

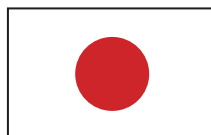


International
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► Decent work and responsible business practices in Indonesia's electronics manufacturing sector



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- ▶ **Decent work and responsible business practices in Indonesia's electronics manufacturing sector**

International Labour Organization • Jakarta



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Foreword

Recent global disruption including the COVID-19 pandemic, together with trade tensions and rising economic and geo-political uncertainty has exposed both the importance and the fragility of global supply chains, especially in the global manufacturing hub of Asia and the Pacific.

As supply chains look to build a future with renewed resilience, there is a growing recognition of the role labour standards and responsible business conduct will play in ensuring this future is inclusive and sustainable.

Amid rising demands for corporate accountability and respect for human rights in supply chains globally, principles of Responsible Business Conduct (RBC) –and with this, adherence to internationally recognized labour standards– are an increasingly important consideration.

In line with these trends, the International Labour Organization (ILO) launched the Resilient, Inclusive and Sustainable Supply Chains Asia (RISSC) project.

Funded by the Government of Japan, the RISSC project aims to foster more resilient, inclusive and sustainable supply chains by promoting decent work and responsible business in a number of key industries, including Indonesia's electronics sector.

The electronics industry is a crucial driver of economic growth and employment in Indonesia, making it a priority sector for the government as part of its future industrialization and development plans. It employs over 300,000 workers (2023), the vast majority of whom are women. The sector contributes significantly to the economy, with total exports valued at USD 7.8 billion and accounting for 13.5% of total Foreign Direct Investment (FDI) (2023). While production remains largely focused on the domestic market, the sector has ambitions for further growth and integration into global supply chains in the coming years.

Moreover, despite having comparably better working conditions than some sectors, the Indonesian electronics industry continues to face a range of decent work deficits which undermine its long term sustainability and competitiveness, particularly among SMEs in the lower tiers of its supply chain.

Among the key issues highlighted by the research are an increasing reliance on short-term and precarious employment contracts, discriminatory hiring and employment practices, elements of coercion (i.e. through document confiscation, for example) and ongoing gaps in basic labour compliance, ranging from wage payments to working hours. Addressing these challenges is essential not only for improving conditions within the industry, but also for strengthening Indonesia's broader position and competitiveness in global supply chains.

To drive meaningful change, the report advocates for coordinated tripartite action involving the government, employers, and trade unions. Key recommendations include the development of a sector-specific industrial policy roadmap in electronics manufacturing, targeted training and support for responsible business practices, and efforts to strengthen public labour inspection and compliance enforcement.

This study serves as a vital evidence-based resource to inform policy discussions and interventions aimed at advancing decent work and responsible business conduct, not just in the electronics sector, but across Indonesia's broader industrial landscape.

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Director

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► Abbreviations

ADB	Asian Development Bank
APINDO	Asosiasi Pengusaha Indonesia (Indonesia's Employers Association)
ASEAN	Association of Southeast Asian Nations
BAPPENAS	Ministry of National Development Planning
BHAM	Bisnis dan Hak Asasi Manusia (Business and Human Rights)
BI	Bank Indonesia (Central Bank/ Bank of Indonesia)
BLKs/BPVP	Balai Latihan Kerja (Vocational Training Centre)/ Balai Pelatihan Vokasi dan Produktivitas (Centre for Vocational Training and Productivity)
BPS	Badan Pusat Statistik (Statistics Agency)
CAGR	Compounded Annual Growth Rate
CBA	Collective Bargaining Agreement
DWI	Decent Work Indicators
EMS	Electronic Manufacturing Services
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GSC	Global Supply Chain
GVC	Global Value Chain

HRDD	Human Rights Due Diligence
ICT	Information and Communication Technology
IDR	Indonesian Rupiah
JABODETABEK	Jakarta and its surroundings (Jakarta, Bogor, Depok, Tangerang and Bekasi)
ILO	International Labour Organization
ISIC	International Standard Industrial Classification
KADIN	Indonesia Chamber of Commerce
MNE	Multi-National Enterprise
NIEs	Newly Industrialized Economies
NTM	Non-Tariff Measures
OECD	Organization of Economic Co-operation and Development
OEM	Original Equipment Manufacturers
PKB	Perjanjian Kerja Bersama (Collective Bargaining Agreement)
PKWT	Perjanjian Kerja Waktu Tertentu/ Fixed Time Work Agreement
PKWTT	Perjanjian Kerja Waktu Tidak Tetentu/ Employment Contract for indefinite period
R&D	Research and Development

RCA	Revealed Comparative Advantage
RBC	Responsible Business Conduct
Sakernas	Statistik Angkatan Kerja Nasional (Indonesia Labour Force Survey)
SEZ	Special Economic Zone
TiVA	Trade in Value Added
UNCTAD	United Nations Conference on Trade and Development
UNGPs	United Nations Guiding Principles
US	United States

► Executive summary

Electronics are foundational to the modern global economy, powering everything from consumer devices that enable instant communication to industrial systems that drive automation and energy management. The rise of smart technologies, AI, and the Internet of Things has further amplified the demand for advanced electronics, while climate and environmental imperatives have fuelled the growth of new sectors such as electric vehicle manufacturing. In the era of globalization, electronics manufacturing has become one of the most globally fragmented supply chains, with production spread across multiple countries to leverage cost efficiencies, specialized expertise, and access to critical mineral inputs. Since the 1980s, regions like East Asia have come to dominate labour -and increasingly capital- intensive manufacturing amid government incentives, robust supply chains and skilled labour, while Europe and North America have excelled in research, design and high-value production.

The electronics industry is a key driver of economic growth and employment in Indonesia, and as such it is one of the government's priority sectors under its Mid-Term Development Plan 2020-2024. Between 2000 and 2015, the industry grew by ten per cent per annum (compound annual growth) and contributed an average of seven per cent to total manufacturing output. However, in recent years, its share of GDP has declined, while other industries have increased their share (including lower value-added sectors like processing and textiles).

In terms of export performance and global market share, the Indonesian electronics sector has lagged behind its neighbours in recent years. At 0.4 per cent, the country has the lowest export market share among the so-called ASEAN-5 group (Indonesia, Malaysia, the Philippines, Singapore, and Thailand), a figure that has remained relatively constant since 1994. At the same time, while Viet Nam's export market share was lower than Indonesia's before 2010 but is now the highest in ASEAN.

Growing regional competition and persistently low productivity have weighed on the sector's international performance, a trend which is also reflected in domestic growth data showing electronics lagging the wider manufacturing sector (compound annual growth in electronics was 8 percent in the most recently available year, 2018, whereas in general manufacturing it was 13 percent). Although disputed particularly by trade unions, businesses have also pointed to rising labour costs (linked to minimum wage increments) as a constraint on industry competitiveness, a trend that has driven growing interest and investment in automation and labour-saving technologies in recent years. Amid these trends, employment growth has stagnated and the use of (more) flexible and insecure contracts has grown, prompting concerns about declining quality of work in the sector. At the same time, the sector still provides far higher wages than the manufacturing sector more generally (USD 333 versus USD 122 in the most recently available year, 2018).

Amid rising demands for corporate accountability and respect for human rights in supply chains globally, principles of Responsible Business Conduct (RBC) –and with this, adherence to internationally recognized labour standards– are an increasingly important consideration for the electronics sector. Driven in part by growing consumer awareness (and media coverage) of human rights impacts from business operations, companies are now increasingly bound by both voluntary and mandatory obligations to safeguard human rights in their supply chains, in line with international instruments like the UN Guiding Principles on Business and Human Rights.

In recent years, there has been a noticeable trend towards legally codifying these corporate obligations to human and labour rights in supply chains. Emerging legislative frameworks vary by country, but generally call for companies to adhere to internationally recognized labour rights, including freedom of association, the right to collective bargaining, the elimination of forced and child labour and

workplace discrimination, and ensuring a safe and healthy working environment. Owing to the investment and export profile of Indonesia's electronics sector, the EU's Corporate Sustainability Due Diligence Directive (CSDDD) and Japan's Guidelines on Respecting Human Rights in Responsible Supply Chains are particularly pertinent in this regard.

This study draws on an extensive literature review and primary stakeholder data collected in the Indonesian electronics sector, with the core aim of analysing challenges and opportunities for improving both decent work and Responsible Business Conduct (RBC) as a catalyst for future growth and competitiveness. Reflective of the industry's structure and composition in Indonesia, the study focuses primarily on home appliance and industrial device manufacturers, with perspectives from Original Equipment Manufacturers (OEMs) and their supplier firms, key government ministries, trade unions, and employer and sectoral business associations, among others. Alongside the quantitative and qualitative analysis, the study also posits a number of key recommendations for industry stakeholders to consider, in both policy and practice, in support of a more responsible and sustainable electronics industry in Indonesia.¹

The research reveals a number of important trends and observations which characterize the current state of decent work and responsible business in the sector. These include a growing use of short term and less secure contracts, which can undermine rights protection and benefits entitlements, as well as ongoing discrimination in both recruitment and employment in the sector, affecting women and union members in particular. Qualitative insights also point to coercive management practices such as document confiscation (in particular, companies withholding workers' college diplomas, ostensibly to prevent them from resigning), which represent risk factors for forced labour under international labour standards. Labour inspection is also highly limited in the sector, meaning basic labour compliance issues on elements like wage payments, contracting and working time, remain prevalent. More generally, while there is growing awareness of responsible business conduct among lead firms at the OEM and Tier 1 levels, there remain significant gaps in awareness, understanding and application elsewhere in the electronics supply chain, with SMEs typically either the incentives or the capacity to meet emerging requirements such as Human Rights Due Diligence.

To address decent work deficits and promote responsible business conduct in the Indonesian electronics industry, the report recommends collaborative tripartite action involving government, employers, and trade unions. The government should develop a sector-specific industrial policy roadmap, enhance support for responsible business practices, strengthen labour inspection and compliance enforcement, and use evidence from the electronics sector to inform future labour law revisions. Employers and EBMOs are urged to invest in strengthening social dialogue, promote industry-wide commitment to RBC, accelerate advocacy efforts, and lead in preparing the industry for growing responsible business requirements. Trade unions are encouraged to collaborate with companies to strengthen social dialogue, build capacity on responsible business practices, establish a network or working group on responsible business conduct, and promote female representation and leadership within the industry and their organizations. All stakeholders should explore sector-specific guidelines on decent work and responsible business conduct, promote the ratification of outstanding ILO core conventions, and collaborate to address skills challenges arising from automation and technological disruption.

¹ Data was collected via In-depth Interviews (IDIs) and Focus Group Discussions (FGDs) in the Greater Jakarta and Batam (Riau Islands) regions, during the period September to November 2023.

► 1. Introduction

The history of Indonesia's electronics industry is closely linked to the role of foreign direct investment (FDI) (Kadarusman & Nadvi, 2013). During the 1970s, Indonesia's import substitution policy proved inviting for Japanese electronics firms in particular which, having already established themselves as technological leaders, flocked to the country amid generous government incentives (aimed at spurring domestic technology transfer) and the prospect of accessing a growing –and at that time still largely protected– consumer market.²

The mid-1980s saw a crucial policy shift towards export-oriented industrialization in Indonesia. Electronics firms from industrialized countries like Japan, South Korea and Taiwan were drawn to the country's strategic location and favourable labour costs and established it as a key base for export-oriented manufacturing. As Indonesia's electronics exports expanded, so too did the role and profile of domestic firms, empowered by newly accumulated knowledge and capacity as suppliers to leading multinationals. This period marked a significant step towards the emergence of a home-grown (domestic-focused) electronics industry in Indonesia (Kadarusman, 2012).

During the 1990s, Japanese investors established large and strategically located industrial areas such as the MM2100 Industrial Town (1990) and East Jakarta Industrial Park/EJIP (1992) (ILO, 2019). The MM2100 and EJIP are home to a range of companies engaged in electronics and related manufacturing activities. Many of the original companies in these areas were Japanese, but in recent years their foothold in the sector has waned amid intensifying competition from Chinese and South Korean multinationals (Kadarusman, 2012).

Despite constraints to competitiveness and employment growth in recent years, the Indonesian government remains committed to the electronics sector and has designated it as one of five priority manufacturing sectors under its flagship national policy roadmap, *Making Indonesia 4.0* (Ministry of Industry, 2020), in recognition of its continued importance to the economy and labour market³. The electronics industry alone employs more than 300,000 workers according to Government data⁴. In recent years, state support for the industry has been heavily characterized by protectionist measures like local content requirements and import restrictions, aimed at shielding domestic manufacturers from inflows of cheap electronics products, especially from China (Kadarusman, 2012).

Objectives and Scope of this Study

The aims of this study are primarily twofold: (i) to analyze the current state of Indonesia's electronics manufacturing supply chain in terms of decent work and human rights due diligence, and to identify gaps and improvement opportunities for the sector amid growing global competition and changing supply chain rules; and (ii) to provide practical, evidence-based recommendations for key industry stakeholders to better support and enable decent work and responsible business conduct in the electronics sector, in line with international standards.

The thematic scope of this study is aligned with the ten substantive elements of the ILO's decent work indicator framework, which was first devised in 2008 in an effort to better measure decent work at the national level. These elements are: (1) employment opportunities, (2) adequate earnings and productive work, (3) decent working time, (4) combining work, family and personal life, (5) work that should be abolished, (6) stability and security of work, (7) equal opportunity and treatment in employment, (8) safe work environment, (9) social security, and (10) social dialogue, employers' and workers' representation. In addition to this thematic focus,

2 he import substitution policy was aimed at replacing imported goods with domestically produced ones. This provided an incentive for foreign companies like Japanese electronics firms to set up production facilities in Indonesia rather than export goods to the country. The Indonesian government offered generous incentives to foreign companies that were willing to transfer technology and know-how to help develop domestic industries.

3 Together, the five priority sectors (which alongside electronics include food and beverage, automotives, chemicals, and textiles and apparel) contribute 60 per cent of manufacturing GDP, 65 per cent of exports, and 60 per cent of employment in Indonesia (Ministry of Industry, 2018).

4 Sakernas 2022, using 2-digit ISIC of 26 and 27.

this study also examines the links between decent work and responsible business conduct, both in theory and practice in the sector, for example through workplace processes such as collective bargaining, grievance handling and dispute resolution, and Human Rights Due Diligence (HRDD).

The main reference frameworks for responsible business used in this research are the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy (MNE Declaration), the OECD Guidelines for Multinational Enterprises, and the UN's Guiding Principles on Business and Human Rights (UNGPs). Among others, these instruments lay out expectations for businesses to respect internationally recognized human and labour rights throughout their operations and supply chains. These include the core labour rights of the ILO Declaration on Fundamental Principles and Rights at Work, namely freedom of association and collective bargaining, the elimination of child labour and forced labour, the right to a safe and healthy workplace, and elimination of all forms of workplace discrimination.

This study focuses on the two primary types of production in the electronics sector in Indonesia: final product assembly and electronics parts and components manufacturers, in the first and second tiers of the supply chain (as per the International Standard of Industrial Classification (ISIC) Revision 4 and Harmonized System (HS) (see Annex 3).

Data Collection Methods

The study is based on a literature review and primary data collection. For the literature review and contextual analysis, it draws upon authoritative national data sources, primarily from Statistics Indonesia (Industrial Statistics) and the Labour Force Survey (Sakernas), to analyze economic, employment and labour force characteristics in the electronics sector.

Primary data, meanwhile, was collected through a series of In-depth Interviews (IDIs) and Focus Group Discussions (FGDs) with key industry stakeholders conducted in the Greater Jakarta and Batam (Riau Islands) regions in the period September to November 2023. These included electronics manufacturers in OEM, Tier 1 and Tier 2 levels of the supply chain, government agencies, sectoral and national trade unions, and sectoral and national employer representative organizations. While focus groups were used for collective insights from stakeholder interest groups, In-depth Interviews (IDIs) were used to acquire further, more detailed qualitative insights from specific representatives.

Six Focus group discussions comprising a total of 49 participants:

1. Central Government (Coordinating Ministry of Economic Affairs, the Ministry of Planning/ Bappenas, Ministry of Labour, Ministry of Industry, Ministry of Law and Human Rights),
2. National employer organizations (APINDO and GABEL, the electronics industry association)
3. Local business and EBMO representatives in Batam (APINDO, KADIN, and industrial park management)
4. Local trade unions in Batam (Electronics and Electronics Workers Union of SPMI, Panasonic Workers Union, Schneider Electric Manufacturing Union, and Metal and Electronics Union Federation of KSBSI.)
5. National trade unions in Jakarta (FSPMI, KSPI, KSPSI CAITU, K-SARBUMUSI, KSPN, FSP LEM, F LOMENIK-KSBSI, Panasonic Gobel Workers Union)
6. CSOs (LBH Jakarta and Trade Union Rights Centre).

In-depth interviews with representatives from 10 institutions, namely:

- ▶ two trade unions,
- ▶ three OEMs (multinational and local)
- ▶ two first-tier suppliers
- ▶ two employer associations
- ▶ one local government agency

Data collection and analysis was followed by a workshop conducted by the ILO in Jakarta to validate the study results among tripartite constituents and industry stakeholders, and to co-design key recommendations for inclusion in this final report.

► **Table 1.1 List of informants**

Number	Informant/ Resource persons	Category	Location
1	Firm A	OEM (Home Appliances)	Jabodetabek
2	Firm B	OEM (Home Appliances)	Jabodetabek
3	Firm C	OEM (Office Equipment/ Home Appliances)	Jabodetabek
4	Firm D	OEM (Industrial Product)/ Supplier tier 1	Jabodetabek
5	Firm E	Supplier – Tier 1 / Tier 2	Jabodetabek
6	Firm F	Supplier – Tier 1	Batam
7	Firm G	Supplier – Tier 1	Batam
8	Labour Union A	Labour Union at Federation Level	Jabodetabek
9	Labour Union B	Labour Union at Firm Level	Jabodetabek
10	Apindo Batam	Employers Association	Batam
11	Batam Department of Manpower	Government	Batam

Risks and Limitations

During the data collection and research process, certain limitations were identified. Firstly, the report was constrained by a reliance on limited secondary data, some of which dates back to 2022 and may be influenced by the COVID-19 pandemic. Secondly, potential bias in responses may stem from varying stakeholder perceptions and understanding levels, particularly on labour and responsible business issues. Thirdly, owing to the limited sample size (i.e. number of respondents), the findings may not be fully representative of the industry at large. However, efforts were made to mitigate this by surveying representative employer and worker organizations with large membership bases and a broader understanding of sector-wide conditions and dynamics. It is important to note that in the interests of privacy and confidentiality, individual company and respondent details are not disclosed in this report.

► 2. Analytical Framework

Global Framework for Decent Work

Decent Work, as defined by the International Labour Organization (ILO), entails productive employment for both women and men under conditions of freedom, equity, security, and human dignity. Accordingly, there are four core pillars of the Decent Work Agenda: job creation, rights at work, social protection, and promotion of social dialogue (see Annex 1). Together they speak to the aspirations of people in their working lives, and they are upheld and put into practice by the ILO's system of international labour standards. These standards provide an essential component in the global governance landscape for ensuring that economic growth also delivers broad-based social and environmental benefits. The ILO agenda aligns with Goal 8 of the UN's Sustainable Development Goals (SDGs), which aims to promote sustained, inclusive and sustainable economic growth, with full and productive employment and decent work for all.

► **Figure 2.1 Pillars of the Decent Work Agenda**



Source: Muchichwa (2019)

In 2008, the ILO developed a framework of mostly quantitative indicators in an effort to standardize the measurement of decent work at the national level. The framework covers ten substantive elements corresponding to the four strategic pillars of the Decent Work Agenda. Decent Work Indicators (DWIs) mostly comprise macro indicators derived from national datasets like Labour Force Surveys, as well as more qualitative legal indicators grounded in national laws and policies. Having enjoyed broad uptake and recognition globally since then, the thematic structure and analytical focus of this research is aligned with, and informed by, the thematic taxonomy of the DWIs.

Global Framework for Business and Human Rights (and responsible business)

Human rights concerns in global supply chains find their substantive origins in the 1990s against the backdrop of rapidly expanding global production networks and the emergence of new low-cost manufacturing hubs

across the developing world. With many global industries increasingly characterised by longer and more complex supply chains, disparities in human rights and labour standards across production locations became increasingly apparent. Notable scandals and growing public calls for greater corporate accountability in the 1990s prompted international policymakers to strengthen the global governance framework for protecting human rights in business operations.

Three main international frameworks and standards addressing issues of business and human rights have risen to prominence in the last two decades in particular. The UN Guiding Principles on Business and Human Rights (UNGPs) provide the pre-eminent global framework for promoting responsible business conduct in all global and domestic supply chains. Introduced in 2011, the UNGPs clarify the corporate responsibility to respect human rights and call on enterprises to conduct Human Rights Due Diligence (HRDD) to identify and address actual and potential adverse human rights impacts arising from their activities. The internationally recognized human rights referred to by the UNGPs encompass the fundamental labour rights set out in the ILO Declaration on Fundamental Principles and Rights at Work.

In addition, the ILO Tripartite Declaration of Principles concerning Multinational Enterprises (MNE) and Social Policy (MNE Declaration) and the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises on Responsible Business Conduct provide further complementary guidelines for promoting responsible business conduct (both were first introduced in the 1970s and have been updated periodically since then). While the MNE Declaration emphasizes labour rights, social dialogue, and practices to build sustainable enterprises (as per the ILO's mandate), the OECD Guidelines cover a broader spectrum of 'responsible business' issues including human rights, employment relations, environmental concerns, and anti-bribery measures. Like the UNGPs, both frameworks are voluntary in nature but lay out clear expectations and responsibilities for business conduct in a wide range of contexts and industries, including electronics manufacturing.

► **Table 2.1 Normative Frameworks for Responsible Business**

	ILO MNE Declaration	UNGPs	OECD Guidelines
Coverage	Employment, training, working conditions, life and labour relations, forced labour, child labour, non-discrimination, freedom of association, and collective bargaining	31 principles, organized under three pillars: Protect, Respect, and Remedy	Business responsibility: labour and human rights issues, environment, disclosure, bribery, consumer, interests, science and technology, competition, and taxation.
Commonalities	Framework for all companies, common understanding of impact, conducting due diligence, responsibility throughout supply chain, access to remedy		

Embedded in all these frameworks, Human Rights Due Diligence (HRDD) has risen to prominence in recent years as a key operational tool to enable companies to meet their responsibility to respect human rights, and in so doing help build greater corporate accountability in supply chains. Envisaged as a process rather than a goal in itself, HRDD involves identifying, preventing, mitigating and accounting for a company's impact on human and labour rights, and ensuring a commitment to stakeholder dialogue and engagement throughout. Moreover, as all three frameworks (the MNE Declaration, OECD Guidelines and UNGPs) have gained greater visibility and traction in the public and private realms over the last decade, so too has the trend towards codifying HRDD expectations into legal requirements at the national and supranational levels.

OECD countries, particularly in the European Union, are leading this governance trend in supply chains. In 2024, the EU adopted the Corporate Sustainability Due Diligence Directive (CSDDD), requiring companies within the bloc (and those with substantial operations there) to exercise greater responsibility over human rights impacts from their operations, including through Human Rights and Environmental Due Diligence. This directive extends to subsidiaries and supply chain partners, compelling thousands of businesses worldwide to conduct due diligence, report on mitigation measures, and provide access to remedy for human rights violations. Given Indonesia's significant trade and investment ties with the EU (EU imports of electrical equipment from Indonesia rose by 29.6 percent to EUR 2 billion in 2022), the CSDDD is expected to further accelerate the demand for responsible business practices across Indonesia's manufacturing industry.

Similarly important to Indonesian electronics is Japan, which is one of the first non-Western countries to adopt a national policy framework on business and human rights (and which will likely influence other countries in the Asia-Pacific region in the coming years). Japan's Guidelines on Respecting Human Rights in Responsible Supply Chains, launched in 2022, apply to all companies conducting business in Japan, as well as their group companies, service providers, suppliers, and other entities in which they invest.¹⁶ There are more than 100 Japanese electric and electronics companies in Indonesia, as well as hundreds more in their domestic supplier networks.

