

HUMAN RIGHTS RISKS BEHIND ELECTRIC BUSES IN SWEDISH PUBLIC TRANSPORTATION

An Industry Issue for Collaboration



This report has been produced by ETI Sweden in collaboration with Storstockholms Lokaltrafik (SL), Västtrafik, Skånetrafiken, and Luleå Lokaltrafik, who have also provided financial support. The review was conducted by Globalworks.

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Foreword

In order to achieve Sweden's climate goals for the transportation sector, a large-scale transition to an electric vehicle fleet is required. In this transition, we are faced with new sustainability challenges, from mineral extraction for batteries to the production of electric vehicles as a whole. Ensuring that this transition occurs sustainably is of paramount importance to us, as public transport authorities. As a result, we have identified a need for increased knowledge regarding sustainability risks and how to manage them within complex supply chains.

We believe that working together is key to success in addressing these issues. Through our membership in ETI Sweden and the working group we have formed, we have strengthened our capabilities to tackle these challenges.

This report has been developed to raise awareness of risks related to human rights violations within our shared supply chains and to enable us to address these risks effectively. As public procurers, we have a common code of conduct for suppliers that is also part of our transport contracts. This is to ensure responsible procurement of products and services that contribute to an environmentally, socially, and economically sustainable society. However, it is not enough to simply set requirements; the compliance with these requirements also needs to be monitored. In the monitoring process, developing a clear risk assessment is crucial to drive the work forward with the right priorities.

The report is a vital component of our ambition to gain an understanding of sustainability risks within our shared supply chains. We hope that the results will contribute to a continued constructive dialogue and proactive efforts within our entire industry regarding risks of labour and human rights violations within complex supply chains.

October 2023

Storstockholms Lokaltrafik
Västrafik
Skånetrafiken
Luleå Lokaltrafik

Executive Summary

This report provides new insights into the situation of workers in the electric vehicle manufacturing industry in China. Information about labour rights violations come from workers' social media posts. Furthermore, Chinese Government and Party documents bear witness to the industry's involvement in state-sanctioned forced labor. The material and methods used in this report make it possible to investigate labour and human rights risks in a closed and repressive environment.

The first chapter of the report on working conditions at battery- and electric bus manufacturing factories is based on workers in social media. The second chapter presents information from official social media accounts and webpages of Government authorities and Party organizations at the national, provincial, and municipal level substantiating links between state-sanctioned forced labour and the electric vehicle supply chain.

The investigations were conducted in 2022 by Lund-based Globalworks, which developed Social@risk™, a framework for text-based big data analysis. The investigations were made on behalf of the Public Transport Authorities (PTAs) Storstockholms Lokaltrafik (SL), Västtrafik, and Skånetrafiken. All are members of the ETI Sweden Working Group for Electric Vehicles. Luleå Lokaltrafik (LLT) joined the group during the course of the work. The aim was to gain an understanding of the human rights risks in the supply chain and provide a foundation for demands in public procurement of battery-powered bus transport.

The results indicate connections to forced labour and extensive risks of poor working conditions in factories manufacturing batteries and electric buses for Swedish public transport.

The selected companies examined are the Chinese suppliers indicated by bidders to the public transport authorities in 2022, namely the battery and electric bus manufacturer Build Your Dreams (BYD), the electric bus manufacturer Yutong, as well as the six battery manufacturers CATL, Durapower, LG Chem, Panasonic, Samsung och SK Innovation.

Findings on Working Conditions

The examination of workers' complaints is based on 1.12 million posts extracted and analyzed for qualitative content analysis and quantitative trend analysis. The posts concern forced labour, systematic exploitation of interns, discrimination, excessive overtime, low pay, deductions and arrears, hazardous working conditions and poor living conditions, unethical recruitment, as well as restricted trade union rights.

Research in this report suggests that battery and electric bus manufacturers' reliance on minerals and energy involves the state-owned sector and, as a result, constitutes a major entry point for severe human rights violations.

Child Labour Through Internships

Work that is harmful to children's physical and/or mental development. The investigation reveals a concerning prevalence of child labour in China, particularly through internships within the vocational education system. Internships are highly regulated to protect minors' health and ensure educational quality. In practice, however, students must endure long working days, low wages, and poor working conditions. Interns feel trapped and cannot resign without risking consequences.

