesia 2018* report. Op. Cit.
[299] As reported in The Jakarta Post on 07/05/2019: https://www.thejakartapost.com/news/2019/05/07/indonesia-temporarily-revokes-export-permits-of-five-mining-companies.html Accessed: 16/08/2019
[300] Based on data and analysis in PwC's *Mining in Indonesia Report 2018.* Op. Cit.
[301] Based on discussions with a couple of industry representatives and reinforced in PwC's *Mining in Indonesia Report 2018.* Ibid.
[302] Ibid.

5. Implications, recommendations and conclusions

5a. Overall observations and implications

The SPS heatmap and findings in the detailed scorecards point to some recurring trends across the sectors, and from these, some key investment-related implications for BAPPENAS, BKPM and other GoI entities to consider as it sets about finalising its mid-term development plan for the coming five years:

- When it comes to **'benefits to Indonesia', (i) knowledge and technology transfer and (ii) potential for domestic linkages** received the highest average score across the sectors.
- FDI in education, by its very nature, had the strongest score for knowledge and technology transfer.
- When it comes to the potential for domestic linkages, FDI in tourism and automotive were the two lead sectors.
- In terms of Indonesia's attractiveness to investors, the **domestic and international market potential emerged as the strongest factor overall**. This is a highly encouraging point, since international research on FDI location determinants shows that (i) domestic market growth potential and (ii) proximity to markets and customers are the top two determinants cited by investors globally for the vast majority of sectors.[303]
- The two weakest-performing factors across sectors assessed were **(i) the regulatory environment and (ii) infrastructure.**
- **The regulatory environment remains challenging for the majority of sectors assessed.** Only one sector, tourism, achieved a score of 4, while the majority received a score of 2. The regulations concerned are as varied as the sectors covered, and while some are sector-specific, others, such as the Halal Law and local content requirements (LCRs) present challenges and have implications for multiple sectors.
- **Achieving a more conducive regulatory environment needs to be a GoI priority.** 'Regulations or business climate' is one of the top FDI location determinants globally, according to the Financial Times' data[304], and for the SPS sectors, was the third determinant for the majority of sectors. For existing investors in Indonesia, the regulatory and legal environment reportedly remains a major challenge: only 23 percent of European investors surveyed in 2019 were either positive or very positive about the outlook for Indonesia's regulatory and legal environment.[305]

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[303] FDI location determinants insights from fDi Markets database (Financial Times Ltd.)
[304] Ibid.
[305] Joint European Chambers' Business Confidence Index 2019. Op. Cit.

- Despite the noteworthy and encouraging progress in the past five years, **infrastructure remains a challenge and competitive weakness for Indonesia when it comes to investment.** Again, the availability and quality of infrastructure (most notably transport and ICT infrastructure) are among the top ten location determinants for FDI into ASEAN, while for the sectors assessed in this SPS, transport infrastructure featured as either the third or fourth most important determinant for five of the sectors, as can be seen in the table below.[306]

FDI location motives and determinants globally – by selected sectors:

SECTOR	1ST DETERMINANT	2ND DETERMINANT	3RD DETERMINANT	4TH DETERMINANT
Tourism	A	B	D	H
Food & Beverage	A	B	D	E
Chemicals	A	B	D	E
Textiles & Apparel	A	B	D	C
Automotive	A	B	C	D
Electronics	A	B	C	F
Renewable Energy	A	D	G	E
Pharmaceuticals & Medical Devices	C	B	D	A
Transport & Logistics	B	A	E	D
Cosmetics	A	B	D	E
Education	A	B	D	H
Digital / Creative Industries	B	A	C	D
Financial Services	A	B	D	C

A – Domestic Market Growth Potential
B – Proximity to markets / customers
C – Skilled workforce availability
D – Regulations or Business Climate
E – Transport Infrastructure
F – Technology & Innovation
G – Natural Resources
H – Quality of Life

Source: Author's elaborations based on fDi Markets data (Financial Times Ltd.)

- As mentioned in section two of this study (on the SPS approach and methodology), infrastructure as a sector grouping will and should remain a GoI priority when it comes to FDI attraction. However, by leaving infrastructure to one side, this SPS has been able to devote resources to analysing a greater number of other sectors – most notably manufacturing and services sectors – where FDI can make a long-term sustainable contribution to Indonesia's socio-economic development and directly contribute to boosting exports – whether of goods or services.

- This SPS has identified eight tier 1 priority sectors for FDI attraction, with an additional eight tier 2 high-potential sectors that also offer some promising FDI attraction prospects over the coming

[306] FDI location determinants insights from fDi Markets database. Op. Cit.

five years, subject to some important challenges, constraints and weaknesses being addressed. Implications and recommendations for each of the sectors are set out in the following section.

