

Human Trafficking and Other Labor Risks in the Electronics & Electrical Products Sector

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Verité

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1. Introduction

1.1 Objective

This report provides an overview of the risks of human trafficking, including forced labor,¹ in the electronics and electrical products sector globally. In some cases, the report also discusses other serious labor abuses as indicators of conditions or practices in the working environment that contribute to workers' vulnerability to forced labor.

This sector is a key contributor to the global economy. Yet, the sector faces important challenges related to decent work including limited freedom of association and collective bargaining, discrimination based on sex and migration status, document retention, and excessive working hours.² The involvement of labor contractors, subcontracting of recruitment and worker management functions, and excessive recruitment fees charged to workers are indicators of human trafficking risks and have led to instances of debt bondage and forced labor.³ Migrant workers,⁴ who often work informally and with limited alternative means of employment, make up a significant proportion of the global electronics and electrical products workforce; they are at particularly high risk of labor exploitation, including forced labor.

The objective of this report is to raise awareness of the forms that forced labor may take in the electronics and electrical products sector, its structural causes, and the combination of factors that may bind workers to their jobs. The intended audience for these findings includes government and industry

¹ Note: The United States recognizes two primary forms of trafficking in persons: forced labor and sex trafficking. For the purposes of this report, several terms are used such as "trafficking in persons," "human trafficking," and "forced labor." In this report, these terms refer to a crime whereby traffickers exploit and profit at the expense of adults or children by compelling them to perform labor.

² ["Decent work in manufacturing supply chains Trends, challenges and innovations in Asia and the Pacific." ILO, Sep 2025.](#)

³ ["Risk assessment of forced labour in procurement: Information and communications technology 2025 report." Electronics Watch, Dec 2024.](#)

⁴ In this report, the term migrant worker refers to a person who migrates, or has migrated, from one country to another, with a view to being employed by someone other than him/herself, including any person regularly admitted, as a migrant for employment, and/or to seek temporary or permanent residence in another country. This definition is aligned with [ILO Convention C097 – Migration for Employment Convention \(Revised\), 1949](#) and the [U.S. Department of Homeland Security's Office of Homeland Security Statistics](#).

actors seeking to strengthen their human rights due diligence approaches to manage the risks of forced labor, as well as workers and their advocates, civil society, and consumers.

Electronics and electrical products entities operate within an increasingly stringent regulatory environment that demands proactive measures to prevent human trafficking. Federal legislation such as the Trafficking Victims Protection Act, the Tariff Act of 1930, the Trade Facilitation and Trade Enforcement Act of 2015, the Countering America's Adversaries through Sanctions Act, the Uyghur Forced Labor Prevention Act, as well as relevant regulations like the Federal Acquisition Regulation and various state-level requirements, establish clear expectations for businesses to monitor and address trafficking risks within their operations and supply chains.

Electronics and electrical products sector entities also face compelling business reasons to implement robust due diligence systems. The reputational damage from association with trafficking operations can result in immediate loss of contracts, particularly with government agencies and major corporations that have adopted zero-tolerance policies. Furthermore, the operational disruptions caused by trafficking-related investigations can significantly impact service delivery and customer relationships, while the financial costs of remediation and legal proceedings can be substantial.

While forced labor risks exist across the electronics and electrical products sector's diverse operations and materials supply chains, the focus of this report is on labor supply chains and the work done in electronics manufacturing facilities by foreign migrant workers, subcontracted workers, and otherwise vulnerable workers. Guiding frameworks used to benchmark practices and conditions in this sector, include, but are not limited to:

- [ILO Convention 29 – Forced Labour Convention, 1930](#)
- [UN Guiding Principles on Business and Human Rights](#)
- [OECD Due Diligence Guidance in the Electronics Sector](#)
- [The RBA Code of Conduct](#)
- [Electronics Watch Code](#)

1.2 Scope

This report covers the recruitment, contracting, and management of labor involved in the manufacturing and production of electronics and electrical products. For information on the human trafficking and

forced labor risks associated with raw materials used in the manufacture of electronics and electrical products, see the [Coltan, Tungsten, and Tin](#); [Copper](#); [Gold](#); [Silver](#); [Steel](#); and [Zinc](#) commodity reports available at [ResponsibleSourcingTool.org](https://www.responsible sourcing tool.org).

Workers in focus include those who are part of electronic and electrical product production lines (e.g., electrical and electronic engineering technicians, trouble-shooters, inspectors, machine operators, and assembly line workers), as well as factory canteen, security, and janitorial workers.

Any worker with one or more of the vulnerabilities described in this report can become a victim of forced labor. Attention is given to research indicating acute vulnerabilities faced by migrant, seasonal, and/or subcontracted workers (workers who are supplied by third party providers), who are often exposed to deceptive recruitment, charging of fees and expenses to secure a job, debt bondage, excessive working hours, retention of identity documents, and unsafe working and living conditions.