Discrimination In Recruitment

Rights violations are applied systematically to (vulnerable) worker groups, and recruitment is based on discriminatory criteria. Discrimination has been identified in wage disparities between different groups (see child labour above) and in the recruitment of workers. Among 1,820 job advertisements related to battery and car manufacturers, age discrimination was the most common. Young workers are preferred, but discrimination based on gender and ethnicity also occurs.

Forced Labour as a Practice in Factories

Administrative obstacles to resignation, penalties for resignation, non-wage payment for the last month. Workers testify that they have been forced to continue working despite resigning. Employers refer to quota systems, according to which only a certain percentage of employees are allowed to quit during a period. Workers state that they didn't get their wages after they left without the employer's approval. Without formal resignation, it is difficult for migrant workers to transfer their social security registration to their next employer.

Illegal Trade Union Organizing

Workers are prevented, with threats and coercion, from voicing grievances and organizing their interests. The only permitted trade union in China is the state-controlled ACFTU. Despite free trade unions being illegal, protests have occurred. In recent years, however, state repression against workers, activists, and lawyers has increased. This has also been the case in the electric vehicle supply chain, where the number of strikes has decreased as a result.

Low Wages and Unreasonable Deductions

Workers are not paid wages in part or in full. The gap has increased between the actual wage and a wage that allows for a decent standard of living. It is common for employees to receive unreasonable deductions when taking leave or in connection with termination. Wage deductions are also used as a form of punishment. Additionally, employees often do not receive the overtime pay they are entitled to according to Chinese Labour Law, and wages are not paid on time.

Unethical Recruitment

Workers are not fully and correctly informed about working conditions, and dispatch labour contracts are strategically used to disadvantage workers. Workers recruited to the factory are often not properly informed about the benefits that are included in their employment. Since employees and labour agents receive bonuses for recruiting new workers, they may exaggerate wage benefits so that newly hired sign contracts with a distorted idea about their real income and work load. New employees may also be forced to pay part of the recruitment costs.

Lack of Health and Safety

Exposure to physical and psychological health risks. Insufficient health protection. Many of the workers' complaints relate to exposure to both physical and mental health risks, including long working days for many consecutive days without rest, leading to exhaustion. Problems with high work pressure and poor working conditions have been publicly debated in China, partly due to several suicides at BYD (2021) and CATL (2022).

Extreme Overtime and Low Overtime Pay

Workers work too many hours and/or do not get overtime pay. Workers report working more than 110 overtime hours per month, significantly exceeding the legal limit of 36 hours. Overtime pay should be 1.5 times the regular wage, but according to testimonies, many are forced to work overtime without receiving overtime pay. Dissatisfaction with how employers handle overtime is among the most common complaints.

Poor Living Conditions

The conditions in the dormitories are stressful and unhygienic. Workers often live in dormitories where eight to twelve people share a room. Living conditions are characterized by poor hygiene, and noise, making it difficult to get necessary rest and privacy.

Findings on State-Sanctioned Forced Labour

Identifying state-sanctioned forced labour in China is challenging because informants and investigators may be subjected to threats, repression, or persecution. Globalworks has searched for and compiled information published online by Chinese municipalities, newspapers, and companies that is linked to the investigated battery and electric bus manufacturers. In addition to this, references are made to public studies and articles on working conditions in China, including those conducted by various NGOs and journals.

State-sanctioned and state-tolerated forced labor often occurs within poverty alleviation programs and vocational training agreements between schools and the private sector. The organized transfer of labour through poverty alleviation programs supplies industrial clusters and factories with labour. The relocation is driven by both economic and political incentives. These programs target specific groups, particularly poor households, migrant workers, interns, and ethnic minority groups.

In Xinjiang, a significant region in the battery supply chain, Uyghurs and other ethnic minorities are particularly vulnerable. Re-education camps built in Xinjiang pose a high risk of coercion and are designed to assimilate minorities by altering their lifestyles and thinking. Suppression against non-Han Chinese is also extensive in Tibet and Qinghai.

Energy is a crucial component for both lithium extraction and processing. Therefore, coal mines represent an essential part of the battery production supply chain. There are strong indications of forced labour in the form of prison labor in the extraction of coal, uranium, and asbestos in China.