- It is also important to recognise that the classification of sectors by this SPS is based on the quantitive and qualitative insights gathered to date. Subject to market-based, regulatory or other business environment changes, some of these sectors may possibly demonstrate conditions that warrant a change of tier at some point over the coming five years. As such, the SPS scatter plot should be seen as a 'starting point' to advise BKPM's forthcoming five-year strategy, while acknowledging that certain sectors may warrant 'graduating' to tier 1 status at some point during the strategy's five years, with subsequent implications for annual implementation plans.

5b. Implications and recommendations by sector

TIER 1 PRIORITY SECTORS:

1. Tourism:

- Continue to invest vocational and higher education for the tourism sector to enhance Indonesia's labour and skills offering across the tourism sector. FDI could potentially play a role here, if the education policies become more conducive by enabling such investments. The Indonesia-Australia Comprehensive Partnership Agreement (CEPA) offers some encouraging signs in this regard, particularly with regards to TVET.
- Consider the impact of FDI minimum capital requirement rules on small-scale investors who wish to establish operations in more than one province, since this has been raised as an issue by some smaller-scale investors.

2. Textiles & Apparel:

- Indonesia's labour costs and productivity competitiveness are strong assets and should be leveraged through investment promotion messages and initiatives.
- However, environmental and labour standards need to be addressed to allay investor concerns.
- As with many sectors, enhancing efficiency is a key challenge – part of which involves improving skillsets. While skills levels are broadly strong, foreign investors should be consulted further and encouraged (possibly even incentivised) to make greater contributions to transferring knowledge, technology and supporting vocational skills development in collaboration with SMKs.

3. Digital & Creative:

- There's significant potential for thousands of Indonesian MSMEs and independent craftsmen and women to access new customers through new online marketplaces and platforms – some of which may be established through FDI (e.g. following in the footsteps of foreign companies like Lazada and Shopee.
- Infrastructure deficiencies continue to make it difficult for e-retailers to operate across the country (particularly in more remote parts of the archipelago).
- Data centre regulations require foreign companies to establish data centres in Indonesia, or to use domestic data centre providers. Some investors have indicated these requirements are restrictive. It may therefore be worth conducting a more in-depth assessment on the impact of data centre regulations on FDI decisions in the digital sector.
- Look at addressing issues of internet speeds in Indonesia (both mobile and fixed broadband), which are slower than many ASEAN and other Asian countries.

4. Electronics:

- Foreign investors (e.g. from South Korea) have a track record of contributing to the development of the electronics parts and components industry in ASEAN, although to date, Vietnam and its domestic firms have been the dominant beneficiaries of Korean electronics FDI, with Vietnam becoming a manufacturing hub for Korean electronics firms. The GoI might therefore consult with electronics firms (both consumer electronics and electronic components) from South Korea and other countries on what can be done to further encourage and incentivise knowledge and technology transfer plus domestic linkages in Indonesia.
- Consider conducting impact assessments of LCR and SNI policies on FDI in the sector, since some investors have reported that both policy areas pose challenges, as well as imposing costs and time burdens (in the case of the SNI).
- Look at new site options for electronics manufacturing (industrial estates, SEZs etc., such as the new industrial SEZ under consideration for Java).

5. Food & Beverage:

- Food & Beverage investors, as with other investors in the broader FMCG cluster, have concerns around the Halal Law's implementation. It's recommended that the implementation phasing reflects the GoI's infrastructure readiness (e.g. for efficiency of certifications etc.)
- The impact of regulatory conditions such as LCR and import restrictions (e.g. for industrial salt, sugar and maize) on existing and planned investments should be examined in more depth

- Spatial planning and allocation of more approved and 'clean and clear' sites (industrial estates and/or SEZs) is needed. Investors have reported a general lack of available sites beyond Java. Industrial estates are often a preferred option, to avoid land disputes or issues of unavailability outside estates).

6. Automotive:

- Assess how FDI, with a more conducive enabling environment, can help to address reported skilled labour shortages, including: engineers, technicians, welders, cutters, mechanics and workers in components factories. APINDO recently reported that many automotive SMEs were operating only at half of optimal capacity due to a lack of skilled workers.
- Consult and assess the impact of SNI policies and requirements on FDI operations and investment decisions in the sector, particularly with products such as tyres, wheel rims, glass and lubricants.
- Look at how the tax holiday provisions can be extended to *existing* automotive investors that expand their investments.

7. Financial Services:

- Measures should be taken to enhance cybersecurity and internet speeds (mobile & fixed broadband), enhancing Indonesia's regional competitiveness in this area.
- Consult and assess the impact of FDI caps on investment decisions in the insurance and investment finance subsectors, as some investors say these remain an area of concern.