► **Table 2.2. National Laws on Responsible Business Conduct (selected)**

Country	Legislation/ Regulation	Scope and Requirements	Expected impact on business	Voluntary/ Mandatory
US	Section 307, Tariff Act 1930	▶ Applies to importers of goods into the US ▶ Prohibits importation of goods made with defined forced labour including forced or indentured child labour.	▶ Responsibility to contest a Withhold Release Order. ▶ Non-compliance: exclusion from market access and publication of final findings.	Mandatory
United Kingdom	Modern Slavery Act 2015	▶ Applies to businesses with turnover exceeding £36 million operating in the UK. ▶ Requires annual statement on practices and policies to prevent slavery in own operations and supply chains.	▶ Mandatory reporting and transparency. ▶ Non-compliance: injunction to disclose.	Mandatory
Australia	Modern Slavery Act 2018	▶ Similar to UK Act, applies to businesses with annual revenue exceeding \$100 million. ▶ Requires annual modern slavery statement on risks, measures taken, and effectiveness.	▶ Increased focus on transparency and risk management. ▶ Non-compliance: fines and public disclosure.	Mandatory
France	Duty of Vigilance Law 2017	▶ Applies to businesses with at least 5,000 employees in France or 10,000 globally. ▶ Requires "Vigilance Plan" with risk assessment, mitigation strategies, and prevention measures for human rights and environmental risks.	▶ Compliance responsibility for large businesses. ▶ Non-compliance: civil sanctions and exclusion from public contracts.	Mandatory

Country	Legislation/ Regulation	Scope and Requirements	Expected impact on business	Voluntary/ Mandatory
Germany	Supply Chain Act 2021	▶ Applies to businesses with over 3,000 employees (1,000 by 2024). ▶ Requires risk management system for human rights and environmental risks throughout supply chains. ▶ Tiered due diligence based on size and sector.	▶ Increased due diligence efforts throughout supply chains. ▶ Non-compliance: fines and exclusion from public tenders.	Mandatory
US	Uyghur Forced Labor Prevention Act (UFLPA) 2021	▶ Applies to importer of goods made in the Xinjiang into the US ▶ Rebuttable presumption that importation of goods made in Xinjiang or by listed entities is prohibited under section 307 of the Tariff Act of 1930.	▶ Responsibility to provide clear and convincing evidence. ▶ Non-compliance: exclusion from market access and publication of final findings	Mandatory
Japan	Guidelines on Respecting Human Rights in Responsible Supply Chains 2022	▶ Applies to businesses engaging in business in Japan. ▶ Requires human rights policy commitment, HRDD, implementation of remedy, and stakeholder engagement.	▶ Compliance responsibility on businesses regardless of size or sector. ▶ Not legally binding.	Voluntary
EU	Corporate Sustainability Due Diligence Directive (CSDDD) 2024	▶ Broad scope covering large businesses operating in the EU market. ▶ Requires due diligence on human rights, environment, and good governance throughout supply chains.	▶ Compliance responsibility on EU-operating businesses, regardless of size or location. ▶ Liability regime and potential market access restrictions for non-compliance.	Voluntary

Source: Magnusson Law (2023) and author's compilation.

► 3. The stakeholder and policy context in Indonesia

Key Stakeholders

As in other sectors, the Indonesian government, together with representatives of employers and workers are essential stakeholders in the electronics industry. The Ministry of Manpower (MoM) serves as the focal point for implementing decent work nationally, collaborating with employer associations and trade unions, together with planning agencies such as BAPPENAS (the National Development Planning Agency) and the Coordinating Ministry of Economic Affairs (CMEA).

In partnership with the ILO, these stakeholders are the architects and guardians of the National Decent Work Country Programme for Indonesia, which outlines the country's strategic priorities for the labour market. The current DWCP (2020-2025) aligns with national development priorities and global development targets, including "Making Indonesia 4.0" and the 2030 Sustainable Development Goals. It focuses on three main priorities: strengthening social dialogue, promoting sustainable business and worker welfare, creating jobs (especially for youth), and improving the protection of vulnerable worker groups (ILO, 2020).

Additionally, various government institutions guide and regulate business and labour practices in the electronics sector, including the Ministry of Industry, Ministry of Trade, and Ministry of Law and Human Rights. Table 3.1. provides further information on relevant constituents, stakeholders, and their respective roles in the electronics sector.

► **Table 3.1 Mapping of constituents and key stakeholders in the electronics industry in Indonesia**

Constituents/ Stakeholders	Role(s)/Area
Workers' Organizations	► Worker organizations or trade unions to protect and further the interests of their members by negotiating over working conditions and other Decent Work elements. ► Key unions in the electronics sector include SARBUMUSI, KSPSI, FSPMI⁵, and LOMENIK (under KSBSI).⁶
EBMOs	► Participating in the establishment of a social welfare system in the business community through integrated cooperation between the government, employers/enterprises, and workers, within the framework of active participation for the achievement of national aims (APINDO). ► Providing policy advocacy, business information, education and skills training, trade and investment facilitation, arbitration support, business promotion, and strategic collaboration to drive the sustainability and innovation of its members (KADIN). ► Specific employer associations: Indonesia-Association of Indonesian Manufacturer of Electronics and Electric Home Appliance (GABEL), and Semiconductor Industry Association (SIA).

⁵ FSPMI has a strong presence in Batam, a major electronics hub in Indonesia, and has global affiliations with Global Union, IndustriALL and the ITUC.

⁶ LOMENIK represents metal and steel workers, including some electronics factory employees.

Constituents/ Stakeholders	Role(s)/Area
Ministry of Manpower	▶ Minimum wage regulations ▶ Training and vocational education ▶ Industrial relations ▶ Working norms and labour inspection ▶ Labour productivity and competitiveness ▶ Social protection
Ministry of Law and Human Rights	▶ Focal point for human rights in the Indonesia government. ▶ Technical implementor of Presidential Decree 60 (2023) concerning National Strategy on Business and Human Rights
Coordinating Ministry of Economic Affairs	▶ Labour policies coordination ▶ Monitoring and evaluating the implementation of labour policies
Ministry of Planning (BAPPENAS)	▶ Coordinating and formulating development planning of labour policies, industry, export and investment ▶ Monitoring and evaluation
Ministry of Industry	▶ National standard certification (SNI) ▶ Surveillance recertification ▶ Domestic Component Levels (TKDN) ▶ R&D incentives
Ministry of Trade	▶ Mutual Recognition Agreement of SNI and international standard ▶ Raw material importation ▶ Anti-dumping monitoring ▶ Negotiation in dumping practices ▶ Letter of Credit (L/C)
Ministry of Finance	▶ Tax incentives ▶ 200% super deduction tax incentive on apprenticeships, internships and teaching activities ▶ Tax reduction or elimination (e.g. VAT) ▶ Import duty regulation (in particular raw materials) ▶ Raw material importation (Customs) ▶ R&D incentives
Ministry of Investment/BKPM	▶ Starting a business ▶ Investment facilities and incentives ▶ Domestic Component Level (TKDN) – with MoI ▶ R&D incentives
Ministry of Energy	▶ Renewable energy usage

Source: Authors' compilation, based on ADB (2023), ADB (2014), Brodzicki (2021), Asean-Japan Center (2021)

Constituents/ Stakeholders	Role(s)/Area
Ministry of Transportation	▶ Logistics – container availability
Indonesia Eximbank (LPEI)	▶ Export finance facilities ▶ Letter of Credit (L/C)
Regional governments	▶ Minimum wages ▶ Investment facilities
National Consumer Protection Agency	▶ Protecting the rights of, and promoting the recourses available to, users of both goods and services in Indonesia
Responsible Business Alliance (RBA)	▶ Improving working and environmental conditions and business performance through leading standards and practices
International Labour Organization	▶ Setting standards and guidelines, promoting employment, protecting workers' rights, addressing specific challenges, monitoring and evaluation

Source: Authors' compilation.

Labour laws

Indonesia's labour regulations underwent a significant overhaul in recent years, with the passage of Law No. 11/2020 (commonly known as the Omnibus Act) in 2020. Aimed at expanding employment opportunities and enhancing workforce productivity, the law introduces a range of new provisions including variations in minimum wage calculation and a formula for minimum wage adjustment (under specific conditions), revisions in Fixed-Term Employment Agreements (PKWT) with a maximum contract period of five years (MK, 2023), bipartite negotiations for layoff settlements, adjusted leave regulations, and job loss assurances. The Ministry of Manpower-regulated employment provisions now defer to central government provisions.

The law has faced controversy and protests from civil society and trade unions since its enactment, many of whom argue they were largely excluded from the formulation process, and that the new law downgrades workers' rights by allowing more job insecurity (especially for fixed-term contract workers), more outsourcing and unilateral employer authority in employment termination. Table 3.2.1 summarizes these recent legal reforms and their implications, organized by Decent Work theme.

In addition to the Job Creation Law, a number of other laws are relevant to decent work in the electronics sector, including the Manpower Law No. 13 (2003), Law No. 1 of 1970 on Occupational Safety and Health (especially as OSH is now a Fundamental Principle and Right at Work), and the amendment to Law No. 11 of 2023 on Employment Creation Law. Like the Job Creation Law, the Employment Creation Law in particular has been criticised by trade unions both for its lack of prior consultation and for allegedly weakening job protections, among others by easing termination rules and removing limits on contract durations and the number of outsourced workers.

Business & Human Rights Policies

In 2023, Indonesia enacted Presidential Regulation No. 60, establishing the National Strategy for Business and Human Rights (Stranas BHAM). Drawing reference from the United Nations Guiding Principles on Business and Human Rights (UNGPs), the strategy clarifies the state's obligation to protect human rights in business activities, together with the corporate responsibility to respect human rights, and the importance of effective mechanisms for addressing violations and providing access to remedy.

As Indonesia's de facto National Action Plan on Business and Human Rights (a UN-led initiative), the strategy puts the country among the few in ASEAN with such a national policy commitment. Its key priorities are threefold, namely raising awareness among businesses and government officials, reinforcing legal and institutional frameworks, and fostering stakeholder collaboration. It also notes the importance of HRDD, encouraging businesses to assess potential human rights impacts across their operations and supply chains, identify risks, implement preventive measures, and remediate harm.

Alongside Regulation 60, the government also introduced PRISMA, a web-based self-assessment tool for businesses to benchmark their own practices against national and international human rights standards. PRISMA assists companies in identifying and mitigating human rights risks, aligning business practices with human rights principles, and demonstrating commitment to Responsible Business Conduct. Despite its voluntary nature and limited adoption by around 240 companies to date, the government expects PRISMA to eventually become a key resource for businesses, and an important vehicle in helping deliver the National Strategy.

The Stranas BHAM positions Indonesia well to become a regional leader in promoting responsible business (underpinned by renewed commitments to Decent Work), with clearly articulated responsibilities for the government and enterprises. At the same time, success will depend on effective coordination and implementation (across government and the private sector), robust monitoring mechanisms, and genuine stakeholder engagement. In this regard, the government and other stakeholders recognise that the strategy will require further elaboration in the coming years to enhance practical applicability, particularly at the business level.

► 4. Research Findings and Analysis

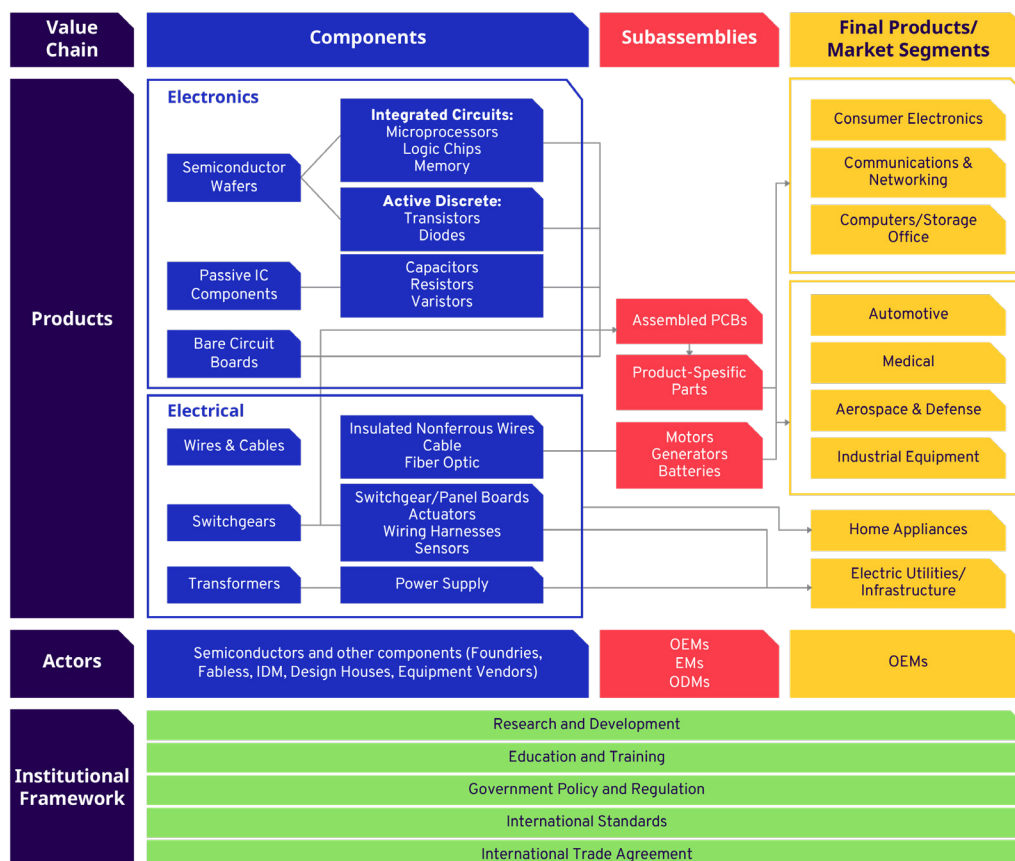
This chapter is divided into two sections: (1) Industry Analysis, (2) Thematic Analysis of Decent Work and Responsible Business Conduct within the electronics sector. The analysis is grounded in national data to enhance our comprehension of the current industry situation and is further supplemented by qualitative insights derived from focus group discussions and in-depth interviews with key industry stakeholders. Through this approach, the study provides a comprehensive examination of the disparities between regulatory frameworks and their practical application, identifies Decent Work deficits, risks and opportunities, and highlights opportunities for enhancing the implementation of Responsible Business Conduct in line with evolving national and international expectations.

Electronics Industry Profile

The global electronics industry

The electronics industry has a complex and segmented supply chain, with production having become increasingly dispersed across firms and geographies in the last four decades. Figure 4.1 is a business process map of the global electronics industry, outlining the main stages of component manufacturing, sub-assembly, and end-product manufacture and assembly. While final product assembly is typically dominated by large OEMs, upstream stages such as sub-assembly and component manufacturing are often undertaken by a diverse network of companies in geographically disparate locations.

► **Figure 4.1 The Electronics Value Chain**



Source: Frederick & Gereffi (2016)

Starting in the 1970s amid an era of rapid industrialization, East Asia has emerged as the pre-eminent global hub for electronics manufacturing, helped by strong government support, subsidies and investments in R&D and skills development. Companies from Taiwan, South Korea, and Japan came to dominate the sector, although that has changed in recent decades as China has become a pre-eminent manufacturing force, particularly in the high-tech and mass-market segments (see Table 4.1). Indonesia, for its part, has historically specialized in consumer and industrial electronics manufacturing, driven initially by foreign investors attracted by an abundant skilled labour force and huge domestic consumer market.

► **Table 4.1 Asia's electronics industry landscape**

Country	Main Products	Main Companies	Competitive advantage
Taiwan	High-tech components (semiconductors, memory chips)	TSMC, Foxconn	Strong government support, R&D capabilities, skilled workforce
South Korea	Advanced displays (OLED, LCD panels)	Samsung, LG	Established technology, large domestic market, export infrastructure
Japan	Sophisticated electronics (quality & innovation)	Sony, Panasonic, Canon	Brand reputation, strong R&D, focus on niche markets
China	High-tech components & final assembly (smartphones, laptops)	Huawei, ZTE, Apple (assembly)	Large domestic market, government support, diversified production
Vietnam	Low-cost manufacturing (smartphones, components)	Samsung, Intel	Low labour costs, proximity to East Asian markets, trade agreements
Malaysia	Printed circuit boards (PCBs), sub-assemblies	Various brands	Established electronics industry, skilled workforce, trade agreements
Thailand	Automotive electronics, hard disk drives	Seagate, Western Digital	Growing domestic market, trade agreements with Japan
Philippines	Semiconductor packaging & testing, mobile phone assembly	Infineon, ON Semiconductor, Nokia	Low labour costs, skilled workforce, government incentives
Indonesia	Smartphone assembly, home appliances, components	LG, Panasonic, Samsung	Large and growing domestic market, government incentives, developing workforce

Source: Authors' compilation, based on ADB (2023), ADB (2014), Brodzicki (2021), ASEAN-Japan Center (2021)

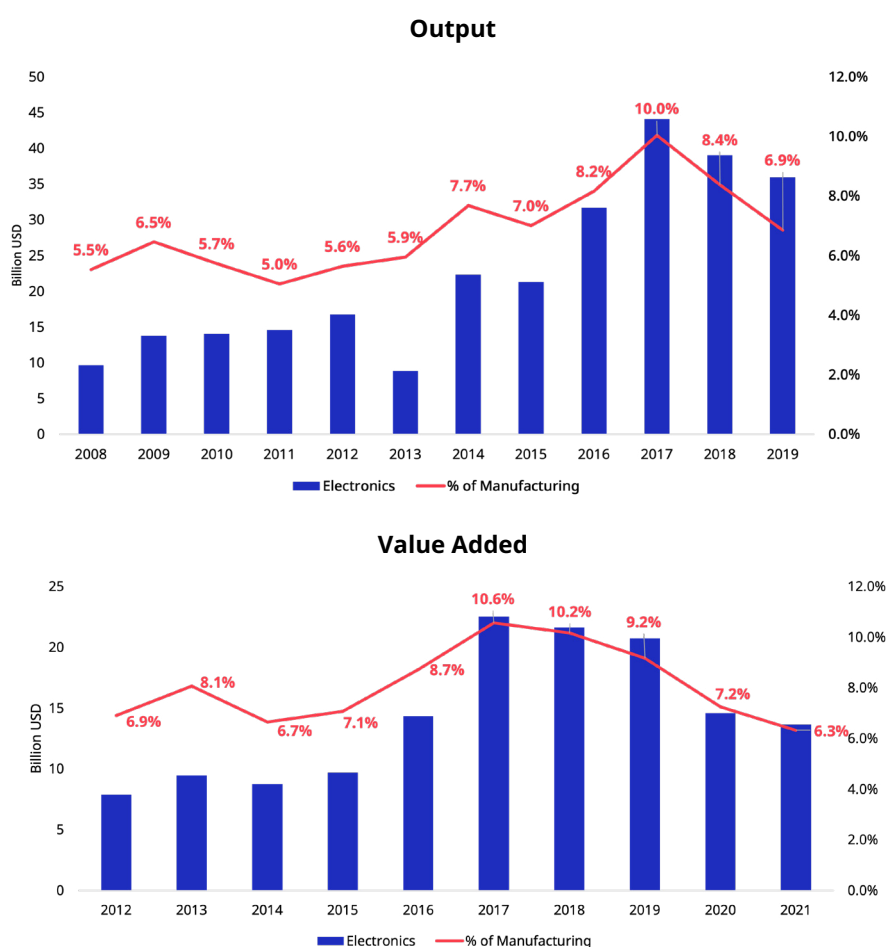
7 Data from the IBS Survey indicates a higher share of employment for female workers. In this study, we used Sakernas data to show the share of employment by gender, as Sakernas covers all types of companies, including micro-, small-, medium-, and large-enterprises, while the IBS Survey only provides data for medium and large enterprises. Additionally, a weight variable is available in the Sakernas data, allowing for national-level inference. The IBS Survey does not provide a weight variable.

The Indonesian electronics industry: economic profile and performance

Over the last decade and a half, electronics output in Indonesia expanded rapidly, reaching a high of USD 44 billion in 2017 (Statistics Indonesia, 2023). Despite experiencing double digit growth over this period, the industry's contribution to total manufacturing output remained relatively stable at around 6.8 per cent from 2017 to 2019 (Figure 4.2a). Similarly, value added increased notably since 2016, particularly in 2017, reaching USD 22.5 billion. Nevertheless, its share of total manufacturing remained steady from 2012 to 2021, with an average contribution of about eight per cent during that period (Figure 4.2b).

The electronics industry in Indonesia is dominated by the manufacture of computers, communication devices, consumer electronics (3Cs)⁷, and electronics components. The output value of these products also increased from 2000 to 2020, with the output value of 3Cs and components reaching USD 5 billion and USD 11 billion, respectively, in 2020 (see Figure 4.3). The output value of component products also more than doubled between 2010 and 2015. Industrial and medical products meanwhile made a lower contribution to overall sector output, indicating constraints on growth and competitiveness in that sub-sector. By value-added, the growth rate of 3Cs products during 2012-2021 period was 8.2 per cent (CAGR) while component products rose significantly at a rate of 5.5 per cent (CAGR). These products are expected to grow in the future due to strong domestic demand, particularly in audio-video electronics, household appliances, and smartphones.

► **Figure 4.2 Output and value added of the electronics industry and its share of total manufacturing (billion USD)**

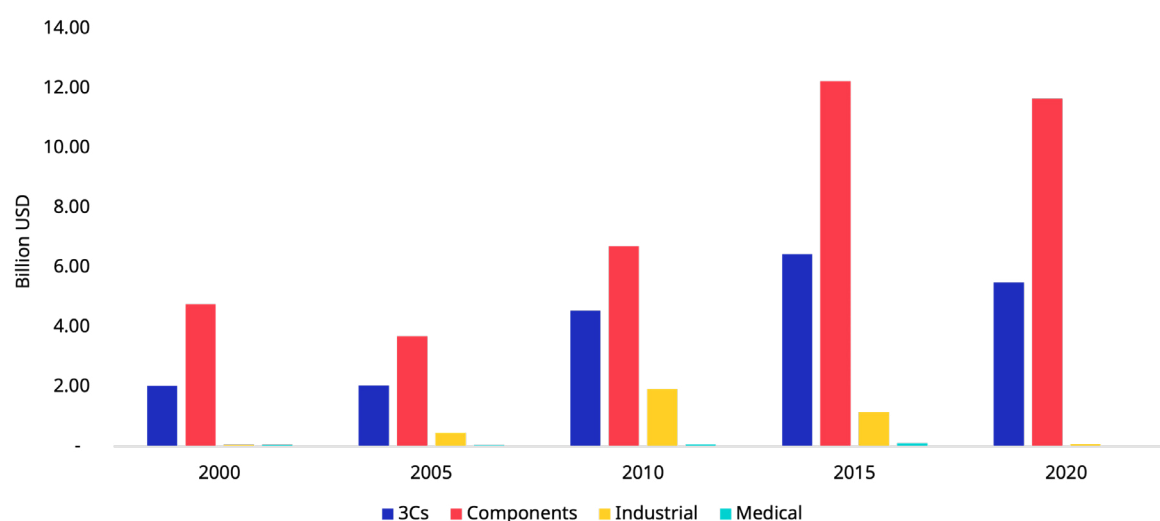


Source: Industrial Statistics - Statistics Indonesia (BPS), 2023.

Note: Producer's index adjusted for value added.

⁷ Computer, communication, and consumer electronics (3Cs) classification is in line with Sun (2021).