1.3 Context and Methodology

1.3.1 Risk Factors, Risk Indicators, and Analytical Framework

The electronics and electrical products sector includes many different types of jobs ranging from those that are high-skilled and highly compensated to those that are low-skilled and very poorly paid. As is the case across most industries, certain workers are more vulnerable to forced labor risks than others. This is based mainly on their ability to decline or leave a job in order to protect their welfare. Verité's research has found that the greatest risk of forced labor is at the intersection of worker vulnerability and employment practices, including recruitment, that exploit that vulnerability. There are often overlapping characteristics of work and workers at this intersection, such as those in low-paid, low-skilled, dirty, dangerous, and demeaning ("Three D") jobs; subcontract workers and workers recruited by third-party intermediaries; migrant workers; workers compelled by severe economic drivers; and workers subject to coercion by the state.

This report examines both socio-demographic and employment practice-related *risk factors*, which contribute to worker vulnerability, and *risk indicators* or signs, which help identify cases of forced labor. Risk factors and risk indicators have overlapping elements and causes. To help contextualize the many indicators highlighted by the research on this sector, Section 3 organizes them into the four most common **risk factors** that underlie them:

- Migrant workers and immigrants with precarious residency status
- Involvement of labor contractors, recruiters, agents, or other middlemen in the labor supply chain
- Workers experiencing poverty, marginalization,⁵ and absence of alternative income options
- State-imposed forced labor programs

Research for this report identified and discusses the following **indicators** of forced labor in the electronics and electrical products sector:⁶

- Deceptive or fraudulent recruitment (regarding the nature and terms of the job and/or the working and living conditions)
- Debt linked to recruitment practices (including charging of fees)
- Hazardous or degrading working conditions
- Onerous working hours or work schedule
- Degrading work-related living conditions
- Physical violence
- Restrictions on workers' movement
- Retention of workers' personal documents
- Withholding of wages
- Abuse or manipulation of debt

⁵ The [ILO Global Guidelines on the Prevention of Forced Labour Through Lifelong Learning and Skills Development Approaches](#) notes that people most at risk of forced labor are those that are vulnerable and includes marginalization among the common characteristics of vulnerability, along with suffering discrimination on the grounds of age, ethnicity, disability, gender, migration status, race, religion, or sex, etc. leading to social and economic exclusion or marginalization.

⁶ The ILO Forced Labour Convention, 1930 (No.29), defines forced labor as “all work or service which is exacted from any person under the threat of a penalty and for which the person has not offered himself or herself voluntarily.” To support front line actors in the identification of situations of forced labor, ILO Indicators of Forced Labor - 2025 Revised Addition includes 11 of the most common signs observed in forced labor cases. They comprise situations that qualify as the menace of any penalty (also called coercion) and the absence of voluntary consent, or the ability to withdraw that consent, in other words the workers' freedom to leave the job. (To meet the threshold of forced labor, a situation must have some a *combination* of these two types of abuse.) The 11 indicators do not map exactly to the ILO's earlier, more granular 2024 *Hard to See, Harder to Count: Handbook on Forced Labour Surveys*, which describes 22 circumstances commonly giving rise to involuntary work or qualify as forms of coercion. The list of indicators here are drawn from both these ILO documents as well as Verité' research for this report.

- Abuse of vulnerability

1.3.2 Sources of Information and Criteria for Inclusion

Sources of information for this report include a broad range of publicly available materials, including civil society publications, journalistic investigations, academic research, and government reporting. These sources were used to identify documented or credible allegations of labor exploitation across electronics and electrical products sector operations. We note that the absence of documentation (e.g., research or investigative reports) pertaining to certain geographic locations or types of businesses does not signify low or the absence of risk and conversely, more available information does not necessarily mean the risk is higher.

Further, allegations were not required to meet a legal or prosecutorial threshold to be included in the analysis, and not all findings presented here meet the legal definition of human trafficking. Labor exploitation occurs along a continuum, from fair, safe, and legal work, in which employment is freely chosen, to situations characterized by a combination of involuntariness and coercion.⁷

2. Overview of the Electronics and Electrical Products Sector

2.1 Background

The electronics and electrical products sector is considered one of the world's largest industries,⁸ encompassing enterprises that manufacture millions of consumer products a year as well as smaller enterprises that focus on producing limited amounts of specialized electrical components.⁹ Growing global demand for electronic products has stimulated job creation around the world. The electronics and electrical products sector is fully globalized. Although many major brands continue to originate in the United States, Japan, and other developed countries, the actual production of most electronic and

⁷ For operational forced labor indicators of involuntariness and coercion developed by the ILO, please refer to the ILO's [Hard to See, Harder to Count: Handbook on Forced Labour Surveys](#) (2024). The presence of an indicator alone does not necessarily confirm a legal finding of forced labor but signals elevated risk, especially when multiple indicators are present simultaneously.