8. Transport & Logistics:

- Consult and assess the impact of the current foreign ownership restrictions on investors' decision-making plans (whether new or expansions of existing investments).
- Consult and assess the impact of the current taxation regime – especially the 2 percent withholding tax requirements – on investment operations, plus market entry and expansion decisions in the sector.

TIER 2 HIGH POTENTIAL SECTORS:

1. Chemicals:

- Consider a consultation with industry on a workable implementation process for the Halal Law that will minimise disruptions and burdens on the sector, plus assess the law's impact on broader chemicals investment operations and decisions.
- Consult and assess the impact of regulations on Hazardous Substances ("B2") and Hazardous and Toxic Substances ("B3"), plus their reporting measures and requirements, on investment operations and decisions.

2. Agriculture:

- Could an investment-focused biotechnology strategy or roadmap be a worthwhile undertaking?
- Consult and assess the impact of existing restrictions on current and future FDI operations and decisions – especially in areas such as horticulture and plantations.
- There are industry calls for lower agribusiness distribution costs and better warehousing solutions - especially in more remote areas of the archipelago. Could this present a potential opportunity for greater foreign-domestic collaboration, despite the current 67 percent FDI ownership caps for both distribution and warehousing?

3. Pharmaceuticals & Medical Devices:

- Foreign investors could play a greater role in enhancing education in the sector and addressing skills shortages in areas such as pharmaceutical and medical engineering, if the regulatory conditions evolve to make this favourable. There are already some limited examples: the German pharmaceuticals multinational Bayer has recently been training 15 SMK students on mechatronics at its factory in Cimanggis. Since 'skilled workforce availability' is cited as a top determinant for FDI in the sector[307], addressing skills shortages should be a GoI priority if it is to attract more FDI in the sector in the medium to longer term.
- Investors in the sector have concerns around multiple aspects of legislation: consider consulting and assessing the impact of the current legislative and regulatory framework – and particularly the Patents Law, Halal Law and LCRs – on investment decisions among existing and potential investors.
- The current DNI continues to impose a number of restrictions on foreign investors, including an 85 percent ownership cap on patent medicines manufacturing and a 67 percent cap on medical

[307] FDI location determinants insights from fDi Markets database. Op. Cit.

distribution. Both caps present challenges, not least because investors report a limited number of local partners who are able (or willing) to take a minimum 15 percent stake in a patent medicines manufacturing businesses, while the same goes for domestic businesses who can take a minimum 33 percent stake in pharmaceuticals distribution JVs.

4. Education:

- Education is a key 'enabling' sector from an FDI perspective, as it has the potential to contribute to knowledge and workforce-ready skills development in a wide range of sectors and disciplines, including engineering, hospitality, transport and logistics and life sciences – to name but a few.
- Discussions are already well advanced to liberalise the sector for FDI (although reportedly this is more oriented towards TVET than universities).
- E-learning also offers significant FDI opportunities and could also help students in more remote parts of Indonesia to access world-class education resources.
- It could be worthwhile assessing incentives to encourage foreign investors to work with educational institutions in order to develop the systems and curricula which will ultimately produce skilled labour in some of Indonesia's key growth sectors – some investors (for example from the transport and logistics sector) believe there's currently a lack of incentives in this area.

5. Cosmetics:

- There is a limited track record of foreign cosmetics companies such as German fragrance company Düllberg Konzentra investing in R&D in Indonesia. However, some investors in the industry reportedly see a skills deficit in Indonesia, where workers' skills do not fully match industry standards and requirements.
- Cosmetics multinationals have a track record of substantial investments in R&D projects in other large emerging markets such as Brazil, China and India. With the right fiscal incentives – such as the recently-announced Government Regulation No. 45/2019 offering a 300 percent super deduction of tax for R&D and other activities – there's the potential for more R&D activity in the longer term, although skills shortages will still need to be addressed through public- and private sector collaboration on work-ready training and education.
- On the Halal Law, investors have some concerns around the GoI's infrastructure readiness to implement the law, as well as a lack of reference lists for cosmetic ingredients. There are also concerns around a number of Indonesia-specific regulations which continue to be applied across the country and which are not in line with the ASEAN Harmonized Cosmetic Regulatory Scheme (AHCRS) or the ASEAN Cosmetic Directive (ACD).

- Addressing such regulatory challenges and misalignments will be important to improve the sector's business environment.