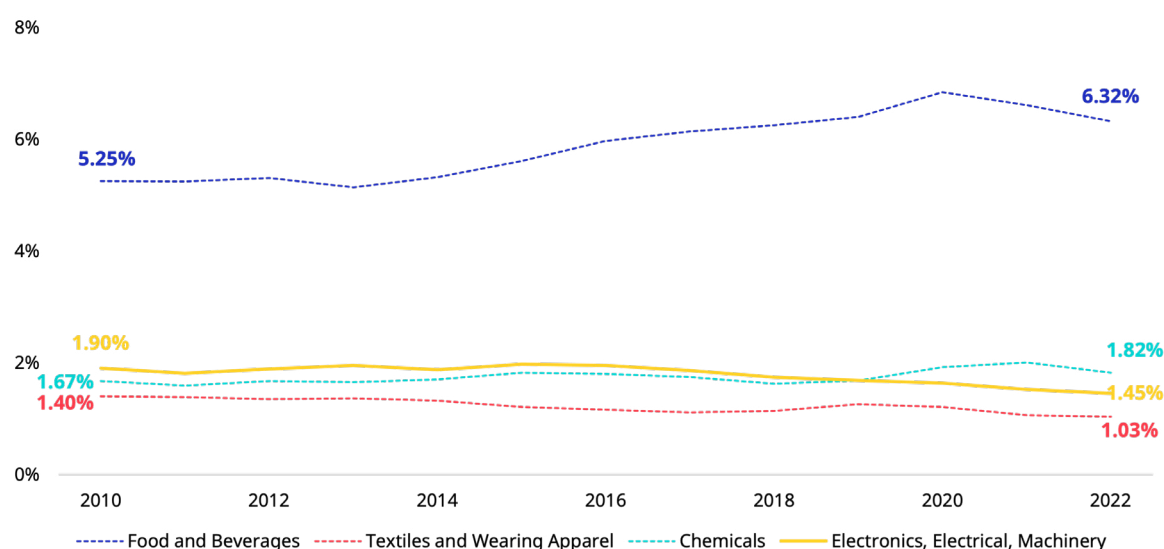
► **Figure 4.3. Total output by electronics product classification 2000-2020 (billion USD)**



Source: Industrial Statistics (processed) - Statistics Indonesia (BPS), 2023.⁸

The electronics industry's contribution to Indonesia's GDP has not grown over the past decade. As shown in Figure 4.4., which maps major manufacturing sectors' share of overall GDP, the electronics sector accounted for 1.9 per cent of GDP in 2010. By 2022, its share had fallen to 1.45 per cent. So while lower value-adding industries like food and beverages have seen an increasing share of GDP in Indonesia, electronics as a proportion of economic output has actually decreased.

► **Figure 4.4 Share of GDP for leading manufacturing sectors in Indonesia 2010-2022**



Source: Statistics Indonesia (2023).

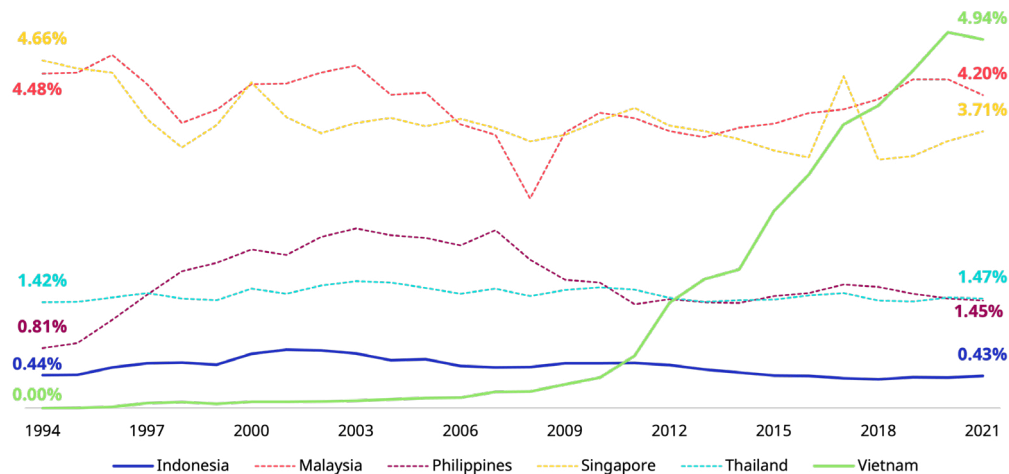
Indonesia's electronics industry has long lagged behind its neighbours in terms of global market share. In 2021, ASEAN's overall export market share for electronics reached 16.24 percent, up from 11 percent in 1995. China, however, held a dominant share of 28% in 2021, underscoring its role as the world's largest producer and consumer of electronic products⁹. Within ASEAN, Indonesia has consistently held the lowest export market share, flatlining at around 0.4 percent since 1994 (Figure 4.5). In contrast, Viet Nam's market

⁸ 3Cs- Computer, Communication and Consumer electronics

⁹ The Atlas of Economic complexity, accessed on 13 October 2023.

share, which was lower than Indonesia's before 2010, has surged to the highest in ASEAN, driven in part by state incentives for FDI and the relocation of Chinese electronics manufacturers, among other factors.

► **Figure 4.5 Global market share of electronic products for selected ASEAN countries 1994-2021**

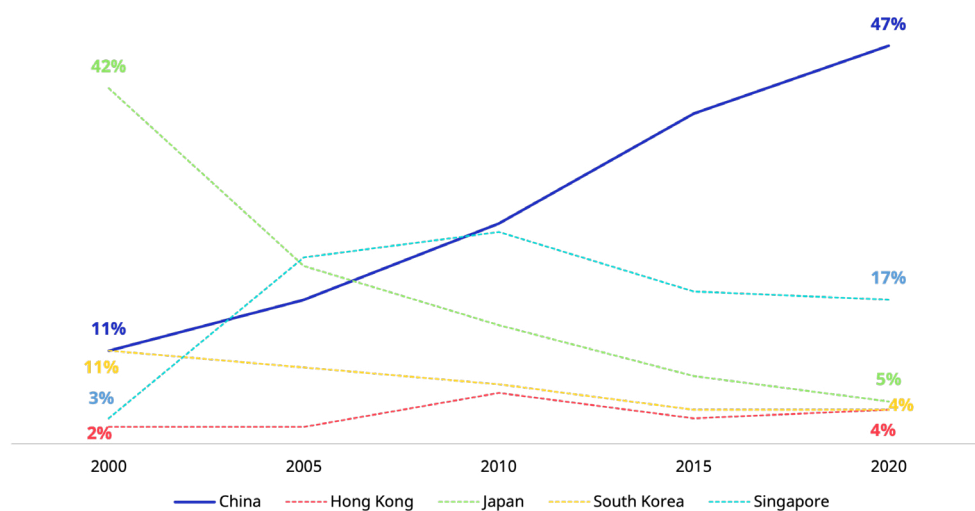


Source: Atlas CID Harvard

Trade in electronics

While globally, growth in exports has often been empirically linked to growth in productivity, in Indonesia, expanding value-added in electronics has taken place amid generally modest export performance¹⁰. The industry's export value remained relatively stable in the decade to 2020 (see Figure 4.7), reaching USD 10.5 billion (in 2020), with the main destinations being regional (within Asia) than global, with the exception of the United States (Figure 4.8). Meanwhile, the value of electronics imports has risen, from USD 17.3 billion to USD 18.7 billion, over the same period -a trend that is indicative, potentially, of growing reliance on imported components for production.

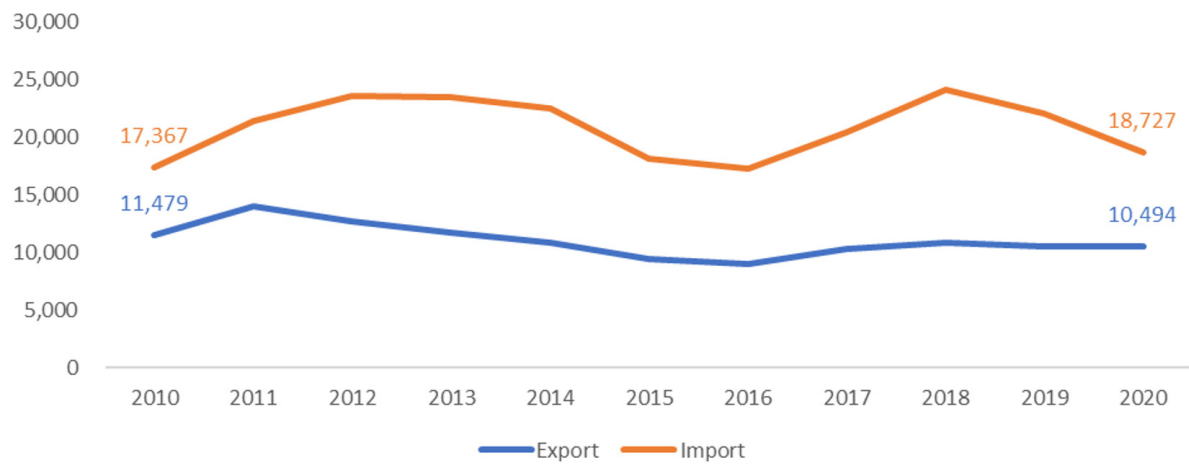
► **Figure 4.6 Percentage of electronics products imported from selected countries out of Indonesia's total imports of electronics products (2000-2020)**



Source: OECD TIVA Database

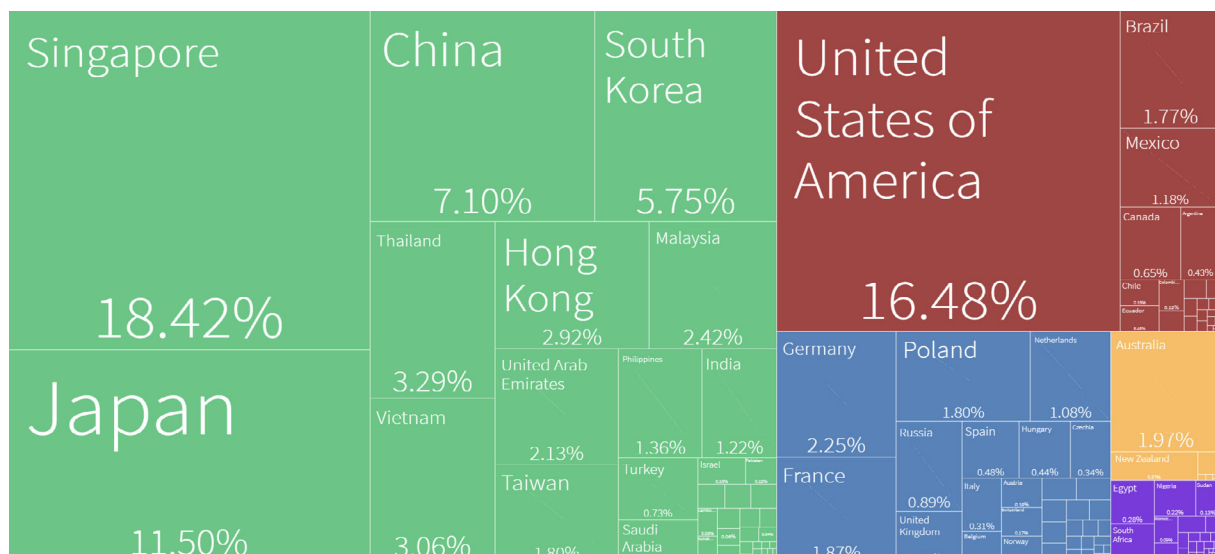
¹⁰ See, for example, Narjoko and Urata (2020), that review several case studies from the experience in countries in Southeast and East Asia on this. In general, the studies on these countries confirm the validity of learning by exploring (LBE) hypotheses that once a manufacturer self-selects in to an export market, it tends to stay in the market and consistently increases its productivity overtime.

► **Figure 4.7 Indonesia's export and import of electronics and electrical equipment (2010-2020, million USD)**

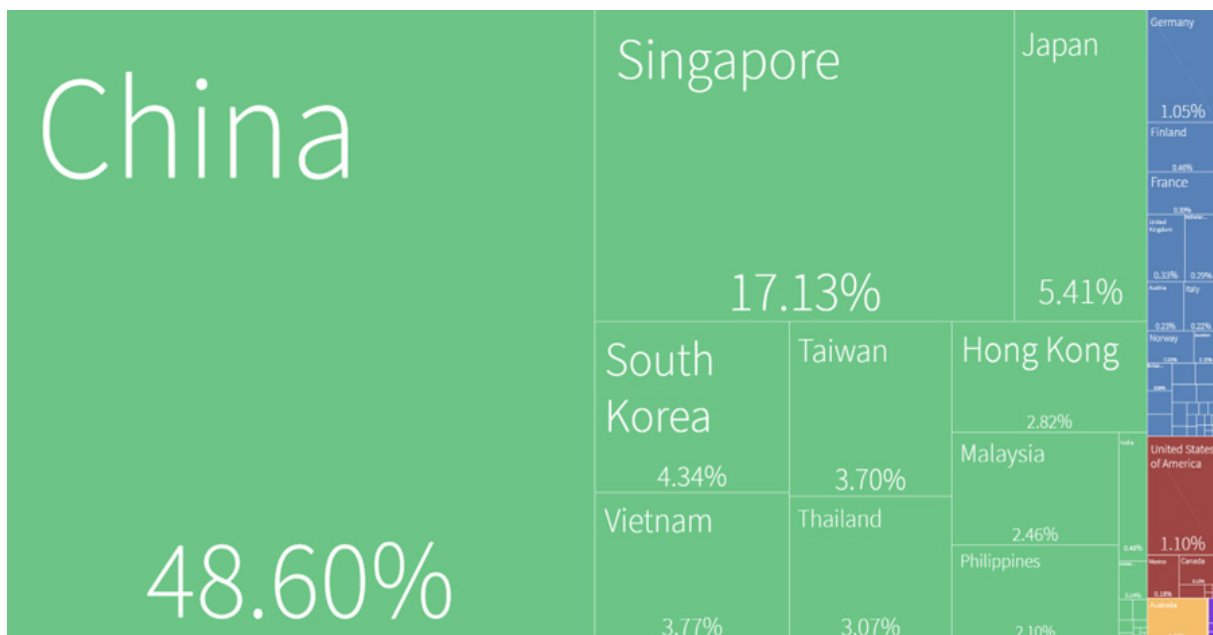


Source: Atlas CID Harvard

► **Figure 4.8 Export destinations for Indonesian electronics (2021)**



Source: Atlas CID Harvard

► **Figure 4.9 Source of Indonesia's electronics imports (2021)**

Source: Atlas CID Harvard

Indonesia imports more electrical products by value than it exports, although this gap has narrowed in recent years due in part to the Local Content Requirements (LCR) policy¹¹. In 2021, the primary destination for electronics exports (from Indonesia) was Singapore – a trend that reflects the city-state's role as a major logistics and distribution hub for electronics produced in nearby Batam (Indonesia). China was the main origin of electronic imports to Indonesia, accounting for 48 per cent of the total by value. This speaks to the growing competitive challenge Chinese companies are posing for traditional electronics manufacturers in Indonesia, particularly in the fast-moving consumer goods segment (ILO, 2019).

In Batam, where the industry is heavily export-oriented, focus groups with employer associations identified growing competition from imported Chinese goods as a significant constraint on industry growth. Interviewed trade unions, meanwhile, raised concerns that competitive pressures are compelling many manufacturers to adopt cost-cutting measures that negatively impact on the workforce and working conditions in the sector.¹²

Focus groups discussion with trade union representatives revealed concerns about the perceived influx of low-priced import (mostly from China), which they believe has undermined the competitiveness of Indonesian manufacturers and prompted many to scale back production and employment. Although the Indonesian government has introduced a range of countermeasures to bolster the industry in recent years, including local content requirements and import restrictions, they appear to have had limited effect, either in boosting local competitiveness or spurring wider job creation in the sector.

Geographical distribution of electronics manufacturing

In terms of geographical distribution, the provinces with the highest number of electronics companies are West Java (300), East Java (96), Batam (Riau Islands) (82), and Banten (78) (see Figure 4.10). Those numbers have remained consistent since 2000 (Figure 4.11). In West Java, the number of companies formed a U-shaped pattern, while from 2000 to 2015 the trend in East Java slightly increased. The decision of firms to locate in Java follows the general pattern of manufacturing investment in Indonesia, which has been historically concentrated in this region. Those located in Riau province are essentially all on Batam island, which as a special autonomous region offers special incentives for investors to establish export-oriented manufacturing

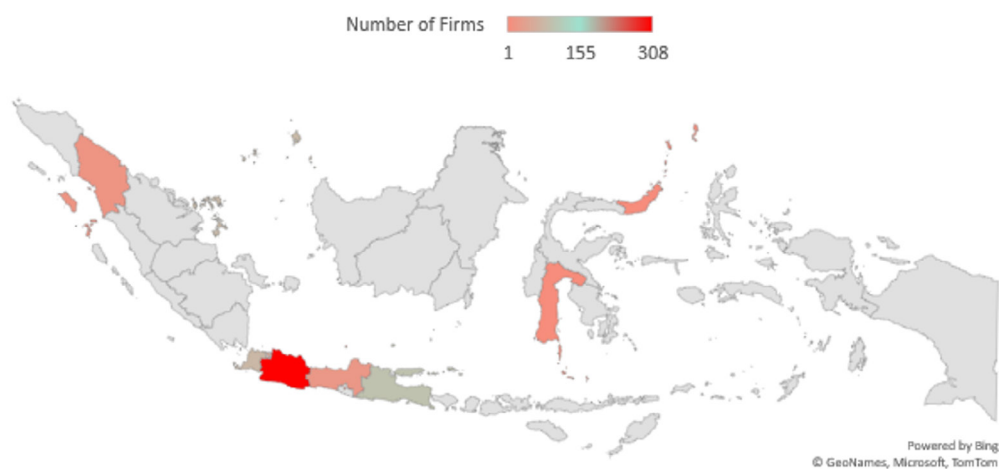
¹¹ The picture is mixed, however. In Batam for example, electronics firms interviewed for this study claimed that electronics firms in that location still import up to 80 per cent of their production inputs, even despite the LCR policy.

¹² Substantiating these claims, a variety of studies have revealed several adverse employment practices in the electronics sector in recent years, including growth in the use of flexible employment arrangements, and evidence of both non-voluntary overtime and restrictions on freedom of association and collective bargaining (ILO (2014), Raj-Reichert (2016), Verite (2014), Matsuzaki (2015), and Torsekar and VerWey (2019).

operations. The number of companies in the Riau Island region and Banten decreased in the same period.

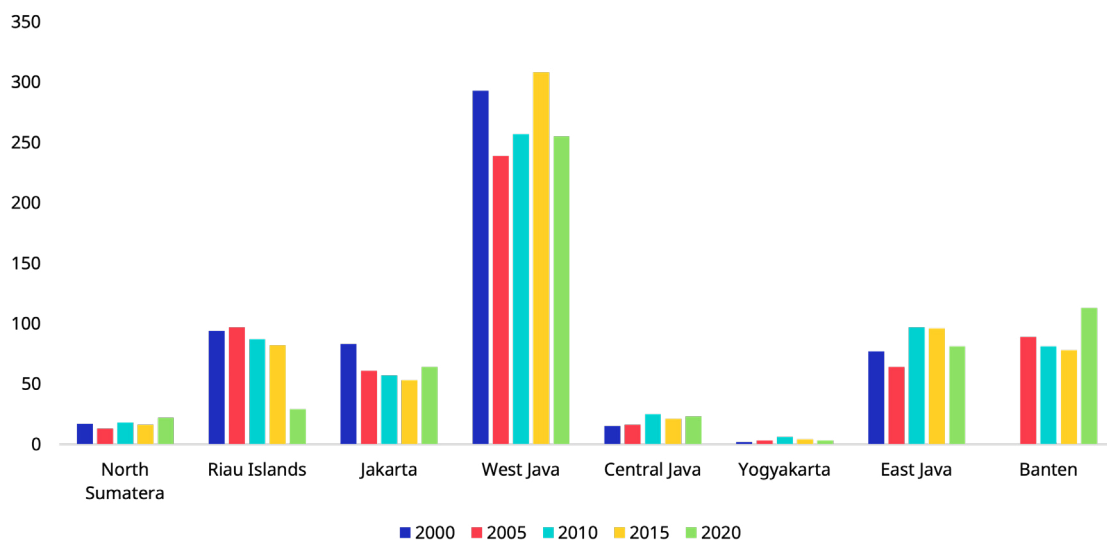
Batam and Java remain key regions for electronics manufacturing in Indonesia, for different reasons and with different dynamics. Supported by government incentives and proximity to Singapore, Batam saw a rapid rise in the 1990s with a focus on electronics components and final assembly of lower-value electronics products. In contrast, Java's electronics industry has a longer history and wider product range, with established domestic and international brands producing mostly consumer electronics for various market segments (van Grunsven & Hutchinson, 2017). While infrastructure is more developed in Java, higher labour costs and growing competition pose challenges, while most investors are attracted to Batam for its free trade zone status and generous investment incentives (even despite a number of infrastructure limitations).

► **Figure 4.10 Geographical distribution of electronics firms (2015)**



Source: Industrial Statistics (processed) - Statistics Indonesia (BPS), 2015.

► **Figure 4.11 Electronics firms' geographical distribution dynamic (2000-2015)**



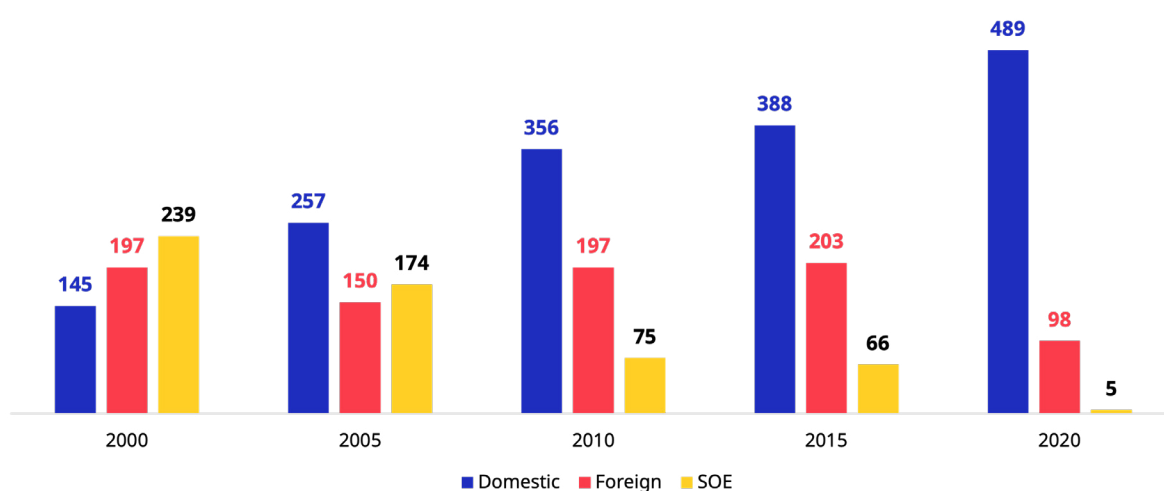
Source: Industrial Statistics (processed) - Statistics Indonesia (BPS), 2000-2015.

Note: Banten, as an independent province, was inaugurated in the year 2000. Consequently, any specific data or records pertaining to Banten before this year would not exist, as it was part of West Java until its establishment.

Enterprise profile

In the 2000s, there was an explosion in the number of private electronics firms and a precipitous decline in the number of State-Owned Enterprises (SOEs) in the sector. While private firms more than tripled in number from 145 in 2000 to 489 in 2020, the number of SOEs collapsed from 239 to just 5 (Figure 4.12). At the same time, the number of foreign-owned electronics firms also declined as domestic firms continued to grow. With foreign firms typically more likely to be export-oriented, reputation sensitive, and bound by stricter social and environmental compliance standards, this trend may have implications for wider industry prospects vis-à-vis responsible business, as domestic firms tend to lack the resources and incentives to invest in these areas.