⁸ ["The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains." ILO, 25 Nov 2024.](#)

⁹ ["The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains." ILO, 25 Nov 2024.](#)

electrical products has increasingly shifted to developing and middle-income countries, largely in Asia and Southeast Asia (e.g., Vietnam, Malaysia, India, and Thailand),¹⁰ where the sector has generated job opportunities and become key to economic and social development.¹¹ Top exporting countries include China, Germany, Japan, Malaysia, Singapore, South Korea, Thailand, the United States, and Vietnam.¹²

The sector includes computer and electronic product manufacturing (e.g., computer and peripheral equipment; communications equipment; audio and video equipment; semiconductor and other electronic components; navigational, measuring, electromedical, and control instruments; and magnetic and optical media) as well as electrical equipment, appliance, and component manufacturing (e.g., electrical lighting equipment such as lamp bulbs and lighting fixtures; household appliances; electrical equipment such as electric motors, generators, transformers, and switchgear apparatuses; and other electrical equipment and components such as batteries, insulated wire, electrical outlets, fuse boxes, and light switches).¹³

Electronic and electrical products are manufactured using a wide array of metals and minerals, including copper, aluminum, titanium, and gold. Plastics made from petroleum products and other chemicals are also used. As noted above, information on labor risks in key inputs used in electronics and electrical products can be found in other RST commodity reports, available [here](#). Because production in the sector is so globalized, companies rely heavily on inputs from the transportation sector (see the Responsible Sourcing Tool's [Transportation sector report](#) for more information) and other supporting industries like the Facilities Services sector as well.

¹⁰ [Solovev, Andrey and Timur Yuldashev. "Best Countries for Contract Electronics Manufacturing, Part 2: Malaysia, Thailand, Vietnam, and India." Integra Sources, 12 Dec 2024.](#)

¹¹ ["The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains." ILO, 25 Nov 2024.](#)

¹² ["Electrical machinery and electronics." Observatory of Economic Complexity \(OEC\), 2024.](#)

¹³ [U.S. Bureau of Labor Statistics. "Industries at a Glance: Computer and Electronic Product Manufacturing: NAICS 334." U.S. Bureau of Labor Statistics. "Industries at a Glance: Electrical Equipment, Appliance, and Component Manufacturing: NAICS 335."](#)

2.2 Supply Chain: Long, Complex, and Non-Transparent

Electronics and electrical products supply chains are notoriously complex, often characterized as global webs, with multiple tiers of customers and suppliers and branching suppliers of suppliers across dozens of countries. They also tend to include high levels of outsourced and subcontracted manufacturing, resulting in contract manufacturers, who work with a vast number of smaller suppliers, being key industry players.¹⁴

The supply chain actors involved in electronics and electrical products manufacturing include raw materials suppliers furthest upstream, electronics component manufacturers, electronics assembly companies, original design and equipment manufacturers, downstream distributors and retailers, and aftermarket and service providers. Original design and equipment manufacturers focus on designing and developing product prototypes, while electronics component manufacturers produce specific individual components (e.g., batteries, semiconductors, display screens) that electronics assembly manufacturers – including contract manufacturers – use to produce finished devices.¹⁵ This report focuses on human trafficking risks found primarily in electronics component manufacturers and electronics assembly manufacturers, where the presence of vulnerable workers like migrants and those employed by third parties is high.

Electronics and electrical products supply chain actors are diverse in terms of size, focus, and business structure. The International Labour Organization (ILO) notes more than 44,000 enterprises in the global electronics sector ranging from global electronics production conglomerates and large multinational enterprises to small and medium-sized enterprises, contract manufacturers, and even home-based and micro enterprises.¹⁶ As noted above, outsourcing is common in electronics manufacturing, with many original equipment manufacturers outsourcing production to electronics assembly and manufacturing

¹⁴ [“The impact of procurement practices in the electronics sector on labour rights and temporary and other forms of employment.” ILO, 16 Jan 2017.](#)

¹⁵ [“The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains.” ILO, 25 Nov 2024.](#)

¹⁶ [“The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains.” ILO, 25 Nov 2024.](#)

companies,¹⁷ who in turn source from a vast number of chemical, metal, plastic, and glass input suppliers located around the world.

The complexity of these sourcing and production arrangements makes scrutiny of the labor practices throughout a product's full production cycle quite difficult, creating challenges for establishing supply chain transparency and conducting human rights due diligence. Each node of, or business entity in, a supply chain has its own labor supply chain. Even when a particular facility within the product or materials supply chain implements safeguards against trafficking or other labor abuses in its own management practices (including due diligence of its labor supply chain), trafficking may occur in the labor practices or supply chains (including labor supply chains) of its suppliers.

2.3 Labor Supply Chain

Another dynamic that characterizes electronics and electrical products supply chains, and that can lead to labor rights risks, is “just-in-time” production, a manufacturing approach in which goods are produced and delivered in specific quantities as they are needed in order to improve efficiency and minimize waste. This leads many contract manufacturers to rely on temporary employment and other flexible or non-standard employment arrangements in order to remain agile in response to customers’ changing orders and to keep costs low.¹⁸ At times of high production, workers are in some cases prevented from resigning by managers who refuse to process resignation requests beyond the monthly limits that have been set (e.g. three resignations per month, per team), or placed on resigning “waiting lists” to prevent workforce turnover;¹⁹ when new hires are required, recruitment is typically carried out quickly, sometimes without appropriate oversight, in order to speed up production processes. When production dips, layoffs are common, even early on in workers’ contracts; this is sometimes soon after migrant

¹⁷ [“The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains.” ILO, 25 Nov 2024.](#)