6. Maritime & Fisheries:

- Spatial planning is an important issue – especially for aquaculture, with instances of industrial zones being given clearance to develop on land upstream from sites allocated to aquaculture. Such cases have clear environmental implications, and as such, mechanisms to improve coordination of spatial planning – especially at subnational levels – should be considered.
- The 100 gross tonnage (GT) limitation for fishing vessels presents challenges for deep-sea fishing.
- It may be worthwhile consulting further with investors on the attractiveness of the current fiscal and incentives regime for the sector. While tax holiday provisions ranging from 5-20 years are available to maritime and fisheries investors in select SEZs such as Bitung and Morotai, a recent report by California Environmental Associates noted a lack of other government incentives for investment in sustainably managed fisheries.

7. Downstream Minerals Processing:

- Despite the recent upswing in the industry, it must be remembered that the industry is often unpredictable and at times volatile, given fluctuations in commodity prices.
- From an investment promotion perspective, Indonesia is already well-known by the global industry for its minerals and other natural resources plus associated potential for downstream activities. It's therefore worth focusing efforts and resources on promoting sectors where Indonesia's offering is either less well-known, or where there's a greater number of competing markets for investment.
- Key concerns for investors in Indonesia remain regulatory uncertainties and the lack of coordination between central and regional governments, according to PwC's Advisor for Energy, Utilities and Mining.[308] In May 2019, the Ministry of Energy and Mineral Resources (MEMR) temporarily revoked the export permits of five mining firms on the ground that they had failed to demonstrate any progress in developing smelters.[309] Such cases, while arguably justified given the prevailing regulations, nevertheless sound the alarm for other minerals companies considering downstream processing activities in the country.

[308] According to PwC's Sacha Winzenried, speaking to Oxford Business Group for its *Indonesia 2018* report. Op. Cit.
[309] As reported in The Jakarta Post on 07/05/2019: https://www.thejakartapost.com/news/2019/05/07/indonesia-temporarily-revokes-export-permits-of-five-mining-companies.html Accessed: 16/08/2019

8. Renewable Energy:

- The question is not whether Indonesia is able to attract FDI in renewables, but whether the current business environment and policy framework is sufficiently conducive to enable Indonesia to fulfill its FDI attraction potential in this sector.
- The 49 percent limitation on FDI in 1-10MW power generation remains a challenge for smaller-scale investors.
- Investors have also reported that the current power purchase agreement (PPA) framework requires costly and time-consuming vendor qualifications, unclear tender procedures and extremely costly PPA negotiations – thus deterring potential new investors, or new projects by existing investors. Investors would therefore welcome simpler and clearer procedures with predictable pricing and PPA terms to reduce costs and attract investment.
- Since 'regulations or business climate' is cited as the second most important determinant for FDI in the sector[310], addressing regulatory challenges should be a GoI priority if it is to attract more FDI in the sector in the medium to longer term.
- Consider consulting and assessing ways in which foreign investors can contribute to improving the availability and quality of workforce-ready skills in critical energy-related disciplines such as engineering and advanced manufacturing.
- Consider consulting and assessing the potential for providing special pricing incentives for operating reserves provided through renewables.

5c. Overall recommendations and conclusions

The global economy is witnessing major changes, some of which will change the course of industries forever. The rise of industry 4.0, automation and artificial intelligence mean that the jobs of tomorrow will be vastly different to those of today, and therefore so too will the required skillsets. Meanwhile, macroeconomic and geopolitical uncertainties fuelled by tensions such as the ongoing US-China trade war raise questions about the prospects for the global trade in goods, and how their significance compared with trade in services will evolve in the years to come.

As of 2018, value-added services represented 43.4 percent of the country's GDP (versus 20 percent for manufacturing).[311] When it comes to FDI, the rise and dominance of services is even more pronounced, with the tertiary sectors collectively constituting 50.9 percent of all DDI and FDI combined in 2018 (and 48.2 percent of FDI that year.)[312]

[310] FDI location determinants insights from fDi Markets database. Op. Cit.
[311] World Bank's World Development Indicators (WDI) portal.
[312] BKPM's Investment Realisation Report 2018. Op. Cit.

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As BAPPENAS leads the finalisation of its upcoming National Medium-Term Development Plan and BKPM develops its five-year strategy, its noteworthy that this SPS has identified a broadly balanced mix of manufacturing and services sectors that should either be prioritised for proactive investment promotion, or should form a core part of the investment climate development agenda.

It is recommended that BKPM and BAPPENAS review each of the sector-specific observations, implications and recommendations outlined in the previous subsection, and use these as a basis for further consultations and dialogue both with their peers in government and representatives from the private sector (both domestic and foreign), in order to identify what policy-related measures and other initiatives should be looked at in the short- medium- and longer-terms to either improve or maximise Indonesia's prospects for attracting quality, sustainable FDI in those sectors.

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