► **Figure 4.12 Number of electronics firms based on firms' ownership**

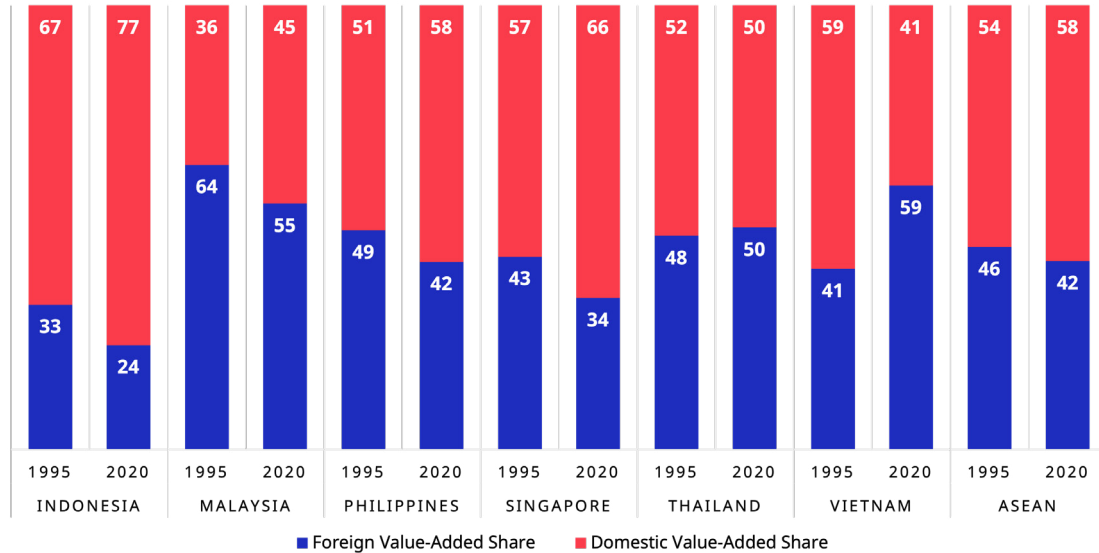


Source: Industrial Statistics (processed) - Statistics Indonesia (BPS), 2000-2020.

Integration into global supply chains

Indonesia's participation in global supply chains lags behind that of other ASEAN nations (see Figure 4.13 and Figure 4.14), although this is somewhat understandable owing to its relative size and economic self-sufficiency. Generally, countries can typically engage in global supply chains via either forward or backward participation, or both. Forward participation pertains to a country or sector's role as a supplier of inputs to destination countries. This is commonly observed in resource-abundant economies that extract and export raw materials for manufacture and consumption (via global supply chains). In contrast, backward participation refers to countries (or sectors) that utilize inputs imported from other countries, for example in manufacturing finished goods for consumption or export. Due to its association with the creation of value added through manufacturing, the latter often denotes a deeper or more substantive level of integration into global production networks.

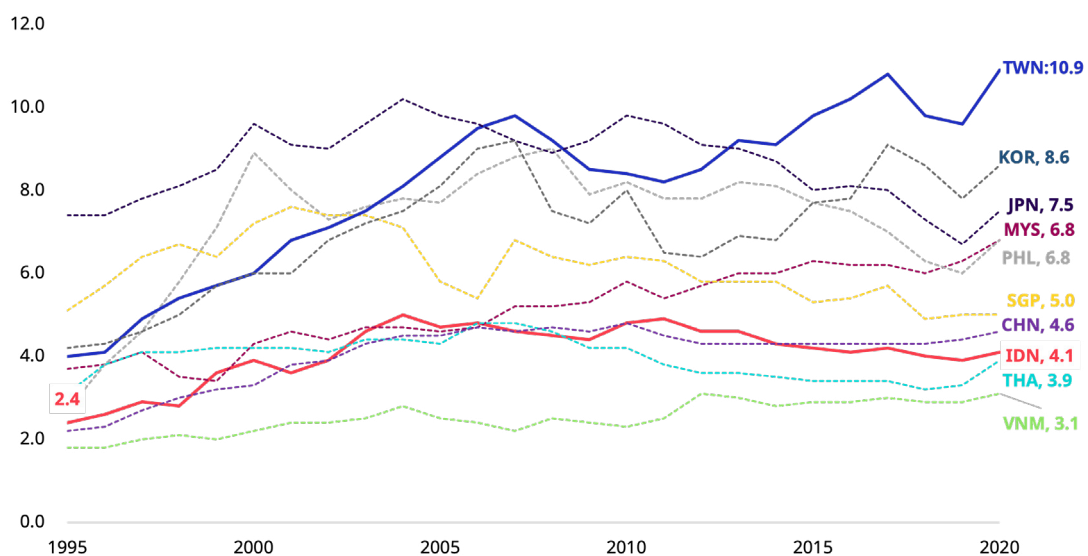
► **Figure 4.13. Foreign value-added and domestic value-added share in export of electronics industry products for selected ASEAN countries (1995 & 2020)**



Source: OECD TiVA Database (2023).

Figure 4.13 illustrates Indonesia's low level of *backward* participation in global supply chains (measured by its low share of foreign value-added in its electronics exports), which declined from 1995 to 2020. An alternative interpretation suggests that Indonesian products are approaching the status of finished goods, particularly as electronics production in the country is predominantly geared towards the domestic market (ASEAN-Japan Center, 2021). In contrast, stronger (or growing) backward linkages are often associated with comparably higher quality inputs and more efficient utilization of productive inputs.

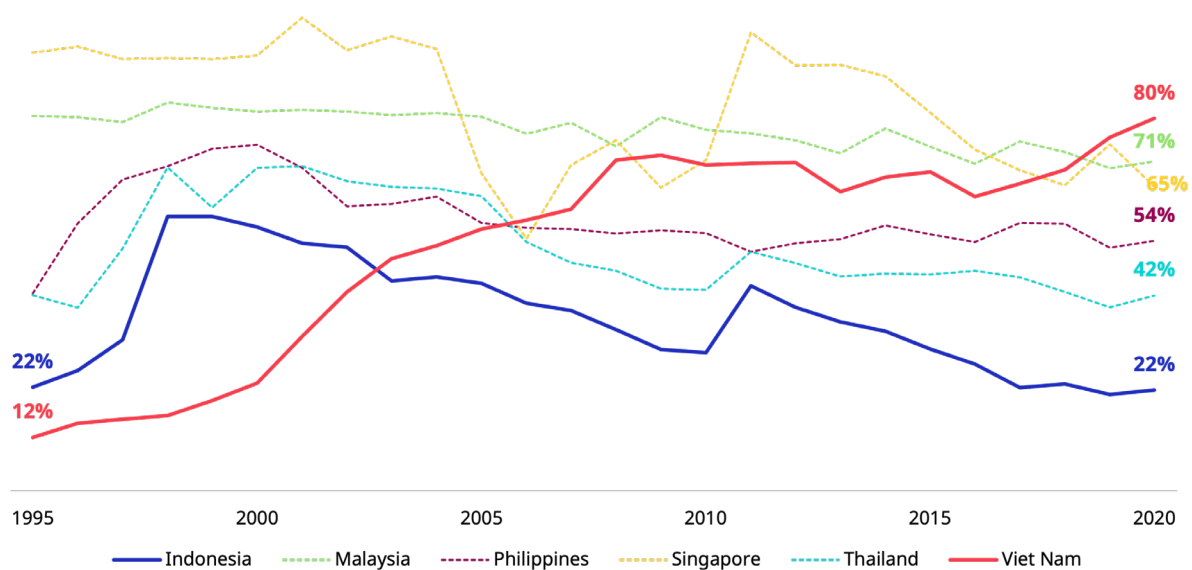
► **Figure 4.14 Domestic value added embodied in foreign exports as a share of gross exports (%)**



Source: OECD TiVA Database

At the same time, owing to its focus on final assembly and production for domestic consumption, the Indonesian electronics sector also demonstrates relatively low forward supply chain participation, especially when compared to Taiwan, for example, which specializes in domestic production and assembly of high-value semiconductors and silicon chips (Figure 4.14). This dynamic reduces the share of domestic value-added products that make up Indonesia's electronics exports.¹³

► **Figure 4.15 Percentage of electronics sector output exported for selected ASEAN countries (1995-2020)**



Source: OECD TiVA Database

Based on Figure 4.15, Indonesia's electronics industry had a relatively low export share at 22 per cent from 1995 to 2020. This is in contrast to Viet Nam's export share which increased from 12 per cent to 80 per cent over the same period. Indonesia's electronics industry's low share of exports suggests that it is more focused on its domestic market than on exports (ASEAN-Japan Center, 2021).

Non-Tariff Measures (NTMs) are another key factor affecting supply chain integration and export expansion prospects for Indonesian electronics. Over the past decade, NTMs have significantly expanded and evolved in advanced economies in Europe and North America, particularly through the implementation of stricter social and environmental standards for globally traded products. As key export markets for Indonesian electronics, the sector has significant exposure to these standards. In 2021, the US accounted for 16.5 percent of Indonesian electronics exports, while EU countries collectively accounted for 10 percent (with Germany and France being the largest destinations at 2.25 percent and 1.87 percent, respectively).

¹³ Viet Nam, for example faces similar challenges, with high backward participation, but low forward participation due to its focus on final product assembly.

Challenges and Opportunities for Decent Work and Responsible Business Conduct in the Electronics Sector

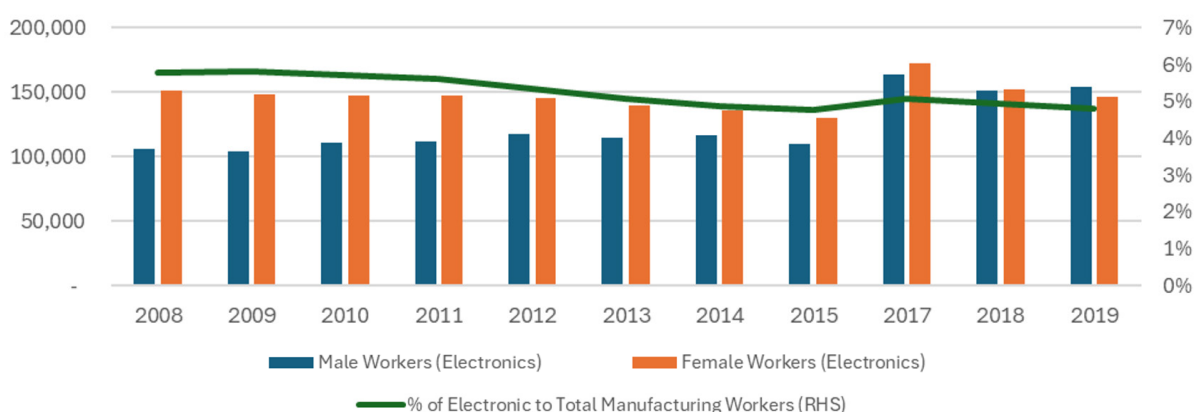
Employment Opportunities

The electronics sector in Indonesia employs more than 300,000 workers, however job growth in the sector has flatlined -and in some cases even reversed- in recent years (Figure 4.16). As such, the size of the industry workforce remained largely unchanged between 2008 and 2021, while its total share of manufacturing employment fell from around 5.9 per cent in 2008 to 4.5 percent in 2021. The Covid-19 pandemic also hit jobs in the sector, too: electronics was one of the country's most heavily affected industries, seeing a 12 per cent drop in employment during the 2019 to 2020 period¹⁴. This decline was caused mostly by reduced trade with China, which is a key trading partner and the main source of raw materials and inputs to the sector.¹⁵

Industry stakeholders interviewed for this study noted intensifying competition and growing automation as two major forces behind the sector's stagnating job growth. The two trends are linked: increasing competition, particularly from Chinese manufacturers, has prompted accelerated investments in automation and labour-saving technologies. According to APINDO and KADIN, robots capable of replacing 'up to five human workers' each have become an appealing option for electronics manufacturers dealing with rising labour costs and lagging productivity (although this statement could not be independently verified).¹⁶ While employers often highlight the potential for automation to create higher-value jobs through upskilling, trade unions, both in Indonesia and elsewhere, have raised concerns about the displacement of workers, particularly women, who predominantly occupy assembly line roles that are most susceptible to automation.

Although data on job losses due to automation is scarce, qualitative insights from labour advocates suggest they can be significant.¹⁷ In Batam, employer representatives noted that 60 to 70 per cent of production processes in a typical electronics factory could be automated, though manual work remains necessary for some tasks. A government agency in Batam also highlighted that, despite displacement effects, new opportunities for skilled workers are emerging in operating automation technologies, underscoring the importance of upskilling and reskilling in the sector's transition planning process.¹⁸

► **Figure 4.16 Total employment (by sex) of electronics industry and its share of total manufacturing employment**



Source: Industrial Statistics, Statistics Indonesia (2023)

Note: Employment of electronics industry covers industry with ISIC 26 (computer, electronics and optics) and 27 (electrical equipment).

14 The most affected sector during the pandemic was logistics, which saw a 22 percent drop in employment.

15 <https://www.industrial-union.org/facing-challenges-in-the-ict-electrical-and-electronics-sector>

16 Employers interviewed for this research also cited the precision, efficiency, and diminished industrial relations issues associated with robots as additional benefits to automating production.

17 Trade union A, for example reported that up to 30 per cent of workers have been laid off due to the increasing adoption of automation in the industry.

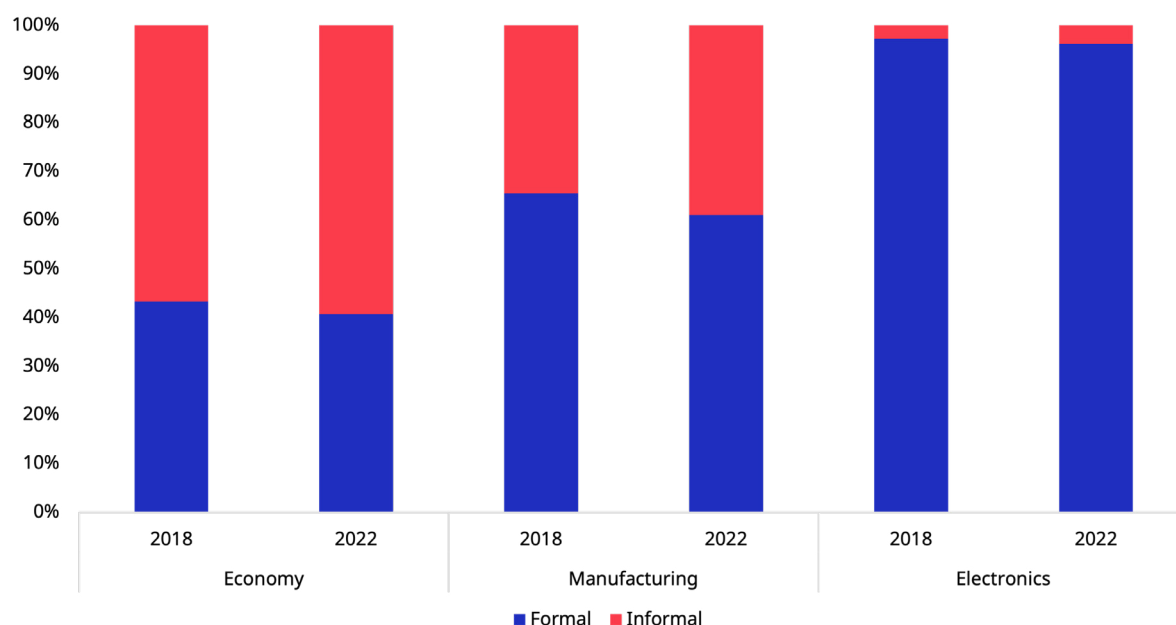
18 At the same time, workers interviewed for this study indicated that opportunities to reskill and upskill for future jobs in the sector are limited and tend to favour men (since they predominate among graduates of robotics and mechatronics, for example). Employers also mentioned that re-training existing workers in these skills is both costly and time-consuming, hence they tend to hire already-qualified people from technical and vocational schools.

Figure 4.16. illustrates the trends in male and female employment in the electronics sector from 2008 to 2019. Both male and female employment numbers remained relatively stable throughout this period, while the percentage of electronics workers to total manufacturing workers also stayed consistent, hovering between 5% and 6%. The overall trendlines differ significantly however, with the absolute number of male workers in the electronics sector increasing from 2008 to 2019, while the number of female workers decreased over the same period. This finding suggests that despite minimal fluctuation in the sector's overall position in manufacturing employment, there have been important underlying shifts in the gender composition of the electronics workforce in recent years.

Informality

Informality, a key measure of employment quality and stability, is lower in electronics than in other comparable sectors (Figure 4.17). While official global definitions of informality vary, the Sakernas (labour force survey) in Indonesia measures informality in employment according to workers' employment status, type of establishment, and labour protection. Accordingly, those with the status of paid employee are considered formal, while those who are self-employed, temporary, casual or unpaid, or unpaid family workers, are considered informal. According to focus groups with trade unions, a small proportion of informal workers can however be found among lower tier electronics suppliers, mostly micro, small and medium-sized enterprises (MSMEs), some of which are also linked to OEM companies. Given the well-established correlation between informality and poor working conditions globally, the ongoing presence of informality in the electronics supply chain may create more challenges for the sector in the coming years, especially for companies subject to growing due diligence requirements in key export markets.

► **Figure 4.17 Percentage of formal and informal workers**



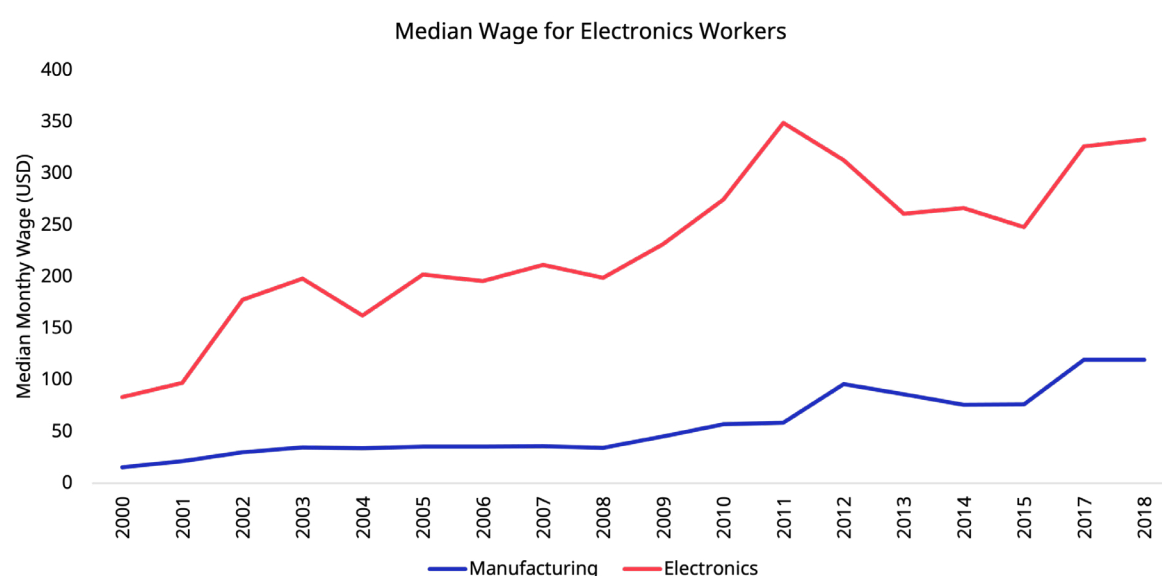
Source: Labour Force Survey (Sakernas), 2018 and 2022.

Note: The definition of formal and informal follows the Sakernas' definition, as the following:

Formal: Employer with permanent/paid worker and Employee; Informal: Self-employed, Employer with temporary worker/unpaid worker, Casual agricultural worker, Casual non-agricultural worker, Unpaid family worker.

Women have historically dominated employment in the electronics sector (a trend rooted in traditional perceptions of gender roles), but this has changed in recent years with female participation falling from 58 per cent in 2008 to 49 per cent in 2019 –all while their overall share in manufacturing employment has remained steady (Figure 4.18). According to industry stakeholders, a key factor in this trend is automation, which can have a disproportionate impact on women due to their predominance in assembly-line positions that are among the easiest to automate.¹⁹ Insights from an employer organization in Batam corroborate this view, although they still estimate that women continue to make up 9 in every 10 workers in the sector there.²⁰ Male workers, meanwhile, tend to be more numerous in both senior technical and lesser-skilled warehouse positions, which have not so far faced lesser risk of automation than assembly lines. Another factor limiting women's employment opportunities is the lack of flexible employment arrangements, which some stakeholders say prevents women from balancing family life with their career ambitions in the electronics industry.

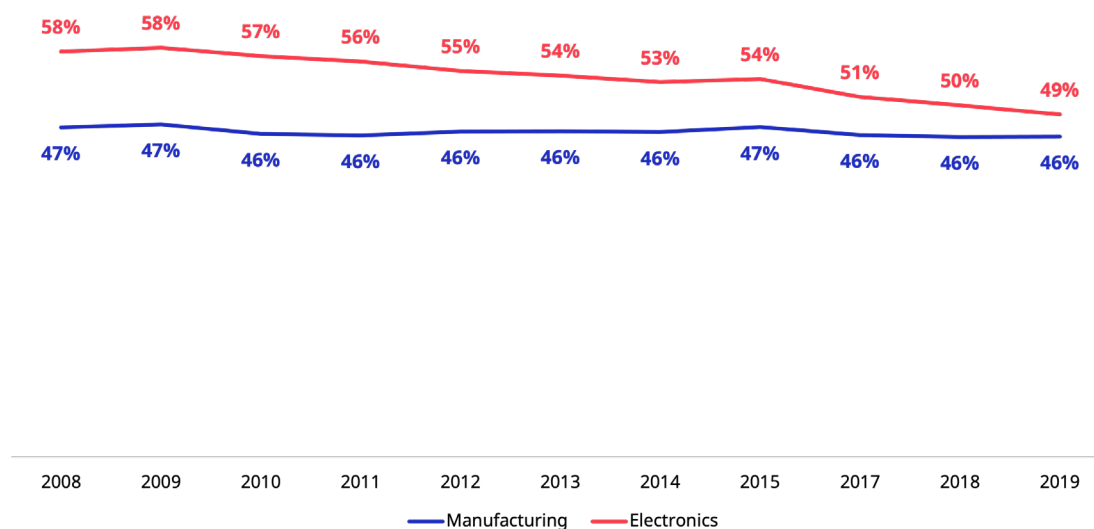
► **Figure 4.18 Median wage for overall workers in electronics industry and manufacturing 2000-2018 (USD)**



Source: Industrial Statistics (processed), Statistics Indonesia (BPS), 2000-2018.
Note: 2016 data is not available.

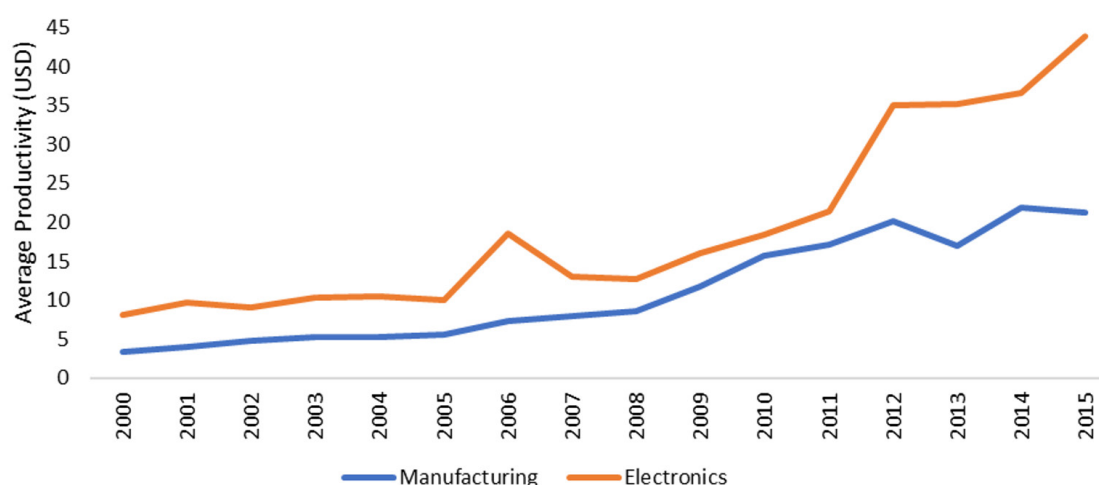
¹⁹ Studies from other sectors in Indonesia reveal findings consistent with this conclusion as well. Esquivel and Kucera (2022) find that laser cutting and automatic head cutting machines in the footwear sector, for example, are operated exclusively by men with engineering degrees, whilst also noting the growing need for literacy in computer and programming for mechanic positions in the sector may further skew hiring in favour of men due to gender segregation in education and vocational training.

²⁰ The same employer representatives also noted that businesses often prefer to hire women as they are perceived to be more focused, efficient, and accurate in work execution than their male peers.

► **Figure 4.19 Female participation rate in electronics industry and manufacturing (2008-2019)**

Source: Industrial Statistics (processed), Statistics Indonesia (BPS), 2008-2019.