The analyzed information substantiate several suppliers investigated in this report are complicit to state-sanctioned forced labour through labour transfers, ownership relationships, or operations in high-risk areas.

Below are the supplier companies' connections to forced labour risks.

- BYD conducts its business operations in Tibet and in a Tibetan autonomous prefecture, where the risk of political oppression and state-sanctioned forced labour is very high.
- BYD, CATL, and Durapower may be linked to state-sanctioned forced labour in Xinjiang through their joint venture partners or shareholders, who conduct their business activities in collaboration with Xinjiang-based mining and processing companies.
- Samsung, LG Chem, and Panasonic may be linked to state-sanctioned forced labour in Xinjiang through products, operations, or services from suppliers.
- BYD, LG Chem, and Panasonic may have contributed to state-sanctioned forced labour because they have participated in state-organized labour transfers through poverty alleviation programs in Western and Central China.
- At Yutong, the risks of forced labour are primarily associated with a supplier contract with CATL, which provides batteries for all the company's e-buses at least until 2032.
- The high-risk areas of Xinjiang, Tibet, and Southwestern Qinghai are associated with forced labour in resource extraction and manufacturing. Five companies investigated are involved in business operations in these high-risk areas.

However, the risks are not only linked to China but also to the Democratic Republic of Congo (DRC), which is the primary source of cobalt. Cobalt from the DRC is a high-risk mineral in relation to human rights violations.

An overarching conclusion is that public transport authorities procuring transportation services or in some cases, purchasing buses directly, must manage heavy risk exposure to severe human rights violations. Reliable systems to monitor working conditions in China are lacking, and both transparency and traceability in the supply chain are low.

ETI Sweden welcomes continued cooperation in public procurement to increase consensus, establish common requirements, and strengthen influence.

ETI Sweden's Recommendations to Public Transport Authorities

- Unless already adopted, implement clear requirements in public procurements of transportation services aligned with internationally recognized human rights – understood, at a minimum, as those expressed in the International Bill of Human Rights and the principles concerning fundamental rights set out in the International Labour Organization's Declaration on Fundamental Principles and Rights at Work.
- Exploit the full range of tools presented in the EU Directives on Public Procurement and the Swedish Public Procurement Law regarding setting social criteria in public contracts.

To address the findings regarding poor working conditions, this could include:

- Consider the full life cycle of products in purchasing decisions, not only the immediate price, such as labour costs in the supply chain. This could include addressing the identified issues related to working conditions, by factoring in costs for increased wages, better accommodation standards, etc.
- In addition to setting minimum requirements through contract performance clauses to respect labour rights, use award criteria to incentivize suppliers who can demonstrate leading and innovative practices in addressing the identified risks related to poor working conditions.
- Ensure adequate resources are allocated internally for continued due diligence measures, including after contracts have been awarded, to follow up on requirements set in the tender process, track performance of suppliers, and respond to potentially new developments and/or information.
- Seek collaboration with other contracting authorities, also outside of Sweden, to build leverage and common approaches to setting social criteria in public procurements of electric buses and transportation services.

To address the findings regarding forced labour, this could include:

- Require suppliers to provide full traceability of their supply chains, including where components such as batteries etc., are manufactured.
- Use contract performance clauses to require all suppliers bidding for the public contract to ensure that no forced labour is being used in the manufacturing of the goods. In evaluating alignment with the contract performance clauses, consider all suppliers, or sub-suppliers, not to be qualified for the evaluation if any of the following criteria is identified: 1) operating in Xinjiang, Tibet and Tibetan autonomous prefectures in Sichuan and Qinghai, 2) participating in state-organized labour transfer/poverty alleviation programs, 3) receiving vocational students through poverty alleviation programs.
- Exclude suppliers deemed to be in violation of social and labour related standards from tenders. This could be based on publicly available information and research from credible independent sources.

The recommendations are based on international standards, mainly the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises (OECD Guidelines), as well as responsibilities under relevant legal frameworks.

Context

To meet the climate crisis, comprehensive societal changes are required. Swedish public procurement has an annual turnover of approximately 800 billion SEK, which is equivalent to nearly one-fifth of Sweden's GDP.¹ Through procurement, the public sector plays a crucial role in the transition to a fossil-free and sustainable society.