¹⁸ [“The impact of procurement practices in the electronics sector on labour rights and temporary and other forms of employment.” ILO, 16 Jan 2017.](#)

[“2025 Information and Communications Technology Benchmark Key Findings Report.” Know The Chain and Business & Human Rights Resource Centre, 2025.](#)

¹⁹ [“Risk assessment of forced labour in procurement: Information and communications technology 2025 report.” Electronics Watch, Dec 2024.](#)

workers have arrived, leaving them with significant recruitment-related debt and no way to earn money to repay the debt.²⁰

Because of this dynamic nature of the electronics and electrical manufacturing sector and the frequent fluctuations in labor demand, particularly in the electronics sub-sector, recruitment agents and labor contractors are heavily involved in the supply of labor to this sector, as discussed further in section 3.1.1 below.

2.4 Processes, Jobs, and Workforce Characteristics

The electronics and electrical products sector directly employs 18 million people globally, with many more employed indirectly in industries along the electronics supply chain.²¹ As of 2023, nearly 80 percent of these workers were employed in Asia and the Pacific Rim countries.²² Though there is variation in size of production units, as noted in section 2.1, component and assembly manufacturing factories tend to be large, usually employing between 10,000 and 50,000 workers and at the upper end as many as 450,000.²³

Occupations in the sector include skilled positions such as appliance engineers, computer hardware engineers, and computer software engineers; semi-skilled positions, such as electrical and electronic engineering technicians, trouble-shooters, inspectors, and machine operators; and low-skilled jobs such as assembly line workers and packers.²⁴

²⁰ [Simpson, Cam. "An iPhone Tester Caught in Apple's Supply Chain." *Bloomberg Businessweek*, November 2013.](#)

["The production of electronic components for the IT industries: Changing labour force requirements in a global economy." ILO, 16 April 2007.](#)

²¹ [Hawes, Mandy et al. "Worker and Community Health & Safety in the Electronics Industry." Anroev, 2024.](#)

["The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains." ILO, 25 Nov 2024.](#)

²² ["The future of work in the electronics industry – Advancing decent work in more inclusive, sustainable and resilient electronics supply chains." ILO, 25 Nov 2024.](#)

²³ ["Due diligence in electronics and vehicle manufacturing." OECD, 7 Jul 2025.](#)

²⁴ [U.S. Bureau of Labor Statistics. "Industries at a Glance: Computer and Electronic Product Manufacturing: NAICS 334."](#)

[U.S. Bureau of Labor Statistics. "Industries at a Glance: Electrical Equipment, Appliance, and Component Manufacturing: NAICS 335."](#)

Lower tiered positions that require fewer skills often involve higher chemical exposure, and workers in them may experience fewer workplace protections.²⁵ Migrants are often in these jobs, as are women (60 percent of workers in the electronics and electrical products sector are women, primarily concentrated in low-skilled and low-paid assembly and manufacturing jobs while men occupy supervisory positions), and both demographics face heightened risks.²⁶ Expecting mothers are particularly vulnerable to toxic chemicals used in electronics and electrical products – due to adverse impacts to unborn children and to female reproductive organs. Women are vulnerable to sexual harassment, and sexual and gender-based violence, as discussed further in Section 3.2.1.²⁷ Migrant workers are particularly vulnerable to recruitment-related debt resulting from fees and expenses, debt-bondage, restrictions on their freedom of movement, and other abuses, as discussed further in section 3.1.

Unionization and freedom of association rates within the electronics sector are generally considered low, with workers facing human rights risks for joining trade unions and/or engaging in collective bargaining.²⁸

3. Forced Labor and Other Labor Rights Risk Factors Associated with Electronics and Electrical Products

The United States Department of State's *2025 Trafficking in Persons* report noted evidence of forced labor (or risk of forced labor)²⁹ associated with the production of electronics and electrical products in the following three countries: China, Japan, and Malaysia.

²⁵ [Hawes, Mandy et al. "Worker and Community Health & Safety in the Electronics Industry." Anroev, 2024.](#)

²⁶ ["2025 Information and Communications Technology Benchmark Key Findings Report." Know The Chain and Business & Human Rights Resource Centre, 2025.](#)

[Villadiego, Laura. "The gender gap in electronics factories: women exposed to chemicals and lower pay." Equal Times, 22 Dec 2017.](#)

²⁷ ["Due diligence in electronics and vehicle manufacturing." OECD, 7 Jul 2025.](#)

["The Hidden Cost of Electronics: Workers and Communities at Risk." Good Electronics, 24 Aug 2025.](#)

²⁸ ["Due diligence in electronics and vehicle manufacturing." OECD, 7 Jul 2025.](#)

²⁹ Risk of, or vulnerability to, forced labor in the electronics and electrical products sector, as opposed to documented evidence of forced labor, is indicated by the inclusion of "(risk)" following the country in which the risk or vulnerability was reported.

The following sections discuss common risk factors and employment practices identified across many geographic locations, including the countries listed above, where risks and situations of forced labor in the electronics and electrical products sector have been identified. These factors and practices are often interrelated and can compound each other.