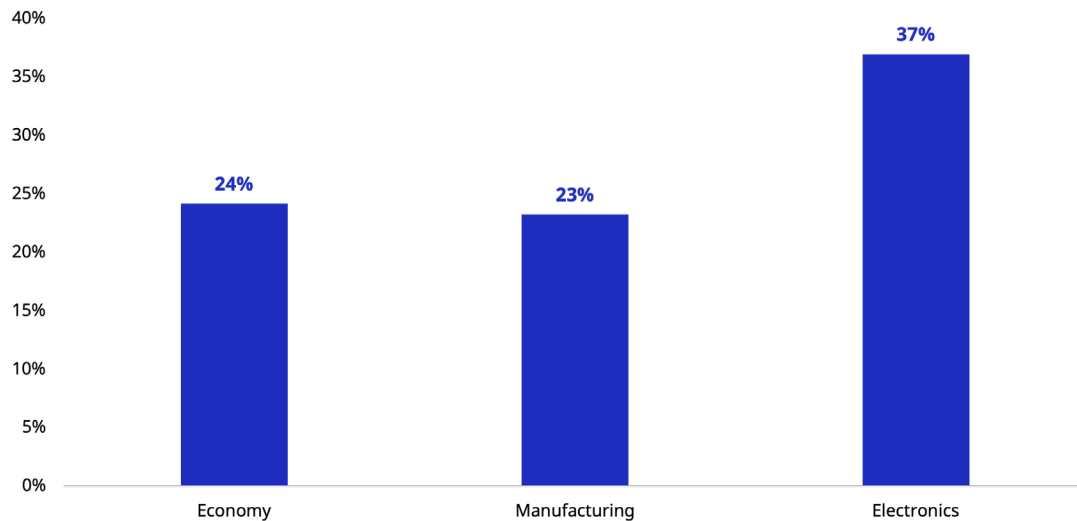
The electronics industry demonstrated higher productivity than other industries during 2000-2015 (Figure 4.19). This could be due to several factors, among them comparably higher workforce skills and access to training in the workforce. According to Sakernas 2022, workers in the electronics industry receive more training than in other sectors (Figure 4.2.5.A). Some 37 per cent of total workers in the electronics industry receive training, considerably higher than manufacturing (23 per cent) and other sectors in the economy overall (24 per cent), see Figure 4.2.0B. Yet, compared to the other countries, labour productivity in the sector is still sluggish. According to the Asian Productivity Organization (APO), Indonesia's total factor productivity (TFP)²¹ was 0.9 in 2021, while China's, Malaysia's, and Viet Nam's TFP were 1.18, 1.15, and 1.23 respectively in the same year.

► **Figure 4.20A Average labour productivity for electronics and manufacturing workers, Indonesia (2000-2015, USD)**

Source: Industrial Statistics (processed), Statistics Indonesia (BPS), 2000-2015.

²¹ Total factor productivity (TFP) refers to the productivity of all inputs taken together. TFP is a measure of the output of an industry or economy relative to the size of all of its primary factor inputs. When the growth of a nation's economic output over time is compared with the growth of its labor force and its capital stock (inputs) it is usually found that the former exceeds the latter., APO, 2024

► **Figure 4.20B Percentage of workers who received training in 2022**

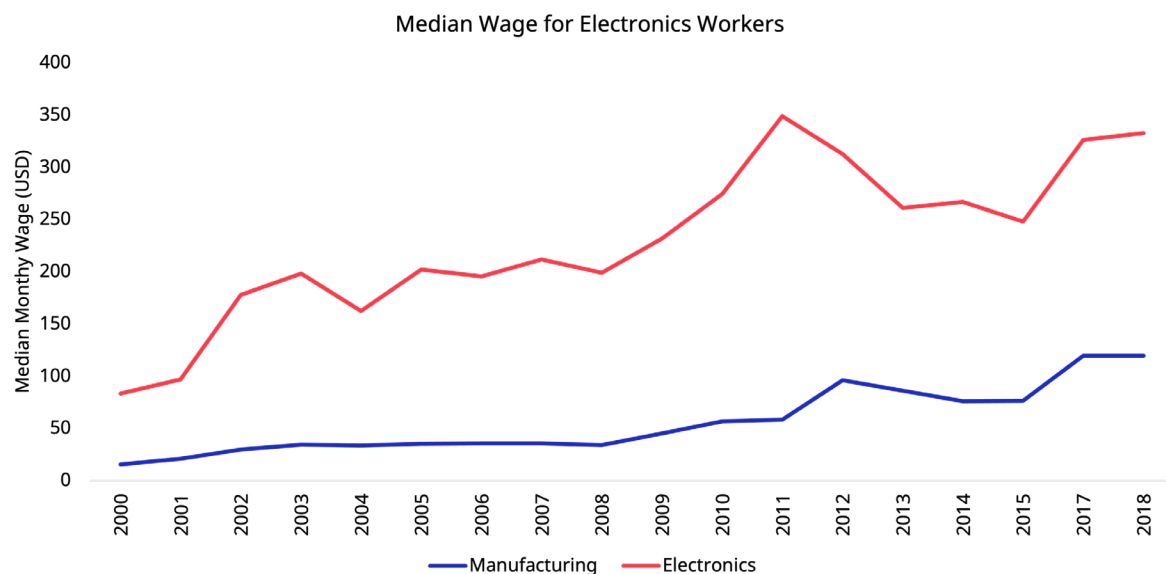


Source: Labour Force Survey (Sakernas), 2022.

Wages and earnings

Average wages in the electronics industry are significantly higher than both statutory minimums (which vary by locality, as outlined in table 4.3) and the average for manufacturing as a whole, although the latter has been growing more rapidly in percentage terms in recent years (see Figure 4.21). Some industry stakeholders cite the high levels of FDI in the sector as a key reason for these higher wages, as foreign firms not only tend to invest more in productivity-enhancements that can drive wage growth (e.g. through upskilling and technological adoption, for example), but they also often transfer good practices to domestic supplier firms, thus driving wage growth there too.²²

► **Figure 4.21 Median wage for overall workers in electronics industry and manufacturing 2000-2018 (USD)**



Source: Industrial Statistics (processed), Statistics Indonesia (BPS), 2000-2018.
Note: 2016 data is not available.

22 This was confirmed by several companies interviewed in this study, including Firms A, C, and E.

Indonesia has also seen relatively fast minimum wage growth in recent years, rising by more than 50 per cent between 2015 and 2022 (from USD 350 to USD 550). However, even after that growth, Indonesia still ranked middle among its peers in ASEAN in terms of its actual level (higher than the Philippines and Viet Nam, but still lower than Thailand and Malaysia). Some employers have argued that recent wage growth has dampened job creation in sectors that are (still) largely labour intensive and have location flexibility (i.e. to move to new production bases), like electronics. They also note that this has sped up moves by some firms to adopt labour saving technologies to offset rising labour costs.

► **Table 4.2 Minimum wage for selected ASEAN countries, USD (PPP adjusted)**

Country	2015	2019	2022	2015-2022 Change
Myanmar	272	287	214	-21%
Lao PDR	278	347	323	16%
Philippines	362	411	488	35%
Viet Nam	331	437	517	56%
Cambodia	353	496	547	55%
Indonesia	350	461	550	57%
Thailand	601	638	733	22%
Malaysia	549	654	975	78%

Source: ILO (2023)

In interviews, sectoral employer organizations noted that most electronics companies, especially major OEM firms, pay close attention to legal compliance, including on minimum wages. At the same time, focus groups with trade unions reveal significant concerns about non-compliance (and a general lack of regard for compliance) particularly among SMEs in the lower tiers of the electronics supply chain. Worker representatives also highlighted that, up until 2021 when the government stopped regulating sectoral minimum wages, wage growth in electronics manufacturing tended to outstrip that of provincial minimum wages (as the sector grew more quickly than other industries).

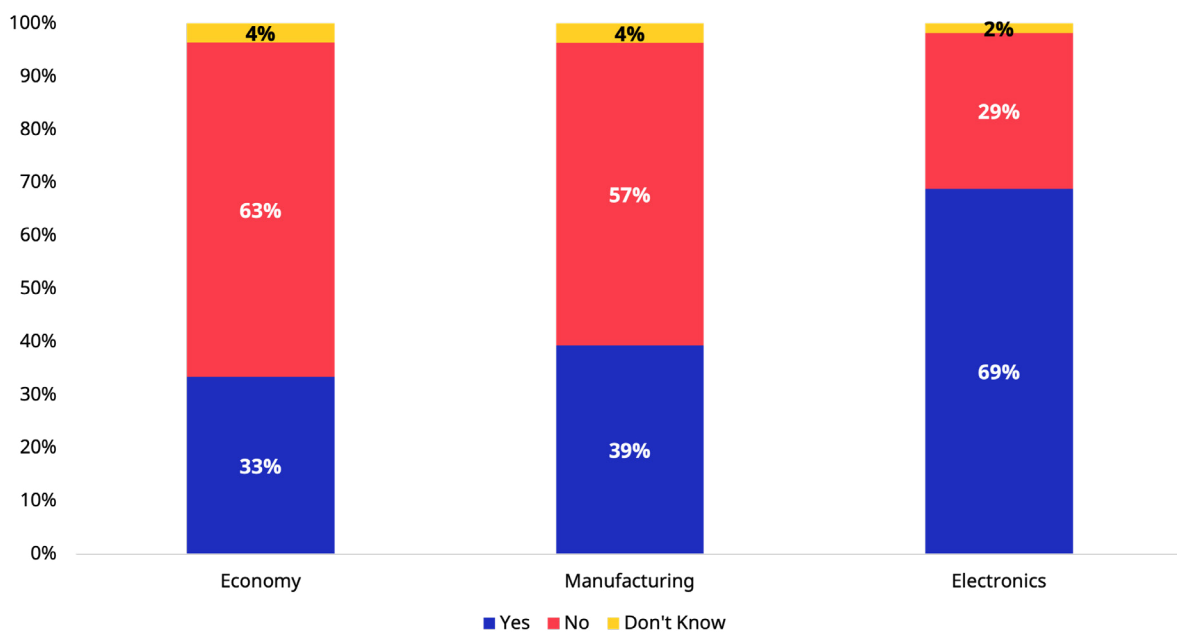
► **Table 4.3 Provincial Minimum Wage for selected provinces 2018-2024 (Nominal USD, converted using median rate)**

Province	2019	2021	2024	% Increase 2018-2024
Riau	172	202	208	21%
Riau Islands	179	210	215	20%
Jakarta	255	309	321	26%
West Java	108	127	130	20%
Central Java	104	126	129	24%
Yogyakarta	102	124	135	32%
East Java	106	131	137	30%

Source: BPS

In line with union concerns, labour force survey data points to significant gaps in minimum wage compliance in the sector, with just 69 per cent of workers receiving at least the statutory minimum wage (Figure 4.21). Whilst this figure is higher than that of manufacturing in general, it still suggests that low pay remains commonplace in the electronics industry. At the same time, it is also important to note that in some cases, Indonesian law does permit smaller companies to pay below provincial or city/district level minimum wages. Delineated in Government Regulation (PP) Number 36 of 2021 regarding Wages (an offshoot of Law (UU) Number 11 on Job Creation), this provision was introduced as a means to bolster small business growth and labour market flexibility, despite concerns from unions about diminished labour protections.

► **Figure 4.22 Percentage of workers who received wages that complied with minimum wage regulation**

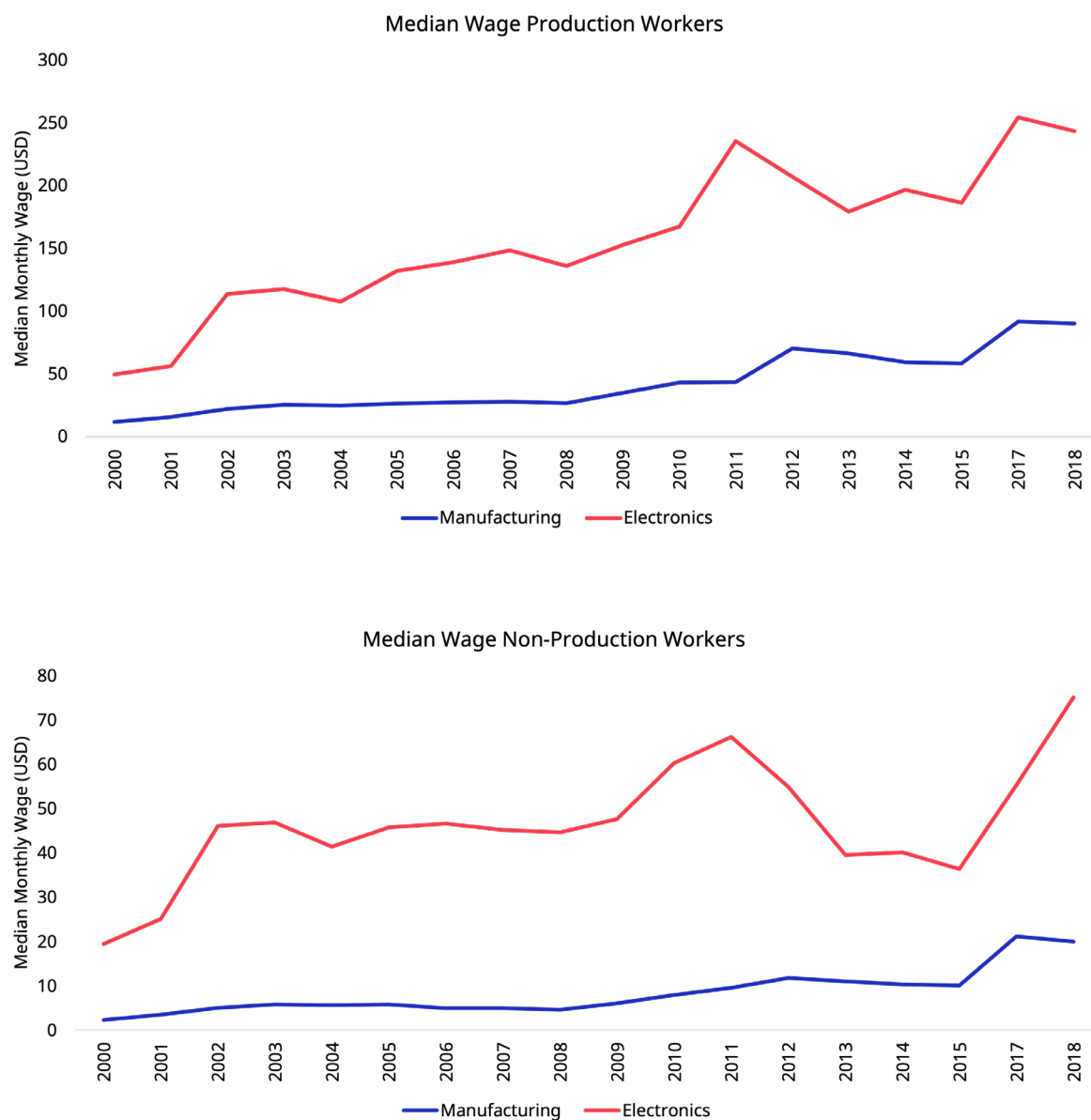


Source: Labour Force Survey (Sakernas), 2022.

Within the sector itself, government data shows that median wages of production workers in electronics manufacturing are higher than that of non-production workers. The median wage of production workers was USD 244 in 2018 with a growth rate of 13 per cent (CAGR), while the median wage of non-production workers in the electronics industry was USD 75 for the same period. Compared to the manufacturing sector in general, those median wages were higher, see Figure 4.23.

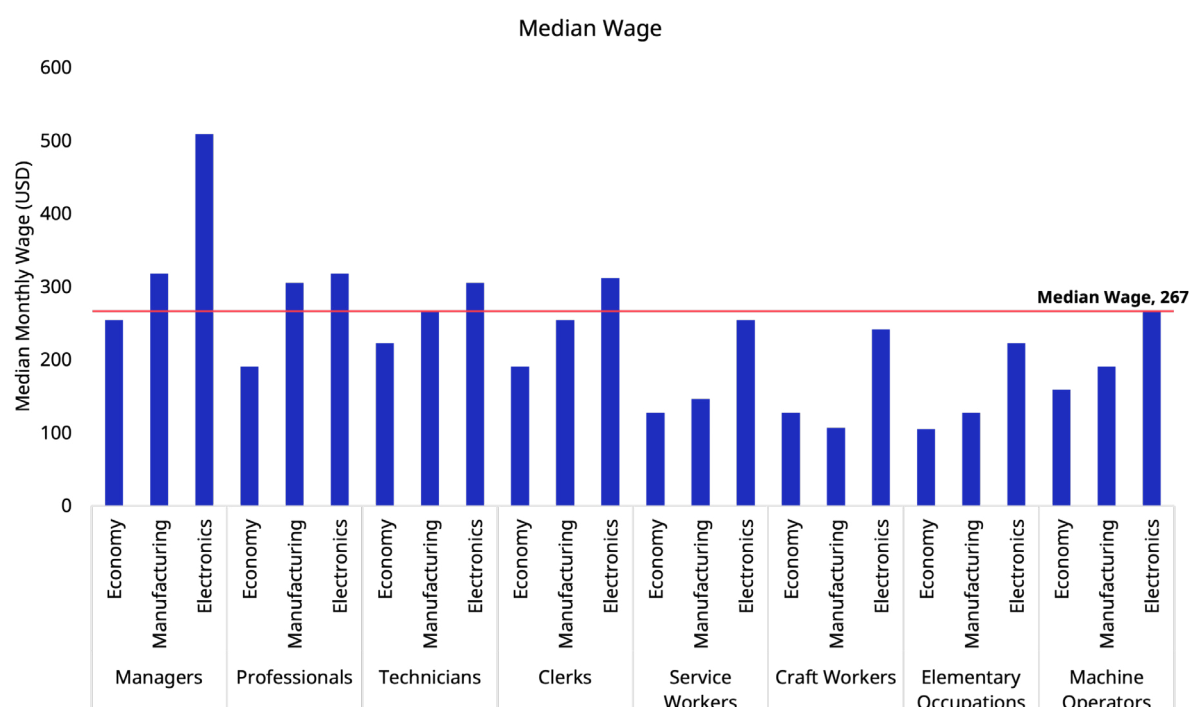
By occupation (Figure 4.24), the evidence that the electronics industry pays comparably higher wages than manufacturing more generally remains relevant. Data from 2022 revealed higher wages in all occupations, from managers to elementary occupations. The significant difference was identified mainly in the top and lower levels of management, while the gap in the middle was relatively small.

► **Figure 4.23 Median wage for production and non-production workers in the electronics industry and overall manufacturing (2000-2018)**



Source: Industrial Statistics (processed), Statistics Indonesia (BPS), 2000-2018.
 Note: 2016 data is not available.

► **Figure 4.24 Median wage by international standard classification of occupations (ISCO) in 2022 (USD)**



Source: Labour Force Survey (Sakernas), 2022.

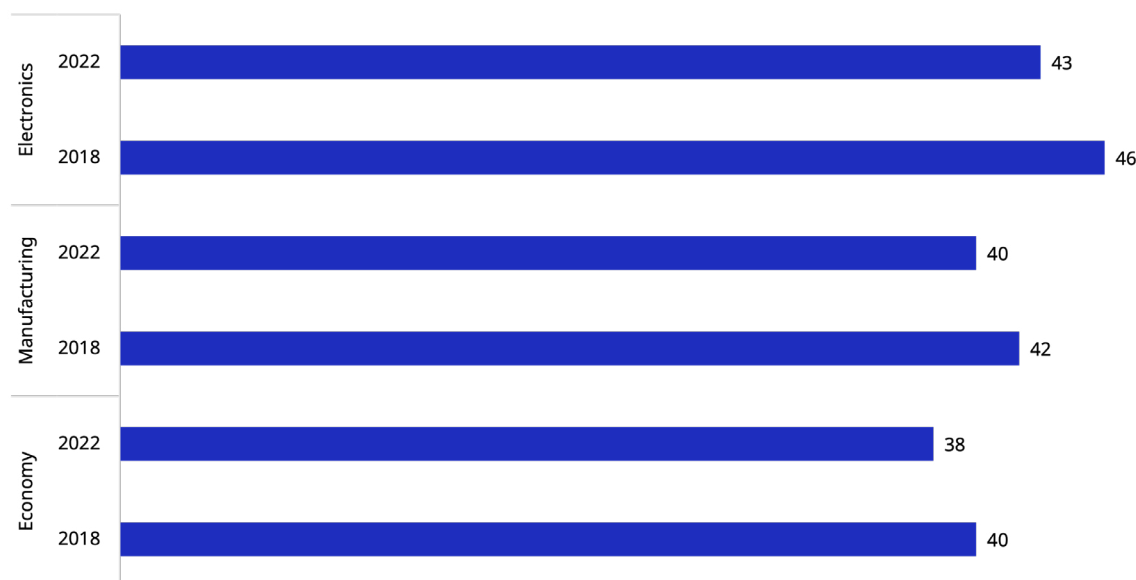
Working Time

Government data (from Sakernas) indicate that weekly working hours in the electronics industry were slightly longer than in other sectors, but the data did not distinguish between regular working hours and overtime. In 2022, the average working hours were 43 hours per week (see Figure 4.25). If the work week consists of five days, the average working hours per day was only 8.3. If the work week consists of six days, the average working hours was only 7.2. This still complies with labour laws, where regular working hours are set at 40 hours per week, either seven hours per day for six working days per week, or eight hours per day for five working days per week. Employers must pay overtime if employees work more than the stipulated hours and overtime is permitted for a maximum of four hours per day or 18 hours per week. Both employer association and companies confirmed in in-depth interviews and focus groups that they pay overtime which complies with the regulation. According to the job creation law and the government regulation 35/2021, the overtime provisions are increased for maximum 4 (four) hours from previously 3 (three) in 1(one) day and 18 hours from previously 14 (fourteen) in 1 (one) week, manufacturers must pay 1.5 times their overtime for the first hour, and 2 times overtime rate for the next hours. Thus, overtime is relatively more costly (to the employer) than regular hours. As a result, to cope with seasonal demand surges in the electronics market, manufacturers interviewed for this research revealed a preference for hiring additional (temporary) recruitment rather than extending existing employees' working hours.

Work on Saturdays and Sundays is also commonplace in the industry (Figure 4.26), as are the use of three shifts per day, in the morning, afternoon, and evening, to ensure round-the-clock production. These trends are driven by the need to maintain machine uptime, as restarting idle machines can be time-consuming and affect production efficiency. Amid demanding work schedules, companies also implement measures to mitigate associated risks including fatigue management strategies, healthy work-life balance initiatives, and additional rest periods for workers. IDI and FGD results for this study indicate that employers generally

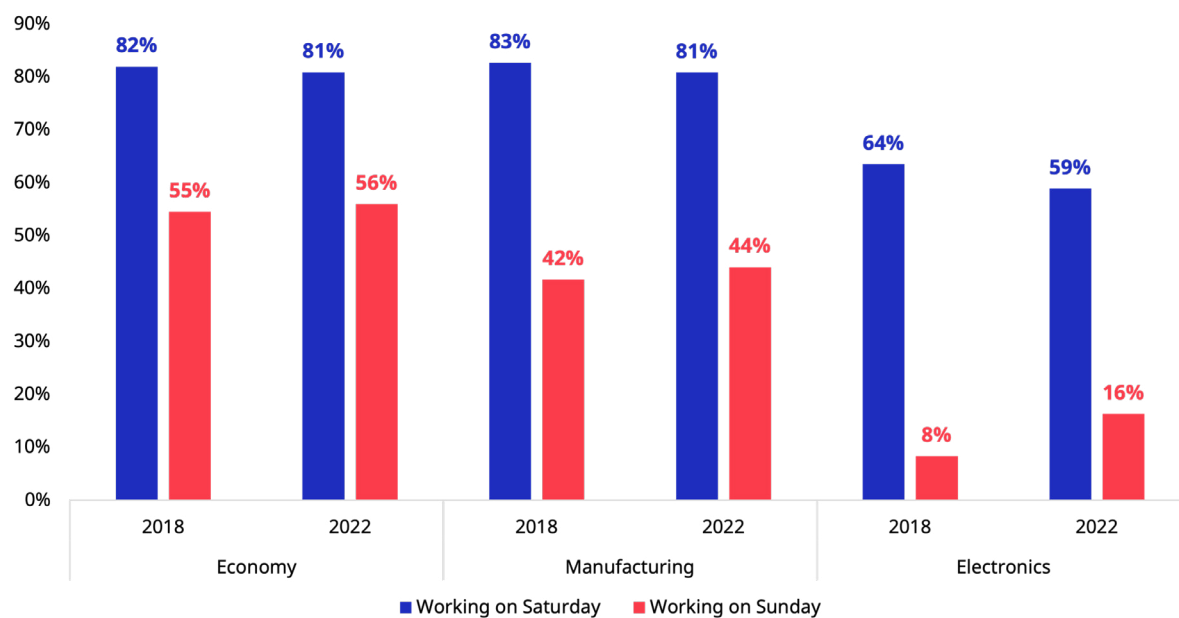
adhere to legal requirements in these areas, while trade unions also confirm that many workers in the sector actually prefer jobs that provide overtime opportunities (as a means to supplement their basic incomes).