According to the Swedish Environmental Protection Agency, emissions from domestic transport (excluding domestic flights) should decrease by at least 70 per cent by 2030 compared to 2010.² One necessary change is the electrification of transportation systems. The transition to electric buses is in full swing across the country.

Sweden's three largest public transport authorities are Storstockholms Lokaltrafik (SL), Västtrafik, and Skånetrafiken. SL envisions that 95-100 percent of the approximately 2,200 buses in the fleet can be electrified by 2035.³ Within Västtrafik, all city bus transport is planned to be electrified by 2030.⁴ Skånetrafiken aims to have all city buses in Malmö running on electricity before 2031.⁵ The fourth public transport authority behind this report, Luleå Lokaltrafik (LLT), plans to have an electrified bus fleet by 2030.⁶

China dominates the global market for electric vehicle batteries and electric buses.⁷ The country also has a strong presence in battery raw materials such as lithium, graphite, cobalt, and rare earth metals, another component used in electric vehicle motors and wind turbines. China processes 87 percent of the world's rare earth metals.⁸

The Chinese supply chains of the public transport authorities involve the manufacturing of buses, components, and batteries, as well as the extraction of minerals and coal for energy.

1. Human Rights in China – And the EU's Response

The Chinese constitution guarantees freedom of speech and expression. However, freedom of expression, freedom of the press, and freedom of information are severely restricted in practice. Individuals reporting on politically sensitive issues face significant risks of harassment, threats, or arrest. Both traditional and social media are monitored and regulated, and censorship, both direct and indirect, is widespread. The space for civil society to operate is very limited and continues to shrink. Several civil society actors have been accused of offenses against national security.⁹

Serious and systematic violations of the human rights of individuals belonging to religious and ethnic minorities occur, especially in Xinjiang and Tibet. Linguistic, cultural, and political assimilation of minorities has become an increasingly important political goal, and the methods to achieve this goal have become harsher. A very large number of Uyghurs and individuals from other minorities are arbitrarily detained in internment camps.¹⁰

In August 2022, the United Nations published a report¹¹ confirming that the Chinese state subjects Uyghurs and minorities in Xinjiang to forced labour and other serious human rights abuses. Forced labour is part of the Chinese state's poverty alleviation program and targets specific groups, particularly registered poor households and vulnerable ethnic groups such as Uyghurs.

1.1 Chinese Laws Protect National Interests

Several laws have been enacted that enable actions against individuals, organizations, and states considered to harm China's interests, including an anti-sanctions law¹² and a national security law with an extraterritorial component¹³. The recently promulgated *Chinese Counter-Espionage Law*¹⁴ potentially renders all investigations and information collection a criminal offense.

1.2 Western Laws Take Stronger Measures Against Forced Labour

At the same time, legislation in the European Union and the United States are stepping up requirements for human rights due diligence. The *EU Proposal for a ban on goods made using forced labour*¹⁵ and the *Directive on corporate sustainability due diligence*¹⁶ urge corporations to do more and be more effective in preventing forced labour risks. In the US, the *Uyghur Forced Labor Prevention Act (UFLPA)*¹⁷ establishes a rebuttable presumption that all goods originating entirely or partly from Xinjiang are banned from entering the US market.

The 2023 updated *OECD Guidelines for Multinational Enterprises on Responsible Business Conduct*¹⁸ call on enterprises to contribute to “the elimination of all forms of forced or compulsory labour and take immediate and effective measures towards the elimination of forced or compulsory labour as a matter of urgency”.

1.3 EU Moves to Cut Dependency on China

Raw materials such as silicon and lithium for batteries and solar cells are required to meet the green transition with electrification and renewable energy. In September 2023, the European Parliament approved a proposal to secure the supply of these raw materials and reduce dependence on China. According to the proposal, an individual country can account for a maximum of 65 percent of the deliveries of a specific raw material.¹⁹

In the same month, European Commission President Ursula von der Leyen announced an investigation into what is described as distorted competition when Chinese electric vehicles are sold in the EU. Von der Leyen argues that the price of electric vehicles is artificially depressed by massive state subsidies.²⁰

China responded that it is not state subsidies that have driven the country's automobile industry's growth, but innovation and fierce competition in the domestic Chinese market.²¹

2. Regional Procurement Procedures

One of the Swedish region's tasks is to provide public transportation to the residents of the region. The responsibility is carried out by a Public Transport Authority (PTA) within each region through procurement.