3.1 Migrant Workers and Immigrants with Precarious Residency Status

As noted above, migrants, both internal and international, make up a significant proportion of the electronics and electrical goods manufacturing workforce in many countries. Migrants in this sector are at increased risk for trafficking for many reasons. Among the most prominent is the burden of debt that many migrants incur in order to cover the cost of their recruitment and job placement. These costs typically include recruitment fees sometimes paid to multiple labor intermediaries, travel expenses, and other related fees to secure employment, such as documentation processing fees. Indebtedness is often exacerbated for lower-skilled workers in the sector who are not paid enough to keep up with high interest rates on loan payments. Indebtedness can compel migrant workers to accept working and living conditions or terms of employment they might not otherwise tolerate in order not to default on their loans and risk the welfare of their families.³⁰

Many migrant workers are reported to have been deceived at various stages of the recruitment process about job conditions, including wages, by unethical recruiters or employers. Cultural and linguistic barriers, absence of social support networks, fear of deportation, and lack of access to legal recourse compound their vulnerability.³¹ In some country contexts, migrant workers' access to their identity documents, freedom of movement, and legal ability to change jobs are tightly controlled or limited. For example, in Malaysia, the ILO reports that migrant workers' work permits "are tied to specific employers and work sectors, limiting their freedom to change employers except in certain circumstances. This lack

³⁰ ["Addressing forced labour and child in the electronic and electrical sector in Malaysia." ILO, 2025.](#)

["Forced Labor in the Production of Electronic Goods in Malaysia: A Comprehensive Study of Scope and Characteristics." Verité, 2014.](#)

³¹ [Hawes, Mandy et al. "Worker and Community Health & Safety in the Electronics Industry." Anroev, 2024.](#)

of employment flexibility places significant power in the hands of employers, compelling workers to endure unfavorable conditions to maintain their legal immigration status.”³²

3.2 Involvement of Labor Contractors, Recruiters, Agents, or Other Middlemen in the Labor Supply Chain

The involvement of middlemen in the process of recruiting and placing workers in low-level electronics and electrical products sector manufacturing jobs increases workers’ risk of human trafficking. Workers are often deceived by recruiters about the jobs they will be placed in, including about the nature of the work and the wages they will be paid, but also sometimes about the company they will be working for, or the location of the job site.³³ Such deceptive recruitment at a minimum prevents workers from making decisions that are in the best interest of themselves and their families, and, in the most extreme cases, results in work situations from which workers have little possibility of escape.

Labor intermediaries can also serve as the direct employer, in charge of the day-to-day management and living arrangements of migrant workers in the electronics and electrical products sector. In many cases, workers in the sector work in a specific manufacturing facility but are employed by a labor contractor or agent rather than the manufacturer itself.³⁴ This is most common when production demand is high. These outsourced workers are at greater risk of exploitation given they are not covered to the same extent as direct employees by oversight or protections provided by the manufacturing facilities, including access to the company’s grievance procedures.

Conditions in housing provided to migrants have also been reported to contribute to forced labor risk. These accommodations are often dormitory-style living arrangements, with workers sometimes sharing beds or mattresses in shifts. Concerns have consistently been raised regarding overcrowding, unsafe and unhygienic conditions, lack of ventilation, curfews with penalties, and lack of freedom of movement to

³² ["Addressing forced labour and child in the electronic and electrical sector in Malaysia." ILO, 2025.](#)

³³ [The Remedy Project. *Breaking the Circuit: Why Malaysia’s Electronics Supply Chains Must Shift from Reactive Compliance to Proactive Prevention*. Forced Labour Series: Are We Fighting Forced Labour or Just Managing It? December 2025.0](#)

[“Forced Labor in the Production of Electronic Goods in Malaysia: A Comprehensive Study of Scope and Characteristics.” Verité, 2014.](#)

³⁴ ["How the global electronics industry came to rely on forced labour and debt bondage." Danwatch, 28 Jun 2019.](#)

come and go when workers are not working. These facilities are also commonly operated by third-party service providers, with the costs sometimes charged back to workers, increasing their vulnerability to debt.³⁵

3.2.1 Illustrative Cases

The vulnerability of foreign migrants in the sector to fraudulent recruitment can be compounded by their precarious residency status after they start the job overseas. Not only are foreign migrant workers often already in debt as a result of borrowing money to pay recruitment fees, some of which may have been charged illegally, but they may face additional costs if their job is terminated and they are not repatriated as promised. For example, workers from Nepal interviewed by Danwatch reported that they paid high recruitment fees to secure a three-year contract position at an electronics factory in Malaysia. However, less than halfway through their contract the factory eliminated their jobs and stopped paying their wages. Workers quickly fell into greater debt to cover their daily living expenses. According to the workers, the factory demanded over EUR 800 to return their passports and book them a flight back to Nepal. Under Malaysian law, their visas were tied to the employer, so they could not legally find alternative work and were considered to be illegally present in the country.³⁶