► **Figure 4.25 Average working hours in one week**



Source: Labour Force Survey (Sakernas), 2018 and 2022.

► **Figure 4.26 Percentage of workers who work at the weekend**



Source: Labour Force Survey (Sakernas), 2018 and 2022.

Combining Work, Family, and Personal Life

Female workers in the electronics industry often face significant challenges if they become pregnant. There have been instances where pregnant workers have been forced to resign as companies have sought to avoid providing three months of maternity leave to those on one-year contracts. Similarly, trade unions also pointed to the use of discriminatory recruitment criteria, such as only hiring unmarried women under 25, as a way to avoid the risk of incurring unplanned maternity payments. Such practices effectively exclude qualified candidates based on their age and marital status, thus perpetuating gender discrimination in the workplace. To retain their employment, some women conceal their marital status from their employers and hold off registering for a family card, thus leaving their children uncovered by Social Security Provider/Badan Penyelenggara Jaminan Sosial (BPJS) (which requires registration under a family card).

The results of in-depth interviews highlighted some good practices to support women workers in the electronics sector. For example, a company located in Cikarang established day care facilities for children, whilst another -also in Cikarang- provides a nursery and early childhood education facility. Most companies interviewed for this study also provide lactation or nursing rooms to support nursing mothers returning to work.

At the policy level, the government has enacted a Maternal and Child Welfare Law to protect children and pregnant women on 4 June 2024. Electronics companies, particularly those with production processes driven by incoming orders, perceive these regulations as burdensome. The majority of their workforce consists of contract workers, and the Maternal and Child Welfare Law mandates a six-month maternity leave period, along with the right to leave for the woman's husband. These extended leave provisions further incentivize companies to prioritize the employment of single women, according to trade unions interviewed for this research. Employer associations, meanwhile, stated that they remain committed to compliance with government regulations.

Work That Should Be Abolished

The elimination of forced labour is one of the ILO's five Fundamental Principles and Rights at Work. It refers to situations in which persons are coerced to work through the use of violence or intimidation, or by more subtle means such as accumulated debt, retention of identity papers, or threats of being exposed to immigration authorities²³ (see annex 2)²⁴. Focus groups with trade unions indicated several cases that may indicate forced labour risks in the electronics sector, including retention of identity documents and educational certificates, which they note are done to reduce employee turnover and prevent job-hopping (for example, during new workers' induction and training periods). This is particularly prevalent in management trainee positions, but it is not uncommon among contract workers at the operator level as well, given the difficulty of finding replacements if a worker resigns before their contract expires. Whilst not denying that this takes place, employers interviewed for this study noted that such practices are commonplace in other sectors as well as electronics. Unfortunately, authoritative national data on forced labour in Indonesia -or in electronics manufacturing specifically- are not publicly available and could not be obtained for this study.

The elimination of child labour is another of the Fundamental Principles and Rights at Work and an element that, alongside forced labour, is one of the most closely monitored labour risks in corporate supply chains. Child labour is defined as working children aged 5-12 years, 13-14 years who work for more than 15 hours per week, and 15-17 years who work more than 40 hours per week. Statistics Indonesia (2022) records that the proportion of child labour in the manufacturing industry decreased from 13.83 percent in 2021 to 17.93 percent in 2023 (Statista, 2023), although specific breakdowns for the electronics industry are unavailable. Focus groups with employers and trade unions revealed a general consensus that compliance with laws on child labour was high and that underage workers are rarely -if ever- found in the sector.

23 ILO (2023). The International legal definition of forced labour.

<https://www.ilo.org/global/topics/forced-labour/definition/lang--en/index.htm>

24 ILO identifies 11 Indicators of Forced Labour, namely: (1) abuse of vulnerability, (2) deception, (3) restriction of movement, (4) isolation, (5) physical and sexual violence, (6) intimidation and threats, (7) retention of identity documents, (8) withholding of wages, (9) debt bondage, (10) abusive working and living conditions, and (11) excessive overtime. Evidence of a single indicator in any given situation may suggest forced labour is present.

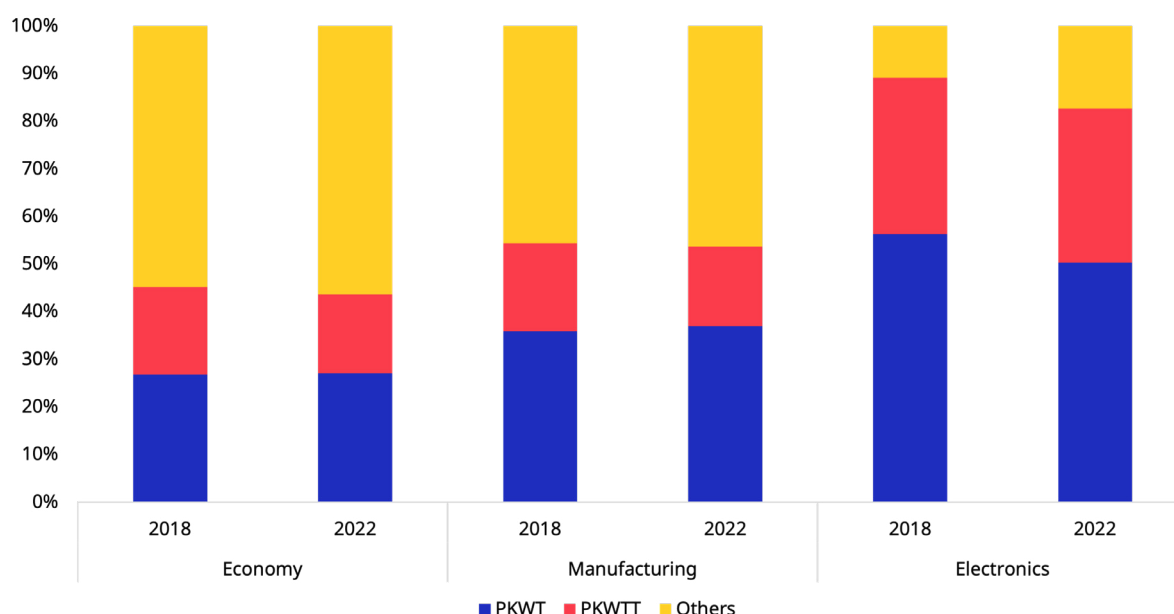
Stability and Security of Work

Issues of stability and security of work are strongly associated with the employment relationship and employment contracting modalities. In the case of Indonesia's electronics sector, a number of common employment contracts are used, namely fixed term contracts (PKWT) and permanent contracts (PKWTT), as well as all other types, which include unwritten and/or verbal agreements and apprenticeships. Where casual workers are employed in the sector, they are typically employed on fixed term contracts, unwritten contracts or apprenticeships.

The electronics industry employs a comparably larger share of its workforce on permanent contracts than either manufacturing or the Indonesian economy more generally (see Figure 4.27). In 2022, 83 per cent of workers in the industry had fixed term or permanent contracts, substantially more than manufacturing and other sectors (with only 54 per cent and 44 per cent, respectively). A key factor in this regard may be the sector's international profile: studies globally show that participation in global supply chains is positively correlated with higher levels of formal employment (Long, Helble, & Trang, 2019; Steenbergen et al., 2020).

At the same time, by share of the workforce covered, fixed term (PKWT) contracts are more common in the electronics sector than permanent contracts (PKWTT) (Figure 4.27). Employers interviewed for this study note that fixed term contracts are preferable as they allow for more flexible hiring and lower severance payments when retrenching staff. While national data on the typical (or average) duration of fixed term contracts are unavailable, the maximum limit allowed by law (under the new Job Creation Law No. 6/2023) is five years. However, focus groups with trade unions revealed concerns about abuse of this law in practice, together with what they see as a rising trend of shorter-term, 'project-based' (fixed term) contracts in the sector. By reducing the stability and security of work, this trend may also have an impact on the industry's ability to attract skilled labour in the long term.

► **Figure 4.27 Percentage of workers based on employment contract**



Note: The term 'Others' includes informal and without contracts.

PKWT: Perjanjian Kerja Waktu Tertentu (Definite time employment contracts - contract workers)

PKWTT: Perjanjian Kerja Waktu Tidak Tertentu (Indefinite time employment contracts - permanent workers)

Source: Labour Force Survey (Sakernas), 2018 and 2022.

The electronics industry is also experiencing growth in more insecure and precarious employment arrangements, including verbal agreements and apprenticeships. While the government has implemented a one-month salary incentive for fixed term workers upon contract termination (based on Law No. 6/2023), trade unions interviewed for this study noted that this hinders the transition of fixed term contract workers to permanent positions. Trade unions also assert that fixed term workers often lack access to company benefits, including bonuses (which are typically company-specific) and promotional opportunities.

Another pressing issue in the electronics sector is the misuse of apprenticeship contracts. Trade unions report that apprenticeship regulations are being routinely exploited to employ workers at below-minimum wages, compromising both their rights and opportunities in work. This practice deviates from the original purpose of apprenticeships, which is to provide training for job seekers not yet ready for full-time employment. Some firms exacerbate this issue by replacing full-time employees with apprentices and re-employing experienced contract workers as apprentices once their contracts expire. Additionally, unions note that some workers in the sector have been known to remain on apprentice contracts for up to a decade.

Equal Opportunity, Treatment and Employment

Electronics companies are known to place emphasis on physical stature in their recruitment decisions, which despite having some protection in law, can effectively lead to discrimination and denial of equal opportunities in employment. Female applicants are often required to meet a minimum height requirement ranging between 150 and 158 centimetres, while male applicants must be between 160 and 168 centimetres. Focus groups for this study revealed evidence of companies refusing workers that were not tall enough. The height criterion is based on ergonomic considerations, as stipulated in Ministry of Manpower Decree Number 5 of 2018, to minimize workplace accidents²⁵. However, this policy effectively excludes qualified candidates who do not meet the designated height standard.

At the same time, many companies also seek younger workers for operator positions (often between the age of 23 to 27 years), citing the physical demands of the job (i.e. prolonged standing for approximately eight hours). Focus group respondents also noted that younger workers are perceived by some managers to be more obedient and less likely to be distracted by personal commitments. Together with marital status (which has already been discussed earlier in this report), the continued emphasis on age and physical attributes in recruitment, over relevant skills and experience, serves to perpetuate gender stereotypes in the electronics sector and undermine employment opportunities for qualified individuals, especially women. To address these issues, the government should review current anti-discrimination laws with a view to strengthening both their coverage and how they are upheld and enforced at the enterprise level. Companies must also re-evaluate their recruitment practices to eliminate discriminatory criteria and focus on identifying and hiring the most qualified candidates, regardless of their gender, age, or marital status.

Safe Work Environment

Since 2022, the right to a safe and healthy workplace has been added to the ILO's framework of fundamental principles and rights at work (FPRW), thus bringing higher esteem and attention to Occupational Safety and Health (OSH) in the context of responsible business conduct, especially for firms with a global outlook. These principles and rights are the most widely cited labour standards used in the governance frameworks for responsible business, including the UN Guiding Principles, trade and investment agreements, and corporate policies and codes of conduct. As such, the addition of OSH as a FPRW is already creating new market signals and compliance imperatives for companies to ensure safe and healthy workplaces internally and throughout their supply chains.

Indonesia has ratified one of the two fundamental OSH conventions, the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187), leaving the Occupational Safety and Health Convention, 1981 (No. 155) still to be ratified. In addition, with support from the ILO, the Ministry of Manpower has launched the second National OSH Programme for the 2024-2029 period, whilst also raising

19 Given that the average height of factory tables at electronics companies is approximately 80 centimeters, workers who fall below the height requirement are at higher risk of injury.

public awareness and policy momentum through initiatives like the National OSH Month, observed from January 12 to February 12 each year.

Awareness and application of Occupational Safety and Health (OSH) standards varies across the electronics industry but is generally stronger among export-oriented companies and suppliers catering to large enterprises, according to trade unions interviewed for this study. This is in part due to stronger internal OSH management structures and related compliance and certification imperatives in these supply chains (such as ISO 45001 on OSH management).

Authoritative national data on workplace accidents in the electronics industry is unavailable, but industry focus groups suggest a generally low prevalence of workplace illness and injury. The Ministry of Manpower (2022) records cases of work accidents and occupational illness based on employment insurance (BPJS TK) data, but it doesn't provide a breakdown for electronics manufacturing.²⁶

By location, the majority of incidents occur inside the workplace (144,929 cases) and during commuting (68,217 cases). Reiterating this, focus group respondents from electronics companies cited accidents occurring during workers' daily commute and during night shifts due to tiredness or loss of focus. Mitigation measures provided by some companies include shuttle services to/from the factory and on-site accommodation and rest areas for workers.

OSH risks in the sector are not limited to workplace accidents alone. In recent years, public concerns have grown about workers' exposure to solvents and metals in electronics manufacturing facilities globally. In Indonesia, Lee et al. (2023) conducted a study with 36 workers (28 exposed, 8 controls) in firms in Batam, using their urine samples before and after shifts. They found that five solvents (acetone, methyl ethyl ketone, toluene, benzene, and xylenes) were found in 46-97 per cent of samples, and seven metals (arsenic, cadmium, cobalt, tin, antimony, lead, and vanadium) were detected in 60-100 per cent of samples. This is consistent with other findings in the public domain, which have revealed worrying levels of worker exposure a range of toxic chemicals including Polyvinyl chloride (PVC), Trichloroethylene (C₂HCl₃) or TCE, Stoddard Solvent, Ethanol, Xylene, Ethylbenzene, Methyl Ethyl Ketone (MEK), Acetone, Zinc Oxide, Manganese Zinc, and Toluene. The challenges are in the implementation of regulations, in particular law enforcement and monitoring; in addition, the existing regulations are not updated regularly, despite the fact that new scientific developments related to chemicals require constant regulatory adjustments to ensure they are relevant and can be used to protect workers and environmental health.

Government data suggest industry compliance is high vis-a-vis mandatory participation in social security and employment insurance programmes, BPJS Kesehatan²⁷ and BPJS Ketenagakerjaan (BPJS TK)²⁸. This ensures that workers are financially protected against work-related risks (e.g. risk on dangerous substances and fire prevention and protection). Some companies provide supplemental private insurance for their employees, and their partnerships with nearby hospitals and clinics ensure prompt medical attention in case of workplace accidents. Through these partnerships some companies offer annual medical check-ups for their employees. This emphasis on preventive healthcare is important, as companies must not only focus on reducing accident rates, but also address any long-term health risks associated with their operations.

Trade unions play a pivotal role in safeguarding OSH practices through Occupational Health and Safety Committees (known in Indonesia as P2K3), which serve as a communication forum between management and workers and ensure that workplace safety and health measures are effectively implemented. Trade unions act as the driving force behind the committee by leveraging their close understanding of worker aspirations and concerns. While some critics have dismissed P2K3 as a mere government formality, its effectiveness hinges on the active participation and collaboration between management and trade unions. Focus group participants from the business side cited robust OSH systems (including growing emphasis

²⁶ The same dataset does however show a high frequency of accidents in the consumer goods industry, which may include some types of electronics products (although this cannot be verified from the publicly available dataset). In 2021, it recorded 38,879 accidents in this sector, or 15.5 percent of total cases that year.

²⁷ BPJS Kesehatan commonly covers curative care for outpatient and inpatient care.

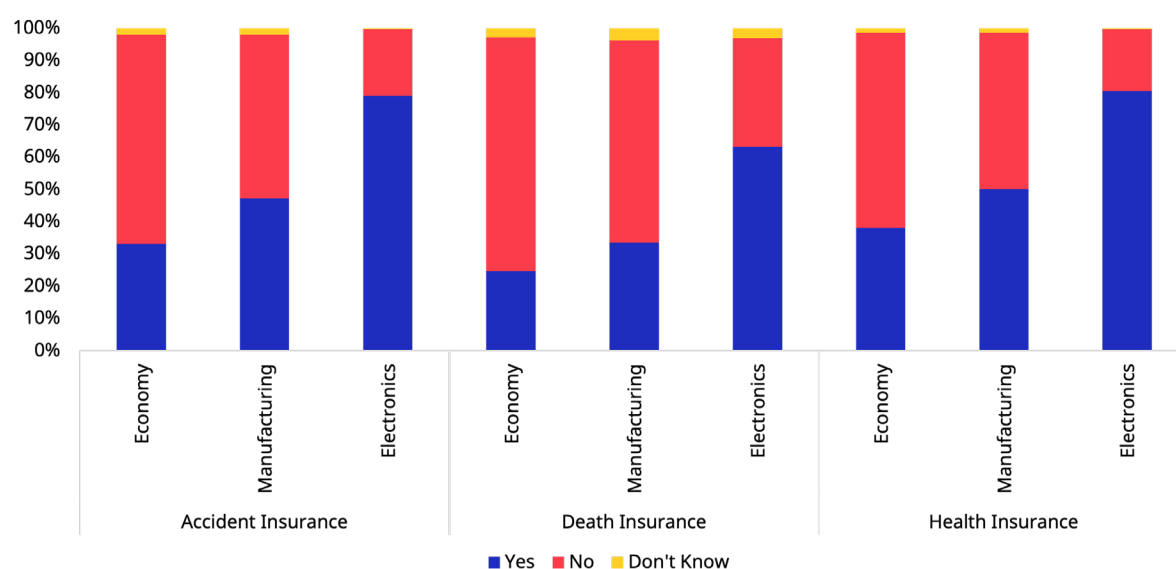
²⁸ BPJS TK covers employment injury, death, old age security and pension guarantee (PP 99/2013).

on prevention) and trade union involvement as key reasons for what they argue is a low rate of workplace accidents in the electronics sector. However, interviewed trade unions stated that challenges remain in addressing night shift-related accidents, ensuring that OSH practices are consistently enforced across the industry, and better understanding -and responding to- the potential long term health implications of toxic chemicals used in the sector.

Social Security

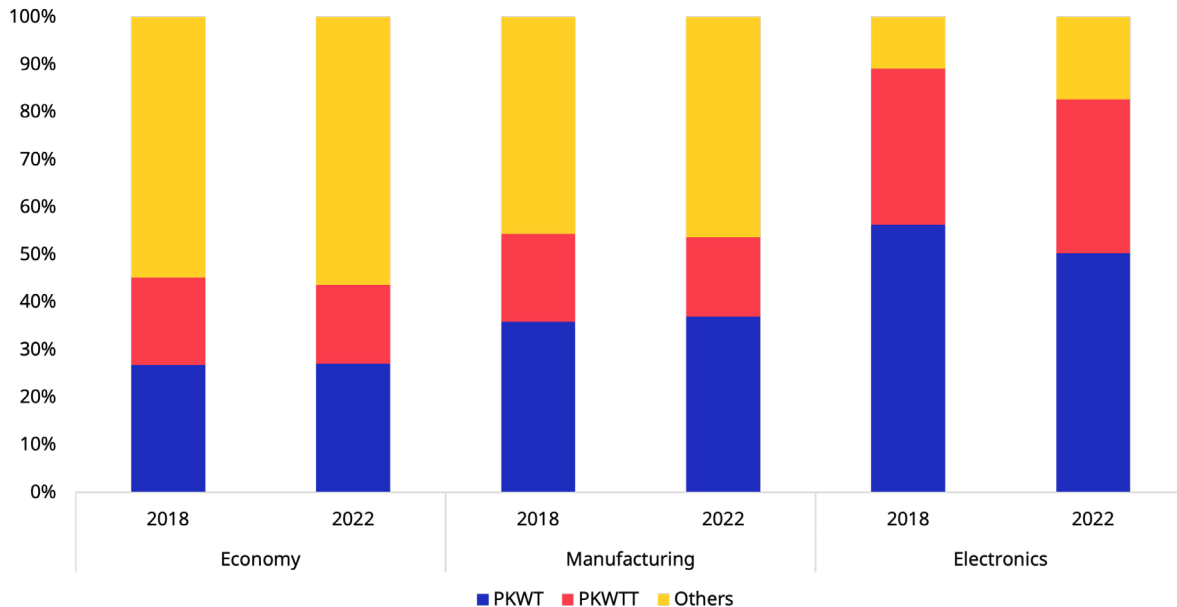
Data indicate that the electronics industry provides better social protection (as mandated by law) for workers than manufacturing and other sectors in general. As shown by Labour Force Survey data from 2022 (Figure 4.28), the prevalence of health insurance coverage in this sector is considerably higher than in other industries, and is consistent in all categories, i.e., accident, death, and medical insurance. These figures suggest better compliance by electronics firms, rather than those in other industries, to government regulation regarding social protection. In addition to medical insurance, other workers' benefits such as severance pay, leave pay, old age insurance, and pension plans are more prevalent in the electronics industry than in manufacturing and other sectors overall (see Figure 4.29). IDIs with various companies also confirmed this trend, whilst also highlighting the case of one company which signed a Memorandum of Understanding (MoU)²⁹ with nearby clinics and hospitals to enhance worker access to convenient and affordable health services.

► **Figure 4.28 Percentage of health insurance coverage in 2022**



Source: Labour Force Survey (Sakernas), 2022.

²⁹ A cooperation agreement on health services for employees and their families aims to obtain better facilities, faster, and optimal health services. Employers only require showing their membership card; the procedure is more straightforward compared to the BPJS Kesehatan procedure.

► **Figure 4.29 Percentage of other workers benefiting coverage in 2022**

Note: The term 'Others' includes informal and without contracts.
 PKWT: Perjanjian Kerja Waktu Tertentu (Definite time employment contracts - contract workers)
 PKWTT: Perjanjian Kerja Waktu Tidak Tertentu (Indefinite time employment contracts - permanent workers)
 Source: Labour Force Survey (Sakernas), 2018 and 2022.

Social Dialogue, Employers' and Workers' Representation

Social dialogue includes all types of bipartite and tripartite consultation, collective bargaining and all forms of management-labour cooperation, designed to advance common workplace interests. The necessary conditions to allow social dialogue are underpinned by the international labour conventions No. 87 and 98 on freedom of association and the right to organize and bargain collectively, both of which have been ratified by Indonesia.

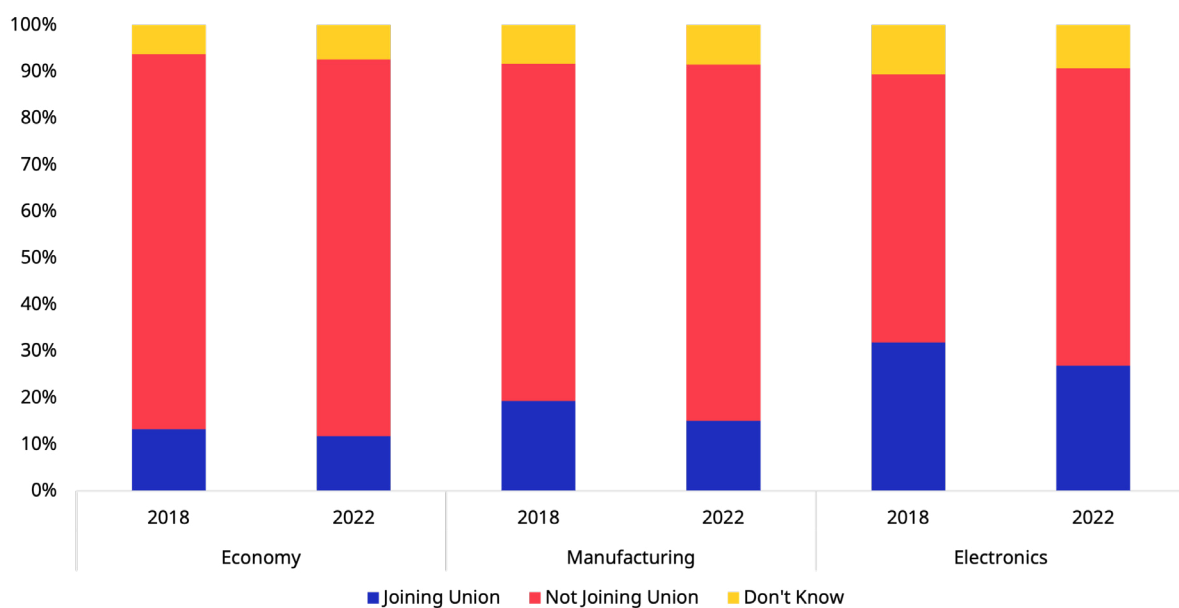
In the Indonesian electronics sector, there are two main employer organizations that should play a key role in workplace and industry social dialogue, APINDO and GABEL. In 1999, APINDO became a member of the Tripartite Task Force on Social Dialogue established by Ministerial Decree No. 7 along with various ministries and trade unions. It has also participated in the formulation and implementation of two ILO Decent Work Country Programmes. APINDO is also in regular contact and dialogue with different government ministries concerning regulations, including those pertaining to labour, trade and investment. GABEL provides inputs to Government agencies on electronics industry related policy development. While APINDO engages in dialogue and consultation with unions at all levels, GABEL engages only with company level unions (ILO, 2019).

Recent years have seen a notable decrease in union participation and density in the electronics sector. Looking at 2018 and 2022 as comparison points, union membership was consistently higher in electronics than either manufacturing or the wider economy (comprising all other sectors) (see Fig. 4.30). However, within the sector, the proportion of unionized workers fell significantly from 32 per cent in 2018 to 27 per cent in 2022, broadly mirroring a national trend that saw union density fall from 13 per cent in 2019 to 11.8 per cent between 2022. This puts Indonesia middle among its peers, with a higher union density than Thailand (3.3 per cent in 2019) and Malaysia (8.7 per cent in 2018), but still lower than Singapore (22.2 per

cent in 2018) and Vietnam (49.6 per cent in 2019). According to unions, the growth in shorter term and more flexible contracts (and the concomitant decline in permanent workers) in the sector is a key factor in the decline, as it reduces both worker incentives to join unions and union incentives to organize workers with short and insecure tenures.

Social dialogue and worker representation, as expressed through collective bargaining and related agreements (i.e. Perjanjian Kerja Bersama/PKB), are often most prevalent among large companies in Indonesia, including in electronics manufacturing, and often at levels that exceed minimum legal standards. PKBs are typically updated every two to three years or as needed, and serve as a key instrument of industrial relations, alongside bipartite dialogue forums and the labour courts. Industry stakeholders note however that labour courts are rarely used in the electronics industry as bipartite mechanisms resolve most cases adequately. According to Ministry of Manpower data, more than 15,000 companies nationwide had a registered collective bargaining agreement in 2023, but the data is not specific for electronics companies. Companies interviewed for this research all reported having active CBAs, although neither this nor the quality of such agreements (or the process by which they were negotiated) could be independently verified. Similarly, whilst companies also reported having grievance handling mechanisms in the workplace, these mostly centred on the provision of suggestion boxes and smartphone-based worker voice mechanisms (e.g. reporting grievances through apps and text messages), as well as the availability of communication channels with the company's Human Resource department.

► **Figure 4.30 Percentage of workers who are trade union members**



Source: Labour Force Survey (Sakernas)

Trade unions interviewed for this research also reported curbs on freedom of association in the electronics sector, citing individual cases of workers being referred to company lawyers -rather than management representatives- to discuss grievances, and of private security personnel being used to impede worker-organizing activities through intimidation and threats. According to the same unions, these companies tend to be un-unionized and lacking in other bipartite mechanisms for dialogue or collective bargaining. At the same time, unions also report cases of wages being withheld from certain types of workers, as companies -especially smaller suppliers to OEM firms- try to manage cashflow bottlenecks caused by absence of down-payments and long payment periods (often 2 to 3 months after goods are delivered) on commercial contracts.

Other issues affecting Decent Work and Responsible Business Conduct

Labour inspection and administration

Ensuring responsible business practices and decent work requires effective labour administration, central to which is the role of labour inspection and effective compliance with national labour laws and standards. Labour inspection in Indonesia has three main duties: (1) prevention and education, (2) Alternative Dispute Resolution / non-judiciary out-of-court settlements, and (3) judicial investigations³⁰. However, in the electronics sector as in other sectors, labour inspection is dogged by persistent capacity constraints (ILO, 2019). In 2019, the country had 1,282 labour inspectors at national and regional levels (including 131 in East Java, 114 in Central Java, and 97 in West Java), overseeing all sectors. With around 30,000 large and medium firms and 4.4 million micro and small companies in manufacturing (Statistics Indonesia, 2023), the inspector-to-company ratio was approximately 1:3,300, excluding micro and small enterprises.

In part to address these constraints, the government introduced the so-called Mandatory Online Employment Report (WLKP). In 2020, 315,396 companies employing over 7.7 million workers submitted WLKP reports. In 2019, 21,613 companies recorded 35,066 labour norm violations and 13,414 OSH practice violations. However, only 59 cases were investigated, itself constrained by the low inspector-to-company ratio. Trade unions interviewed for this research showed support for the idea of replacing provincial level labour inspection with decentralizes jurisdiction at the district or regency levels, to enhance responsiveness and enforcement efficacy, in both electronics manufacturing and other sectors.

Private social auditing

Private third-party auditing also takes place in the Indonesian electronics sector, but this is similarly limited in scope and impact. Employer representatives in Batam noted in key informant interviews that lead firms (i.e. OEMs) often commission audits to assess the quality and sustainability performance of key production branches in Indonesia, with results feeding into key performance indicators (KPIs) for managerial evaluation, and with poor audit outcomes sometimes leading to branch heads being dismissed. In principle, these audits often also require Indonesian branches to assess their suppliers against similar (social) criteria. Whilst some OEM firms distribute questionnaires and checklists to suppliers which delve into labour standards (covering aspects such as minimum wage compliance, child labour prevention, overtime work mechanisms, occupational health and safety, trade union membership), as well as accompanying grading systems with sanctions for non-compliance (including temporary supplier suspensions), workers and employers alike note gaps in both awareness and practical application. Moreover, where third party auditing companies are used, they rarely if ever provide technical assistance for improvement, while overall participation of worker representatives and trade unions in the process is low and could be much improved (as part of a renewed emphasis on participatory HRDD).

Responsible Business and Human Rights Due Diligence

Concerns about human rights in supply chains have increased for policymakers and consumers in the last two decades, and this has prompted companies -especially those operating internationally, and those in their supply chains- to pay closer attention both to global responsible business frameworks and emerging legislative requirements in corporate supply chains. Against this backdrop, several industry-specific initiatives have also emerged in electronics manufacturing to promote higher social -and environmental- standards in the supply chain. One notable example is the Electronics Industry Citizenship Coalition (EICC), formed in 2004 by a group of electronics companies to improve social, environmental and ethical conditions in their global supply chains. In 2016, the EICC expanded its membership eligibility to include companies from other industries that use electronics in their products. Having rebranded as the

³⁰ The Manpower Ministerial Decree No. 1/2020 (a revision of No. 33/2016) outlines regulations governing labour inspection under the Ministry of Manpower (MoM).

Responsible Business Alliance (RBA) in 2017 to reflect a broadened mandate, the RBA launched several initiatives to address specific issues such as responsible minerals sourcing, labour rights, and factory performance. Today, the RBA and its associated initiatives have more than 500 members globally (RBA, 2022). These and other efforts signal growing momentum towards responsible business conduct in the electronics sector, with pressures for change coming from a range of different stakeholders and forces, both within and outside the industry.

As noted earlier, Indonesia now has its own policy framework and tools for promoting greater corporate accountability and social and labour standards, through its National Strategy for Business and Human Rights and accompanying PRISMA self-assessment tool. However, to date the strategy remains largely underapplied in practice, and while there are more than 30,000 medium and large-size manufacturing firms in the country, only 240 companies have used the PRISMA. There are also doubts as to whether the tool has reached the companies in most need of improvement: most of those registered in PRISMA have been assessed as high performers (i.e. marked “appropriate” or “best”), suggesting only those who are comfortable with closer scrutiny of their standards and practices have utilized the service.

Stakeholders interviewed for this research noted that beyond lead (e.g. OEM) companies, Human Rights Due Diligence (HRDD) is not widely practiced in the sector, and where it is practiced, labour issues are rarely considered in a sustained or substantive way. As raised in focus groups and interviews in Batam and Jakarta, many lead manufacturers also tend to rely on an OSH certification standard, ISO 45001, as a proxy for labour and human rights compliance more generally. Moreover, even in companies where labour issues are monitored more closely (through due diligence or social auditing, for example), respondents note that they tend to be overlooked during periods of high production pressure, where price, quality and volume become a singular concern. In these instances, if suppliers meet quality and price expectations, lead companies may overlook labour-related risks and deficiencies within their supply chains. At the same time trade unions, who could serve as a safeguard against such backsliding, do not appear to have substantially engaged in due diligence processes in the sector, mostly due to a lack of understanding and capacity in this area. Whilst the new Presidential Regulation 60 of 2023 (on the National Strategy for Business and Human Rights) demonstrates new intent on the part of the state to regulate responsible business conduct in Indonesia, it does not articulate a defined role for trade unions either in the due diligence process or the wider implementation of the strategy.

► 5. Conclusions

The growth of Indonesia's electronics industry is essential for the nation's economic future, offering formal -and potentially high quality- jobs that support social mobility and can spur the development of a robust supply chain and related sectors. Recognizing its importance, the government has designated electronics as a priority sector in its 2020-2024 Mid-Term Development Plan. From 2000 to 2015, the industry achieved an impressive compound annual growth rate of 10%, contributing on average 7% to the country's total manufacturing output. However, in recent years, the industry's share of GDP has declined as other sectors, including lower value-added industries, have expanded their contributions.

At the same time, corporate supply chains globally are facing growing expectations to meet sustainability and human rights standards. Alongside traditional voluntary measures guided by international frameworks like the UN Guiding Principles on Business and Human Rights, there is also now an emerging legislative trend that places concrete legal obligations on companies to implement Responsible Business Conduct, underpinned by a demonstrated commitment to internationally recognised labour and human rights standards. Against this backdrop, businesses in the global electronics industry face rising expectations to enhance business practices and decent work outcomes, both in their own operations and throughout their supply chain.

As a globalized economy in which trade accounts for almost half of national GDP, Indonesia is not exempt from these developments. Whilst recent evidence reveals a growing national policy focus on promoting Responsible Business Conduct (and by implication, addressing decent work gaps), translating political commitments into action in domestic supply chains remains a formidable challenge. Recent legislative developments such as Presidential Regulation No. 60 (on the National Strategy for Business and Human Rights), together with government-led business tools such as the PRISMA self-assessment, are in their nascence and yet to be fully understood or implemented³¹. Moreover, beyond industry leaders (namely, multinational brands with a global orientation), businesses in Indonesia often lack sufficient incentives or clear demands to prioritize business and human rights in their operations. At the same time, labour inspection remains weak and under-resourced, effectively reducing the risk and costs of non-compliance with labour laws. Cumulatively, this weakens the overall application and enforcement of decent work standards -and wider responsible business practices- in Indonesia, including in the electronics industry.

Drawing on authoritative quantitative datasets and new qualitative insights from key supply chain actors, this study examines how the Indonesian electronics sector is faring amid these developments. With a view to further upgrading the sector and integrating it into global supply chains, the study presents several strategic opportunities and recommendations for the sector to elevate competitiveness through a renewed commitment to decent work and Responsible Business Conduct. Several key findings emerge from the analysis:

- **The electronics industry is struggling to grow, innovate and upgrade,** and with it, create more and better jobs. Amid intensifying regional competition (including growing imports from lower cost neighbouring countries), many local companies have been incentivized into adopting *race to the bottom* production strategies, which —owing to their focus on minimizing labour and associated production costs— run counter to the principles of decent work and responsible business. Among others, this has led to companies trying to seek cost savings through the types of employment contracts and working conditions they provide. Many of these companies lack both the capacity and the incentives to meet the standards required in higher value segments of the electronics supply chain (i.e. as direct exporters or as part of the supplier network for lead OEM firms).

³¹ These tools could also be strengthened in terms of alignment with international standards for labour and responsible business.

- ▶ **There has been growth in short term and more insecure employment contracts in the electronics sector,** among them contract work and apprenticeships, which some employers say is a response to heightened competition and rising minimum wages. Employees with short term and more insecure contracts commonly receive lower wages or benefits than those with longer term or regular employment status. Linked to this, insights from industry focus groups suggest that whilst Indonesian law allows for companies to offer apprenticeship contracts at a lower wage than the statutory minimum, some companies are exploiting these provisions to employ workers for *full-time* positions at apprentice wages, effectively circumventing minimum wage regulations.³²
- ▶ **Discriminatory practices are evident in recruitment and employment.** Stakeholder insights gathered for this study indicates that companies in the electronics sector often prioritize characteristics other than skills and qualifications during recruitment, including height, age, and marital status. Height restrictions for example, are often imposed to meet ergonomic requirements, which companies argue are essential for ensuring safety³³, while workers and trade unions note that many companies prefer hiring single workers to avoid potential maternity leave costs.
- ▶ **Not all work in the sector is voluntary.** There is evidence that some employers in the electronics sector continue to use coercive measures such as document confiscation (particularly of college diplomas) to retain or dissuade workers from leaving and hence stabilize their workforce amid a highly competitive labour market (especially for skilled labour). Confiscation of essential documents is considered a key warning sign of forced labour under ILO Convention No. 29 on Forced Labour³⁴. This Convention underpins the labour dimensions of responsible business frameworks such as the UN Guiding Principles, as well as being a leading concern for reputation-conscious multinationals. Additionally, qualitative insights have revealed instances of workers facing intimidation and reprisals when attempting to raise grievances with management.
- ▶ **Trade unions continue to face restrictions in the electronics sector.** Although unionization rates are slightly higher in electronics manufacturing than similar comparable sectors, worker representatives report facing a range of limitations, both explicit and more subtle, to their (official) activities in electronics workplaces. This is contrary to the provisions of the Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) and Right to Organise and Collective Bargaining Convention, 1949 (No. 98), both of which have been ratified by Indonesia. According to trade union accounts for this research, companies in the sector employ several approaches to discourage union activity, including marking down the performance assessments of individual union leaders, regardless of actual performance. This can act as a disincentive for workers to join unions and suppress overall union membership (to levels lower than they might otherwise would be).
- ▶ **The findings reveal a complex picture regarding skills development and lifelong learning opportunities for workers in the sector.** While much of the industry recognizes the increasing need for upskilling and reskilling programs to cope with trends like automation and rising competition, several challenges hinder access to these opportunities. These include gender disparities and growth of short-term contracts, misuse of the apprenticeship system, a lack of employer-union collaboration (in skills development initiatives), and the absence of more comprehensive and holistic training programs in the sector (for example, covering both technical and transferable skills).
- ▶ **Awareness and application of Responsible Business Conduct is limited across the electronics sector.** Taken together with other findings detailed in this report, the aforementioned observations indicate that decent work remains a second-order concern for many businesses, and where unlike in other sectors (like garment manufacturing, for instance), oversight by monitoring and public and private inspection regimes is relatively limited. Against this backdrop, while some large firms continue to model positive leadership in their supply chain, overall awareness and practical application of responsible business in the electronics sector is weak, especially among SMEs and domestic-market suppliers.

32 These measures were designed, among others, to incentivize businesses to create viable labour market pathways for young people.

33 This finds some substantiation in the Ministry of Manpower Regulation No. 5 of 2018, which states that employers and/or management are obligated to implement Occupational Safety and Health of Work Environment including controlling biology, ergonomic and psychology factors to meet the standard (Article 3b).

34 Forced labour includes abuse of vulnerability, deception, restriction of movement, isolation, physical and sexual violence, intimidation and threats, retention of identity documents, withholding of wages, debt bondage, abusive working and living conditions, and excessive overtime. Those indicators are based on the definition of forced labour specified in the ILO Forced Labour Convention, 1930 (No. 29) and ILO Abolition of Forced Labour Convention, 1957 (No.105).

► 6. Recommendations

This report identifies key issues related to decent work and responsible business conduct in the Indonesian electronics industry, drawing on a review of existing literature, new data, and qualitative insights from key industry stakeholders. Based on these findings, a number of stakeholder-specific recommendations can be proposed in support of a more responsible and sustainable electronics industry. These recommendations were validated by tripartite constituents and industry stakeholders at an ILO-led workshop in Jakarta on 06 December 2023.

Key recommendations include the need for an integrated industrial policy and strategy for the electronics sector, strengthening social dialogue at both the sectoral and enterprise level, promoting industry-wide commitment to responsible business conduct, strengthening labour inspection and compliance enforcement, and a greater focus on skills development to address the challenges of automation. The full recommendations are listed below.

For Government and regulatory bodies	To foster sustainable and inclusive growth in the Indonesian electronics sector, the government should develop a comprehensive industrial policy or strategy for the sector.³⁵ This policy should address key constraints to industry growth and sustainability including low productivity and limited supply chain integration, whilst also outlining measures to close decent work deficits in the sector such as precarious employment, labour rights violations, and the declining participation of women in the workforce. A robust industrial policy would also define strategies for achieving sustainable growth, outline stakeholder roles and responsibilities, and promote responsible business conduct throughout the electronics supply chain, ensuring a more equitable and prosperous future for the industry and its workers. To strengthen the enabling policy environment, the government should also enhance the domestic implementation of core ILO conventions (nine out of ten of which are already ratified by Indonesia, with only C155 -on occupational safety and health- remaining), and assess and take action to close gaps in practical alignment between national laws and international labour standards. Support to domestic implementation in the electronics sector should particularly focus on providing incentives, resources and capacity-building to SMEs and companies with links —or aspiring to have links— to global supply chains (which typically lack the incentives, capacity and resources to effectively align with these standards). To strengthen decent work outcomes in Indonesia's electronics sector, it is essential to strengthen labour inspection by improving both compliance enforcement and advisory capacity on Responsible Business Conduct (RBC). Beyond labour inspectorates, state-backed mechanisms like the PRISMA self-assessment tool should receive further support to expand their scope, coverage, and uptake. Together, these efforts will boost awareness and adoption of responsible business practices -and particularly labour practices- across the electronics industry and beyond. Leverage insights from the electronics sector to guide future revisions of labour laws, including setting new limits on internships, short-term contracts, and recruitment practices. Moreover, policies from technical ministries, such as the Ministry of Manpower and the Ministry of Law and Human Rights, along with derivative regulations from the 2023 Presidential Decree on the national strategy for BHAM (No. 60/2023), should prioritize wage compliance, fair employment contracts, non-discrimination (especially regarding gender), trade union rights, and the prevention of forced labour. Ensuring coherence among laws, regulations, and policies will be key to promoting decent work in the industry.
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³⁵ Such a policy should support and align with the Making Indonesia 4.0" Roadmap, but elaborate further on strategic measures to harness decent work and responsible business for future competitiveness and industry sustainability.

For employers and EBMOs in the sector	Strengthen social dialogue at the sectoral and enterprise levels, with a particular focus on elevating workers' voice and influence and broadening the issues addressed. Key measures in this regard could include (a) expanding public consultation beyond wages, utilizing existing consultation mechanisms such as wage boards, Collective Bargaining Agreements (CBA), grievance handling mechanisms and Occupational Safety and Health (OSH) Committees to discuss wider issues and implementation of decent work and Responsible Business Conduct; and (b) mainstreaming tripartite dialogue to encourage regular engagement among government, businesses, and unions throughout the policymaking process (e.g., the implementation of Presidential Regulation No. 60 of 2023). By extension, tripartite dialogue mechanisms should also be strengthened, e.g. social dialogue on minimum wage determination, with responsibilities to do this falling not just on employers, but also workers, and the government as well. Encourage a sector-wide commitment to Responsible Business Conduct (RBC) in Indonesia's electronics industry, anchored in shared Decent Work standards. This effort should prioritize improved labour compliance, fair and responsible use of contracts, respect for union rights, and the elimination of discrimination and coercive practices in the workplace. Sectoral associations and leading companies should also take the lead in preparing the industry for increasing RBC requirements by raising awareness of key principles and equipping businesses with practical tools, such as enterprise-level guidance materials, best practices, and peer-learning opportunities (especially around decent work and social dialogue as a core foundation of RBC). Acting as knowledge brokers, these leaders can provide critical insights and direct support on adapting to evolving trends and regulations, as well as and inform future government policies in this space.
For trade unions in the sector	Work with companies in the electronics sector to strengthen social dialogue mechanisms (as outlined above). Building awareness and trade union capacity on the responsible business issues, including the ILO MNE Declaration and UNGPs, will allow for unions to raise and address RBC-related concerns through collective bargaining (both the bargaining process and the agreements themselves) and other social dialogue mechanisms, as well as to strengthen their role and engagement in workplace Human Rights Due Diligence (HRDD). Establish a trade union network or working group on responsible business, with the aim of unifying and amplifying worker voice on related issues, and to conduct policy advocacy to strengthen both compliance enforcement (e.g. of labour laws) and the wider legal and policy framework (for decent work and responsible business). Promote –and model good practices that enable– female representation and leadership in electronics workplaces and within trade union structures. Responding to growing gender disparities in the sector, union advocacy should particularly focus on tackling gender-based discrimination in the workplace, removing barriers to women's advancement, and improving work flexibility and workplace facilities for women with childcare responsibilities.

Other issues for all industry stakeholders to consider	Harness industry-wide collaboration to meet current and emerging skills challenges. Stakeholder insights gathered for this research provide useful indications of where industry skills development priorities should lie in the coming years: i. To help the industry and its workforce navigate growing automation and technological disruption, an industry-led tripartite council could be established to analyse skill requirements and craft-targeted training programmes, while emphasizing automation-resistant skills through entities like the Sectoral Skills Council³⁶. ii. To further incentivize this paradigm shift, the government should implement incentives for leading companies to invest in training centres akin to the successful model pioneered by Panasonic Electronics, which not only addresses immediate production needs, but also imparts transferable skills. iii. Complementing this, employers should forge strategic alliances with trade unions to manage specialized training centres, known as Balai Latihan Kerja (BLKs)³⁷, tailored specifically for electronics workers. These union-led initiatives should encompass a holistic curriculum that combines both industry-relevant proficiencies and skills for future careers. This multifaceted approach would help align relevant industry stakeholders in a collective effort to navigate the challenges of automation while fostering a skilled electronics workforce equipped for the future.
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³⁶ Many countries have developed SSCs of one kind or another to contribute a sectoral 'voice' to education and training arrangements. At the core of an SSCs role is specifying the nature of the skills that an industry sector needs. Only those working successfully in a certain industry, and who are exposed to the competitive pressure of domestic and international markets, together with the regulations experienced by firms in the sector, can give a true up-to-date account of what skills are needed in the workforce. (Sector Skills Council, Policy Note (Indonesia) ILO, 2019). Sector Skills Councils for Shipbuilding, hotel and tourism industries have been established in Indonesia.

³⁷ Vocational Training Centre or Balai Latihan Kerja (BLK) now is called Centre for Vocational Training and Productivity and Balai Pelatihan Vokasi dan Produktivitas (BPVP).