Filipino workers have also reported paying high recruitment fees for jobs in the electronics sector in Taiwan, as well as experiencing other types of abuses.³⁷ In Taiwan, electronics products such as semiconductors are produced by workers governed by a labor management system run by brokers. Migrant workers are assigned to specific brokers who manage workers' paperwork, accommodation, transportation, meals, and insurance, along with other aspects of their day-to-day life in Taiwan for a monthly fee. Migrant workers from the Philippines working in these semiconductor factories have

³⁵ ["Addressing forced labour and child in the electronic and electrical sector in Malaysia." ILO, 2025.](#)

[Goodburn, Charlotte et al. "Beyond the Dormitory Labour Regime: Comparing Chinese and Indian Workplace-Residence Systems as Strategies of Migrant Labour Control." *British Sociological Association* Vol 38, issue 2, 1 Feb 2023.](#)

[Nasir, N.H., et al. "Housing Rights: The Migrant Workers' Housing Conditions in Malaysia and Qatar from 2017 Until 2022." *International Journal of Academic Research in Business and Social Sciences*, 13\(2\), 905 –918, 28 Jan 2023.](#)

³⁶ [Mortensen, Nikolaj Houmann. "'I feel scared going out': How migrant workers become outlaws in Malaysia's electronics industry." Danwatch, 28 Jun 2019.](#)

³⁷ ["The Price of Work: A Brief on Widespread Migrant Worker Recruitment Fees in Taiwan's Manufacturing Sectors." *Transparentem*, Feb 2025.](#)

reported that brokers take advantage of the workers' dependence on them by significantly overcharging for basic necessities and amenities, such as electricity, sometimes demanding bribes for services, and ignoring grievances, which brokers manage on behalf of employers. While some employers cover or contribute to the monthly broker management fee, the price gouging that some brokers engage in can push workers further into debt and, in some situations, leads them to leave their jobs altogether.³⁸ In addition to broker abuses, workers have reported verbal abuse while at work, being fined if they make mistakes on production lines, and having to pay fees to retrieve their identity documents, which are confiscated if they break dorm curfews or other rules.³⁹

3.3 Workers Experiencing Poverty, Marginalization, and Absence of Alternative Income Options

Poverty, marginalization, and a lack of social capital among workers in the electronics and electrical products sector exacerbate the risk indicators described above. People living in poverty often lack social networks and relationships that would otherwise support their access to economic, employment, and educational opportunities. Jobs that are undesirable, dangerous, or otherwise difficult—and low-paying—are generally avoided by workers who have access to other options. These jobs are thus routinely done by individuals in extreme poverty, socially marginalized groups, immigrants who may not have local language fluency or transferable skills, and other minorities. Because they have little choice, these workers are more likely to accept terms that ultimately compel them to continue working, despite deceptive, exploitive, abusive, or unsafe practices.

Limited ability to read or to converse in a local language (or the language of the workplace), being trapped in debt, holding work visas that are tied to a single employer, intimidation and threats by an employer, being fearful of authorities, having a fear of deportation, and needing to send money to support relatives are other indicators that workers could be at higher risk of exploitation.⁴⁰

³⁸ [Beltran, Michael and Hsiuwen Liu. "Taiwan's Chip Plants Run on Migrant Workers. Job Brokers Run Their Lives." Rest of World, 28 May 2025.](#)

³⁹ [Bengtsen, Peter. "Debt Bondage in Space, and Taiwan." The Diplomat, 31 Oct 2023.](#)

⁴⁰ ["Modern Slavery in the Construction Sector - Industry Information." National Crime Agency.](#)

3.3.1 Hazardous and undesirable work

Low-skilled work in the electronics industry can be hazardous to the health of workers because of long working hours, risk of musculoskeletal injuries from uncontrolled ergonomic hazards, exposure to extreme temperatures and hazardous chemicals, use of dangerous machinery, and, in some cases, heavy lifting.

Exposure to hazardous chemicals can be a particular risk for workers in the manufacturing of electronics and electrical products. Exposure to hazardous chemicals can result in a variety of negative health effects including cancer, respiratory problems, skin irritation and rashes, birth defects, and liver damage, among others. Because of the chemicals involved, workers involved in the manufacture of printed circuit boards are at extremely high risk of experiencing health problems.⁴¹

The unpleasant and dangerous nature of low-skilled manufacturing labor in this sector is correlated with risk for human trafficking due to the fact that many workers often take on such jobs only because they lack other options of viable employment, are deceived about the nature of the job, or are forced to do so. Workers are not always informed about the hazardous nature of the substances, vapors, and chemicals—some of which can cause serious, long-term illness, and even death—that they are exposed to in the course of their work. The absence of this essential information constitutes deception about the nature of the job, an indicator of forced labor.⁴²

3.3.2 Illustrative Cases

Workers with limited employment opportunities are particularly vulnerable to taking jobs that involve work with and exposure to hazardous materials and chemicals in poorly ventilated workspaces. These workers, many of whom are women, face serious and sometimes deadly occupational illness. The adverse health impacts of materials and chemicals essential to electronics and electrical products production have been known to the industry and civil society for decades. While measures to control

⁴¹ ["The Hidden Cost of Electronics: Workers and Communities at Risk." Good Electronics, 24 Aug 2025.](#)

["The production of electronic components for the IT industries: Changing labour force requirements in a global economy." ILO, 16 Apr 2007.](#)

⁴² ["Risk assessment of forced labour in procurement: Information and communications technology 2025 report." Electronics Watch, Dec 2024.](#)

exposure in some countries have been put in place, overall, the industry has shifted to production in countries with weaker occupational health and safety laws. For example, Special Economic Zones in the Philippines are known for poor working conditions and inadequate social and legal protections for workers in the electronics and electrical products sector. Female workers in these factories report “severe effects on their health and the health of their unborn children; effects that to a large degree correspond with the known effects of the chemicals used in the processes.”⁴³ Workers are typically not informed by the recruiter before accepting these jobs but are known to take the job for lack of alternatives.