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► 8. Annexes

Annex 1. Decent work statistical indicators

No.	Substantive element	Statistical Indicators	Legal Framework Indicators (L)
1	Employment opportunities (1+2)	► Employment-to-population ratio, 15-64 year ► Unemployment rate ► Youth not in education and not in employment, 15-24 years ► Informal employment	► Government commitment to full employment ► Underemployment insurance
		► Labour force participation rate, 15-64 years ► Youth employment rate, 15-24 years ► Unemployment by level of education ► Employment by status in employment ► Proportion of own-account and contributing family workers in total employment ► Share of wage employment in non-agricultural employment	
		► Labour underutilization	
2	Adequate earnings and productive work (1+3)	► Working poverty rate ► Low pay rate (below 2/3 of median hourly earnings)	► Minimum wage
		► Average hourly earnings in selected occupations (S) ► Average real wages (S) ► Minimum wage as % of median wage ► Manufacturing wage index ► Employees with recent job training (past year / past 4 weeks) (S)	
		► Labour underutilization	

No.	Substantive element	Statistical Indicators	Legal Framework Indicators (L)
3	Decent working time (1+3)	▶ Excessive working time (more than 48 hours per week; 'usual' hours) (S) ▶ Usual hours worked (standardized hour bands) (S) ▶ Annual hours worked per employed person (S) ▶ Time-related underemployment rate (S) ▶ Paid annual leave (developmental work to be done by the Office; additional indicator)	▶ Maximum hours of work ▶ Paid annual leave
4	Combining work, family and personal life (1+3)	- ▶ Asocial / unusual hours (developmental work to be done by the office) ▶ Maternity protection (developmental work to be done by the office; main indicator) -	▶ Maternity leave (including weeks of leave and rate of benefits) ▶ Parental leave
5	Work that should be abolished (1+3)	▶ Child labour (as defined by ICLS resolution) (S) M – Other worst forms of child labour (S)** ▶ Hazardous child labour (S) ▶ Forced labour (S)** -	▶ Child labour (including policies to combat it) ▶ Labour force (including public policies to combat it)
6	Stability and security (1, 2+3)	▶ Precarious Employment rate ** ▶ Job tenure** ▶ Subsistence worker rate** ▶ Real earnings casual workers** (S) -	▶ Termination of employment (including notice of termination in weeks)

No.	Substantive element	Statistical Indicators	Legal Framework Indicators (L)
7	Equal opportunity and treatment in employment (1, 2+3)	▶ Occupational segregation by sex ▶ Female share of employment in senior and middle management* (ISCO88 groups 11 and 12)	▶ Equal opportunity and treatment ▶ Equal remuneration for men and women for work of equal value
		▶ Gender wage gap ▶ Share of women in wage employment in the non-agricultural sector ▶ Indicator for Fundamental Principles and Rights at Work (Elimination of discrimination in respect of employment and occupation) to be developed by the Office ▶ Measure for discrimination by race / ethnicity / of Indigenous people / of (recent) migrant workers / of rural workers where relevant and available at the national level	
		▶ Measure of dispersion for sectoral / occupational distribution of (recent) migrant workers ▶ Measure for employment of persons with disabilities ▶ Memo item: Indicators under other substantive elements marked (S) indicator should be reported separately for men and women in addition to the total.	
8	Safe work environment (1+3)	▶ Occupational injury rate, fatal ▶ Occupational injury rate, nonfatal ▶ Time lost due to occupational injuries ▶ Labour inspection (inspectors per 10,000 employed persons)	▶ Employment injury benefits ▶ Safety and health labour inspection
		-	

No.	Substantive element	Statistical Indicators	Legal Framework Indicators (L)
9	Social security (1+3)	▶ Share of population aged 65 and above benefiting from a pension (S) M – Public social security expenditure (% of GDP)	▶ Pension ▶ Incapacity for work due to
		▶ Healthcare exp. not financed out of pocket by private households ▶ Share of population covered by (basic) health care provision (S)	
		▶ Share of economic. active population contributing to a pension scheme (S) ▶ Public expenditure on needs-based cash income support (% of GDP) ▶ Beneficiaries of cash income support (% of the poor) ▶ Sick leave (developmental work to be done by the Office; additional indicator)	
10	Social Dialogue, workers' and employers' representation (1+4)	▶ Union density rate (S) ▶ Enterprises belonging to employer organization [rate] ▶ Collective bargaining coverage rate (S) ▶ Days not worked due to strikes and lockouts**	▶ Freedom of association and the right to organize ▶ Collective bargaining right ▶ Tripartite consultations
		-	
		▶ Indicator for fundamental principles and rights at work (freedom of association and collective bargaining) to be developed by the office	

Note:

1. Standards and fundamental principles and rights at work
2. Employment
3. Social protection
4. Social dialogue

☐	Main decent work indicators
☐	Additional decent work indicators
☐	Candidate for future inclusion

Annex 2. ILO Core Conventions

1. **Forced Labour Convention**, 1930 (No. 29): prohibits all forms of forced or compulsory labour, exceptions are provided for work required by compulsory military service, normal civic obligations, as a consequence of a conviction in a court of law.
2. **Freedom of Association and the Right to Organize Convention**, 1948 (No. 87) sets forth the right for workers and employers to establish and join organizations of their own choosing without previous authorization. Workers' and employers' organizations shall organize freely and not be liable to be dissolved or suspended by administrative authority.
3. **Right to Organize and Collective Bargaining Convention**, 1949 (No. 98) provides that workers shall enjoy adequate protection against acts of anti-union discrimination.
4. **Equal Remuneration Convention**, 1951 (No. 100) requires ratifying countries to ensure the application of the principle of equal remuneration for men and women workers for work of equal value. The term 'remuneration' is broadly defined to include the ordinary, basic or minimum wage or salary and any additional emoluments payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker's employment".
5. **Abolition of Forced Labour Convention**, 1957 (No. 105) prohibits forced or compulsory labour as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system; as a method of mobilizing and using labour for purposes of economic development; as a means of labour discipline; as a punishment for having participated in strikes; and as a means of racial, social, national or religious discrimination".
6. **Discrimination (Employment and Occupation) Convention**, 1958 (No. 111) defines discrimination as any distinction, exclusion or preference made based on race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.
7. **Minimum Age Convention**, 1973 (No. 138) sets the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18 (16 under certain strict conditions).
8. **Occupational Safety and Health Convention**, 1981 (No. 155) create a human and economic burden, which constitutes a serious concern for the ILO and its constituents. Tackling this challenge requires a collective effort by governments, employers and workers to build, implement and continuously strengthen a preventative safety and health culture.
9. **Worst Forms of Child Labour Convention**, 1999 (No. 182) defines as a "child" a person under 18 years of age. It requires ratifying states to eliminate the worst forms of child labour, including: all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; child prostitution and pornography; using children for illicit activities, in particular for the production and trafficking of drugs; and work which is likely to harm the health, safety or morals of children.
10. **Promotional Framework for Occupational Safety and Health Convention**, 2006 (No. 187) create a human and economic burden, which constitutes a serious concern for the ILO and its constituents. Tackling this challenge requires a collective effort by governments, employers and workers to build, implement and continuously strengthen a preventative safety and health culture.

Annex 3. Electronics Product Categories, Based on Trade Data Classification

Segment	Product Examples	HS Code	ISIC Rev4
3C Final Products (Computers, Communications, Consumer Electronics)	Consumer Electronics, Phones, Computers	8469, 8470, 8471, 8472, 8519, 8520, 8521, 8525, 8527, 8528 85181, 85182, 85183, 85184, 85185 85171, 85172, 85173, 85174, 85175, 85176, 85178 90061, 90062, 90063, 90064, 90065 90091, 90092, 90093 844312, 844351, 84433 950410, 950450	2750, 2740, 2790, 2630, 2651, 2610, 2825, 2652, 2620, 2817, 2731, 2829
Medical Final Products	Capital Equipment	901811, 901812, 901813, 901814, 901819, 901820, 9022, 902140, 902150	2660, 2670
Industrial Products	Analytical Instruments	8526, 901210, 901410, 901420, 901480, 901600, 902410, 902480, 90271-5, 902780, 90281-3, 90291-2, 90301-4, 90308, 90321- 2, 90328	2651, 2733, 2740, 2790, 2670
Components	ICs	8532, 8533, 8534, 8540, 8541, 8542, 8523, 8524	2610, 2710, 2790, 2811, 2731, 2732, 2733, 2720

Source: Frederick & Lee (2017); Frederick & Gereffi (2016)

Annex 4. In-Depth Interview Questions

Private Sectors

1. Opening [All]

- 1.1. Please tell us more about your position and role in the company.
- 1.2. Please tell us about the company's main operations and product types. (a) Computers, communications, and consumer electronics; (b) Medical; (c) Industrial electronics; and (d) Does your company participate in global supply chain?
- 1.3. How much (proportionally) does the company export its products in comparison to selling them to the domestic market?
- 1.4. What tier in the supply chain does the company occupy?

2. Employment and Labour Law [All]

- 2.1. What share of the production workforce is on (a) **permanent** employment contracts; (b) **non-permanent** (i.e. fixed term, short term or temporary); and (c) informal employment contracts (i.e. no formal agreement)?
- 2.2. What share of the production workforce is (a) **hired directly** by your company and (b) **hired indirectly** or through third party contracting arrangements (e.g. subcontracting or labour outsourcing)?
 - 2.2.1. Has the balance between direct and indirectly employed workers changed in the last 5 years (and if so why)?
 - 2.2.2. Do you have special arrangements or practices that apply to indirect workers?
- 2.3. Does your company hire workers through **recruitment agencies**? (if so, who pays for the costs of recruitment)?
- 2.4. What is the typical benefits package that workers in the company receive?
 - 2.4.1. Health Insurance (BPJS)
 - 2.4.2. Workers' Insurance (BPJS-TK)
 - 2.4.3. Paid Leave
 - 2.4.4. Overtime Paid
- 2.5. Is there an issue with long working hours/overtime in a particular period due to higher demand?
 - 2.5.1. How does the company regulate and monitor working time (i.e. to prevent non-compliance linked to excessive hours and overtime)?
- 2.6. There is a wide range of labour laws and standards in Indonesia. What are your company's main challenges in ensuring full compliance with labour law?
- 2.7. Does your company provide apprenticeships?
 - 2.7.1. probe: If yes, what is your practice on pay, working time and benefits for apprentices?
- 2.8. Has your company changed any aspect of its workforce policies or employment arrangements in response to the Omnibus Law? (i.e. contract workers arrangement,

3. Equality and Discrimination [All]

- 3.1. What company policies and practices exist to ensure equality and anti-discrimination?
 - 3.1.1. Probe: If cases of discrimination do arise, how are they managed?
- 3.2. What mechanisms does the company have to manage worker grievances and resolve labour disputes?
- 3.3. Approximately what percentage of the production (non-office) workforce is female?
 - 3.3.1. probe: Has this share risen or fallen in the last 5 years (and why)?

4. Equality and Discrimination [All]

- 4.1. What are your company's **policies and practices** on occupational safety and health (OSH)?
- 4.2. What's the biggest occupational health and safety risk to workers in the company?

- 4.3. What OSH facilities does your company provide to its employees? (e.g., nursing room, first aid kit, annual medical checkup)
- 4.4. Do your company provide training related to OSH practices and raising to awareness to it?
- 4.5. Does your company involve labour unions in OSH activities (e.g. prevention, risk assessments, etc.)?

5. Industrial Relations & Social Dialogue [All]

- 5.1. What policies and practices does the company have to ensure freedom of association and the rights of workers to organize and collectively bargain?
 - 5.1.1. Have you faced any difficulties in ensuring workers can organize and bargain effectively?
- 5.2. Does your company have trade unions? If yes, how many?
- 5.3. Approximately what percentage of the production (non-office) workforce belong to a union?
- 5.4. Does the company engage in regular dialogue and negotiation with trade union(s)?
- 5.5. Does the company have an active collective bargaining agreement negotiated with workers/ union(s)?
 - 5.5.1. What issues are covered by the collective bargaining agreement?
 - 5.5.2. Are any of the provisions in the CBA *higher* than the statutory minimum requirements set out in Indonesian law?

6. Training and Skills Development [All]

- 6.1. What kind of regular or periodic training does your company provide its employees? (e.g., vocational training, on-the-job training, formal training with certificate)?
- 6.2. Does your company experience skill mismatches?
- 6.3. What are the three main reasons you offer training to your employees? (Please rank in order of importance. For example, (a) Productivity, (b) Staff retention, and (c) Career development for workers).
- 6.4. Does your company have work-based learning (*Praktik Kerja Lapangan* (PKL), *Praktik Kerja Industri* (Prakerin), On-The-Job Training (OJT), apprenticeship, or third-party training)?
- 6.5. Do you inform all workers in each work unit about training opportunities? What is percentage between female and male staff in training provided by company each year?
- 6.6. In the last 5 years, has your company increased the level of automation and/or labour-saving technology used in the manufacturing process?
 - 6.6.1. If yes, what implications has this had on the workforce (e.g. upskilling, re-skilling, layoffs of old staff, hiring of new staff, etc.)

7. Supply Chains and Responsible Business Conduct

Questions for OEMs

- 7.1. Does your company have a human rights policy (or similar) that covers labour standards and responsible business conduct? **Yes/No**
- 7.2. In the last few years, has your company had to adapt or respond to new laws, rules or requirements in your supply chain relating to social sustainability and/or responsible business conduct? (Interviewer note may need to provide examples to explain/clarify the point). **Yes/No**
 - 7.2.1. *If yes, what rules and what adaptations?*
 - 7.2.2. *If yes, what are the challenges of implementing it?*
- 7.3. In the last 2 years, has your company received a labour inspection or labour audit (either by public authorities or private companies)?
 - 7.3.1. *If yes, please provide more details (how many, who by, etc.)?*

[Sub-section on OEM relationships with suppliers]

- 7.4. Does your company have a code of conduct (or related policies/standards) for your suppliers that covers labour standards and responsible business conduct? **Yes/No**

- 7.5. Does your company conduct human rights due diligence in (a) your corporation (including affiliates/group companies), and (b) your main suppliers? **Yes/No**
- 7.5.1. *If yes (to A or B), how is this done?*
- 7.5.2. *If not to (A or B), why not?*
- 7.6. Does the company conduct human rights impact assessments?
- 7.6.1. If yes, is there a follow up from the findings?
- 7.6.2. If yes, who is doing impact assessment and due diligence in your company?
- 7.7. Does your company request suppliers to comply with any international standards or guidelines related to business and human rights?³⁸ **Yes/No**
- 7.7.1. *If yes, what are they?*
- 7.8. Does your company monitor or audit labour standards and compliance in (a) your corporation (including affiliates/group companies), and (b) your main suppliers? **Yes/No**
- 7.8.1 *If yes, how do you do and how often?*
- 7.9. Has your company ever terminated a contract with a supplier firm in response to a human or labour rights issue? (if yes, can you provide more information?)
- 7.10. Does your company provide guidance/support to suppliers on labour or business human rights issues? **Yes/No**
- 7.11. Does your company publicly report on labour standards and responsible business practices (a) in your company and (b) in your supply chain (i.e., including suppliers)? **Yes/No**
- 7.12. **(Companies in Japanese supply chain only)** Are you aware of Japan's National Action Plan on Business and Human Rights (2020-25), and the related Guidelines on Respecting Human Rights in Responsible Supply Chains (Due Diligence) (2022)? **Yes/No**
- 7.12.1. *If yes, how has your company responded to them?*
- 7.13. Are you aware of Indonesia's National Action Plan on Business and Human Rights by National Commission of Human Rights? **Yes/No**
- 7.13.1. *If yes, what relevance or impact does it have on your business?*
- 7.13.2. Do you feel able or equipped to align with them?
- 7.13.3. *What type of support (if any) would you like to see from the Indonesian government or from the ILO (e.g., industry tools, mechanisms, advisory)?*
- 7.13.4. Do you think it is necessary or useful for the company to align with them?

Questions for Suppliers

- 7.14. Are suppliers aware of compliance with international standards/instruments for Business and Human Rights?
- 7.15. In the last few years, has your company had to adapt or respond to new laws, rules or requirements relating to social sustainability and/or responsible business conduct (i.e. from lead firms and customers, export markets, etc)? **Yes/No**
- 7.15. 1 *If yes, what rules and adaptations?*
- 7.16. Does your company have a human rights policy (or similar) that includes labour standards and/or responsible business conduct? **Yes/No**
- 7.16.1. *If yes, what are the challenges of implementing it?*
- 7.17. Does your company conduct human rights due diligence? **Yes/No**
- 7.17.1. If yes, how often?

38 Interviewer could provide examples e.g. UN Guiding Principles, OECD Guidelines, MNE declaration, national supply chain laws, etc.

- 7.18. Are you required by any of your customers to comply with any international standards/guidelines related to business and human rights? **Yes/No**
- 7.18.1. If yes, what are they?
- 7.19. Are you required (by any customers, i.e. OEM firms) to conduct labour compliance audits (or similar) in your company? **Yes/No**
- 7.20. Do you report on labour standards and responsible business practices to your customers? Yes/No
- 7.20.1. If yes, how often?
- 7.21. When was the last time you were visited by a government labour inspector?
- 7.22. Have you ever received guidance/support from any customers on labour or business human rights issues? **Yes/No**
- 7.23. **(Companies in Japanese supply chains only)** Are you aware of Japan's National Action Plan on Business and Human Rights (2020-25), and the related Guidelines on Respecting Human Rights in Responsible Supply Chains (Due Diligence) (2022)? **Yes/No**
- 7.23.1. If yes, how has your company responded to them?
- 7.24. Are you aware of Indonesia's National Action Plan on Business and Human Rights by National Commission of Human Rights? **Yes/No**
- 7.24.1. If yes, what relevance or impact does it have on your business?

Private Sectors

1. Opening [All]

- 1.1. Please tell me a little bit about your organization's activities regarding the electronics industry in Indonesia.
- 1.2. Would you like me to hear a little bit about your position and role?
- 1.3. What is your institution's stand and position regarding the requirement to support and respect human rights for business?
- 1.3.1. Have any regulatory frameworks been established in this regard?
- 1.3.2. What are your institution's stand and objectives on this issue?
- 1.4. Has your company heard of/adopted the MNE Declaration and Social Policy and UNGPs on Business and Human Rights? Have any policy and committee have been established to address the issue?

2. Labour Law Compliance [All]

- 2.1. To what extent does the Indonesian electronics industry comply with Indonesian labour laws and policies?
- 2.2. What are the biggest compliance issues with Indonesian labour laws and policies faced by electronics industry?
- 2.2.1. *Is the industry well-aware of Indonesia's National Action Plan on Business and Human Rights?*
- 2.2.2. *(JAPANESE ASSOCIATION ONLY) How about Japan's NAP on Business and Human Rights 2020-2025 and Japan's Guidelines on Respecting Human Rights in Responsible Supply Chains (Due Diligence) (2022)?*
- 2.3. Where is better compliance needed?
- 2.4. Any room for improvement for compliance with labour rights?
- 2.5. What should be done to ensure continuous improvement in labour compliance? What tools and/or mechanisms are potentially needed in recent years and 10-year future?

- 2.6. How has your organization supported/enhanced Indonesian electronics industry in the effective compliance with labour laws and policies?

3. Equality and Discrimination [All]

- 3.1. What is the composition of male and female workers in the industry?
- 3.2. To what extent does Indonesia's electronics industry ensure equality and anti-discrimination for its workforce (all tiers)?
- 3.3. What type(s) of discrimination and inequality are most common in the industry?
- 3.4. What should be done (and/or what tools or mechanisms are needed) to address these issues?
- 3.5. What role does your organization play -and what actions does it take- to help combat and prevent discrimination in the electronics sector?

4. Occupational Safety and Health [All]

- 4.1. What are the current policies and practices of the OSH issue in the electronics sector at the workplace level? What OSH cases occurred in the electronics sector?
- 4.2. To what extent does the Indonesia's electronics industry implement occupational health and safety (OSH) practices?
- 4.3. Where is better compliance needed for OSH laws and policies?
- 4.4. What should be done to ensure better compliance with OSH laws and policies? What tools and/or mechanisms are needed?
- 4.5. What role do you think your organization has or should have in the supporting in the effective compliance with OSH laws and policies?

5. Labour Relations and Social Dialogue [All]

- 5.1. How many electronics manufacturing companies are organized/unionized? What is the status of bipartite mechanisms (union and employers) at the workplaces in the electronics sector?
- 5.2. Do unions have collective bargaining agreements?
- 5.3. Is there any case of union busting/anti-union discrimination practice?
- 5.4. What should be done to have effective implementation/communication of social dialogue/freedom of association?
- 5.5.. What role do you think your organization have or should have in the supporting the effective implementation/communication of social dialogue/freedom of association?

6. Training and Access to Skills [All]

- 6.1. What are the current policies and practices of Indonesia's electronics industry to provide skill training and capacity building to employees - especially for industry transformation towards sustainability?
- 6.2. Is the sectoral skills council for the electronics sector available?
- 6.3. What are the issues of skill mismatches and gaps?
- 6.4. What should be done by the industry to have / promote better skill training and capacity building for employees?
- 6.5. How has your organization/agency supported Indonesia's electronics industry in the effective provision of skill trainings and capacity building to employees?

- 6.6. There is a growing issue in the industry concerning the rise of automation. What are the implications for employees? [a] Decreasing labour demand; [b] Reskilling or upskilling; [c] Do not need automation yet.

7. Business and Human Rights

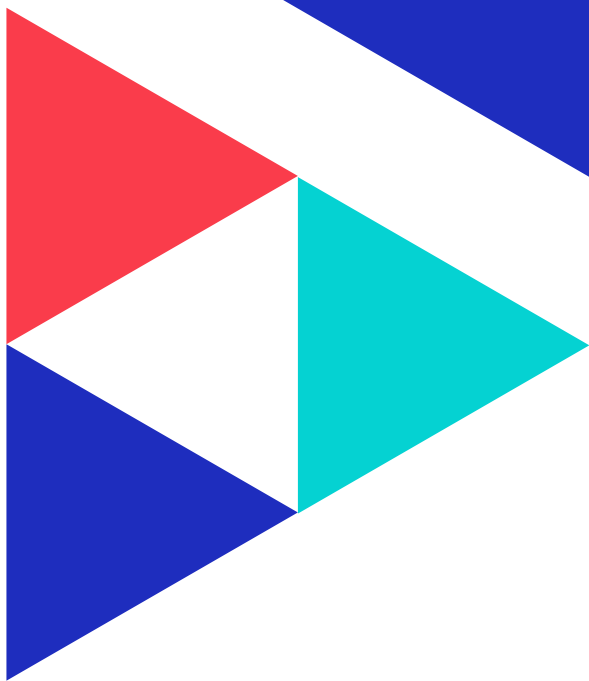
Questions for Employers Organizations & Industry Associations

- 7.1. How important are labour standards and wider responsible business principles to the future of the industry? What does your organization stand regarding this issue?
- 7.2. Has your organization heard about MNE Declaration and UNGPs on Business and Human Rights? If yes, what is the follow up action that the company implemented?
- 7.3. What labour opportunities do you think the industry should make progress on for the industry's sustainability and competitiveness?
- 7.4. What concrete actions do the firms plan to do in respecting human rights and in implementing the UNGPs at the firm level?
- 7.5. In general, how do you view relations between management and workers in the sector?
- 7.6. What are the incentives that the company expects from the government to implement Responsible Business Conduct?
- 7.7. Is any specific committee or unit in the company appointed to be dedicated to the issue of human rights?
- 7.8. What incentives do companies expect from the government to implement Responsible Business Conduct?

Questions for Employers Organizations & Industry Associations

- 7.9. What is the highest educational attainment and job title for workers in the industry who also participate in labour unions?
- 7.10. How many electronics companies are unionized? Do they have collective bargaining agreements?
- 7.11. Have the unions heard about the global instruments on business and human rights?
Probe: What is the union's view on this?
Probe: Is the union involved in enforcing human/labour rights? If yes, what kind of involvement?
- 7.12. What are the most urgent labour issues that need to be addressed and by whom?
- 7.13. How many firms in the electronics industry establish bipartite mechanisms in implementing responsible business conduct?
- 7.14. What support do the workers need from the government and international organizations?
- 7.15. Is the growing rule / requirement for responsible business (e.g., due diligence) helpful for workers?
- 7.16. What are the roles of trade unions for ensuring responsible business?
- 7.17. What type of discrimination have you experienced/seen at your workplace or complained about to your labour union?
Probe: Did it relate to gender, age, religion, nationality, or something else?
- 7.18. Did your trade union have received remedy from employer or external body? Yes/No
Probe: If yes, how did it respond to the issue? And to what extent was the issue resolved?
- 7.19. What measures do you think employers could take to prevent workplace discrimination?

Advancing social justice, promoting decent work



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