3.4 State-Imposed Forced Labor Programs

Forced labor can be imposed by the government of a country or by private actors. While most forced labor is imposed by private actors (86 percent), 14 percent of forced labor around the world is imposed by governments.⁴⁴

State-imposed forced labor refers to forced labor demanded by government authorities; it includes labor used as a:⁴⁵

- means of punishment, political coercion, or education (for example, abuse of compulsory prison labor);
- means of discrimination;
- punishment for participating in strikes;
- means of labor discipline; and/or
- means of mobilizing and using labor for purposes of economic development.

It can take the form of state-sponsored labor programs that include labor transfers and/or compulsory work and is known to supply workers to the electronics and electrical products sector.

⁴³ [“Human rights risks in the ICT supply chain.” Make ICT Fair, 2021.](#)

⁴⁴ [“Global Estimates of Modern Slavery: Forced Labour and Forced Marriage.” ILO, Walk Free, IOM, Sept 2022.](#)

⁴⁵ [“Abolition of Forced Labor Convention, 1957 \(No. 105\).” ILO.](#)

3.4.1 Illustrative Cases

Forced labor has been widely documented in the Xinjiang Uyghur Autonomous Region (XUAR), an autonomous region of China that is the center of China's state-sponsored labor transfer program involving Uyghur Muslims and other ethnic minorities.⁴⁶ Described by the Chinese government as "vocational training" or "poverty alleviation" efforts to increase job opportunities and economic growth for the region, investigations report that many Uyghurs and others are subjected to surveillance, restricted movement, and harsh working conditions in the XUAR and other regions of China. Lack of transparency, including obstacles to credible social auditing, makes it difficult for international companies to trace the origins of their materials or the conditions under which work is performed.⁴⁷ Uyghur forced labor has been documented in electronics manufacturing in China, specifically consumer electronics and components parts (e.g., touch screens, finger print recognition, and smart car technologies).⁴⁸ Under labor transfer programs, Uyghur workers have been transferred from the XUAR and placed in electronics assembly in other provinces.⁴⁹ At the same time, it has been documented that the government of China is promoting the establishment of electronics manufacturing facilities in the XUAR in order to produce electronic parts and consumer electronics.⁵⁰

The forced labor of students has also been documented in connection to the electronics and electrical products sector in numerous countries. In China, electronics factories are known to partner with vocational training schools to supply students as short-term intern workers. These schools often do not give students a choice as to where and when they intern, and tell students that if they do not complete the internship, they will not receive their diplomas. These student workers may not be permitted breaks

⁴⁶ ["China's Repression of Uyghurs in Xinjiang." Council on Foreign Relations, 3 Oct 2025.](#)

["UN experts alarmed by reports of forced labour of Uyghur, Tibetan and other minorities across China." United Nations Office of the High Commissioner for Human Rights, 22 Jan 2026.](#)

["Against their will: The situation in Xinjiang \[Fact sheet\]." U.S. Department of Labor, Bureau of International Labor Affairs, 2020.](#)

⁴⁷ ["Asleep at the Wheel: Car Companies' Complicity in Forced Labor in China." Human Rights Watch, 1 Feb 2024.](#)

⁴⁸ ["Products Made with Forced Labor in the Uyghur Region." Sheffield Hallam University's Helena Kennedy Centre for International Justice, May 2023.](#)

["Uyghurs for Sale." Australian Strategic Policy Institute, 1 Mar 2020.](#)

⁴⁹ ["Policy & Advocacy Report 09.03.2025." The U.S. Committee for Refugees and Immigrants, 3 Sept 2025.](#)

⁵⁰ ["Information and Communication Technology Industry." Coalition to End Forced Labour in the Uyghur Region, Jul 2025.](#)

or leave, may be expected to work excessive hours, and may receive minimal wages or have wages retained by their school.⁵¹

While not in the same category of state-imposed forced labor programs as China's, in Indonesia, there are arrangements involving student interns that show multiple indicators of forced labor and in some cases may amount to forced labor. Electronics factories pay a management fee to the participating vocational training schools as an incentive for providing student workers. While the student workers perform the same tasks as regular workers, they may not be allowed to graduate until they finish the internship work program. These workers also sometimes work between 9 and 10 hours per day, in violation of government regulations. In the Philippines, a study conducted by the Centre for Trade Union and Human Rights found that "student interns in electronics factories do the same work as regular employees but are paid only 75 percent of the minimum wage and receive no legally mandated benefits. Furthermore, they do not have the right to join unions, and they cannot refuse overtime." In order to earn the legally mandated minimum wage, the student workers must work overtime.⁵² These schemes present multiple indicators of forced labor and in some cases may amount to forced labor under international standards.

4. Recommendations: Due Diligence Steps to Address Risks

4.1 Conclusions

This report examined the forced labor risks in the operations and supply chains of companies across the electronics and electrical products sector, focusing specifically on the supply of labor.

The risks of exploitation of workers trace, in most cases, back to the inadequate due diligence processes of third-party services providers, labor agencies, and suppliers; deceptive and exploitive recruitment

⁵¹ [Genuine Free Choice? Child Labor and Mandatory Student Internships in China. Network of Chinese Human Rights Defenders, 21 May 2026.](#)

[Shuo, Zou. "Boundaries set for vocational students' internships." *China Daily*, 26 Jan 2022.](#)

⁵² ["Risk assessment of forced labour in procurement: Information and communications technology 2025 report." *Electronics Watch*, Dec 2024.](#)

processes that result in worker debt and compound other risk factors for migrant workers; the use of workers in state-imposed forced labor; and the unique hazards of electronics production.

Companies should view the contents of this report as a starting point and seek to further develop their understanding of the specific weaknesses and risks in their supply chains at all tiers in order to implement dynamic and ongoing risk assessments and mitigation strategies.

The findings largely point to potential gaps in companies' due diligence systems or approaches to managing risk. The following recommendations for addressing these potential process gaps offer electronics and electrical products entities practical guidance for implementing comprehensive measures to control forced labor risks and protect their operations and individuals who may be vulnerable to exploitation within their supply chains. Effective due diligence requires a systematic approach that integrates risk assessment, prevention and mitigation, capacity building, and monitoring. This involves developing comprehensive frameworks that can identify and address potential forced labor indicators across diverse operational contexts. The goal is not merely to achieve compliance but to create sustainable systems that prevent forced labor and protect vulnerable populations while maintaining operational efficiency and competitive advantage.

The ResponsibleSourcingTool.org site overall and the [Due Diligence Toolset](#) specifically provide technical tools to support the implementation of the following recommendations. The toolset and recommendations that follow are aligned with the [UN Guiding Principles on Business and Human Rights](#) and the [OECD Due Diligence Guidance for Responsible Business Conduct](#). Tool 1 of the Due Diligence Toolset provides a model effective practice due diligence program for identifying potential risks of human trafficking within a supply chain, evaluating and prioritizing identified risks, implementing solutions, and monitoring and improving supplier performance over time.

4.2 Recommendations

4.2.1 Policy and Embedding Forced Labor Prevention Standards and Practices in Business Functions

- 4.2.1.1 Companies should include a clear prohibition against forced labor in their Codes of Conduct and supplier performance standards. (See Base Tool 2.) This should include the "employer pays" principle, which requires that all fees and expenses relating to the recruitment and placement of a worker are paid by the employer.

- 4.2.1.2 The policy should be clearly communicated to all business entities, including third-party service providers and labor agents, and included in business contracts. (See Base Tool 5.) The contracts should also require that the policy be cascaded to the suppliers' suppliers.
- 4.2.1.3 Procurement staff should be formally assigned, trained, and supported to screen prospective suppliers, including third-party service providers and labor agents, for their commitment and capacity to meet the policy standards on avoiding forced labor. (See Base Tools 3, 7 and 8.) There should be clear consequences established for supplier performance on achieving the standards.
- 4.2.1.4 Review of a supplier's management of forced labor risks should be incorporated in regular supplier engagements, such as quarterly business reviews, quality audits, and other existing supplier management processes.

4.2.2 Risk Assessment and Prioritization

- 4.2.2.1 Conduct a combined supply chain mapping and forced labor risk assessment as a key first step in creating a targeted strategy for segmenting and prioritizing risks to address. (See Base Tool 6.) High level risk factors to consider include characteristics of country of operation, product or production processes involved, and workforce demographics (e.g., prevalence of migrant workers). Other factors to consider include a company's ability to influence suppliers based on volume/spend and the degree of harm to people that practices may cause.

4.2.3 Needs Assessment and Capacity Building

- 4.2.3.1 Based on the results of a risk assessment, companies should conduct deep dives (e.g., targeted research, risk assessments, rapid appraisals, supplier assessments) to develop and implement action plans to address the underlying causes of identified risk or issues. The activities, which should be informed by clear objectives and measurable success indicators, may range widely from supplier training to engagement in multistakeholder initiatives where companies individually lack the leverage to drive

positive changes in an operating environment (e.g., where economic or political factors are immovable in the immediate term).

4.2.4 Monitoring

- 4.2.4.1 Companies need to routinely evaluate whether they are implementing their due diligence processes as planned (e.g., new suppliers screened for forced labor risks, review of corrective action plans during regular supplier business reviews).
- 4.2.4.2 The effectiveness of due diligence activities should be tracked to ensure the desired impacts are on target and sustainable (e.g., worker-paid recruitment fees are avoided, foreign migrant workers are in full control of their identification documents, workers have access to remedy).