According to the Swedish Bus and Coach Federation, bus traffic worth SEK 100 billion was procured between 2019 and 2023.²² Public transportation is financed, roughly speaking, about half from ticket revenue and about half from regional and municipal taxes.²³

The PTAs Västtrafik, Storstockholms Lokaltrafik, and Skånetrafiken do not own buses but procure transportation services with personnel, vehicles, and maintenance from transportation

companies. Public transport operators (PTOs), in turn, purchase the buses and hire drivers, and service personnel. PTOs have contracts with bus manufacturers. Apart from the mentioned PTAs, Luleå Lokaltrafik owns its buses and procures them directly.

2.1 Social Criteria in Public Procurement

In 2014, the EU adopted new Directives on Public Procurement. Which were transposed into national law in all Member States in 2016. One of the main focuses of the new directives is on social and environmental criteria, providing public buyers with increased and clearer tools to set such criteria in public tenders. The directives are transposed into Swedish law through *Lagen om Offentlig Upphandling (LOU)*.

Several articles in the directives address how social criteria should and can be introduced. Under *Principles of Procurement*, Article 18.2²⁴, it is stated that: “Member States shall take appropriate measures to ensure that in the performance of public contracts economic operators comply with applicable obligations in the fields of environmental, social and labour law established by Union law, national law, collective agreements or by the international environmental, social and labour law provisions listed in Annex X.”

Annex X includes all eight ILO core conventions, which cover freedom of association and collective bargaining, forced labour, child labour, and discrimination.

The directives furthermore provide a set of tools to incorporate social criteria in different stages of a procurement process. For example, Article 68 encourages public authorities to consider the full life cycle of products in purchasing decisions, not only the immediate price.

Contracting authorities may consider criteria related to the production of the works, services, or supplies to be purchased, hence incorporating costs of improving labour standards in manufacturing countries in tender evaluations. This could include addressing the identified issues related to working conditions covered in this report.

A purchasing authority can also combine mandatory requirements in the form of contract performance clauses with optional requirements in the form of award criteria. This would allow public buyers to, on the one hand, set clear minimum standards for qualification through contract performance clauses, for example, a zero-tolerance for forced labour, and on the other hand support suppliers that demonstrate advanced practices at the time of bidding.

Award criteria could focus on best practice approaches, for example, whether a supplier demonstrates active involvement in worker voice tools further upstream in the supply chain, or how a supplier ensures a living wage is paid to factory workers. Such criteria could allow a higher immediate cost price, creating a competitive advantage for suppliers who can demonstrate positive impacts. Any supplier awarded the contract will nevertheless need to adhere to fundamental labour rights protections, as detailed in contract performance clauses.

Award criteria might be more suitable in addressing some of the risks related to poor working conditions, while mandatory contract performance clauses are a better option for establishing a zero-tolerance for forced labour.

In addition to using contract performance clauses and award criteria, public buyers also have the option to exclude suppliers deemed to violate social and labour standards.²⁵

2.2 Sustainable Public Procurement – a National Collaboration

Since 2010, Sweden's regions, including public transport authorities, have been collaborating on Sustainable Public Procurement²⁶ and have adopted a common supplier code of conduct. The code covers areas such as human rights, workers' rights according to ILO's core conventions, the environment, and business ethics.²⁷

The electric vehicle industry is considered a high-risk sector in terms of human rights and fundamental labour rights. For this reason, Sweden's largest public transport authorities and procurers of bus transport – Storstockholms Lokaltrafik (SL), Västtrafik, and Skånetrafiken – collaborate on requirements for buses, including batteries, to be manufactured sustainably, both environmentally and socially.

Among other things, requirements are set for transport operators to apply the *OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* and work on traceability reporting, continually increasing and improving it. The aim is for these requirements to become industry-wide standards for the procurement of public transport services.

Work is underway within the electric vehicle industry in Sweden and internationally, to make these requirements industry-wide, similar to the regions' supplier code of conduct.

2.3 Follow-Up Assessment is Challenging

According to the regions' common code of conduct and social requirements, public transport operators should be able to demonstrate that their supply chains meet the requirements of the code of conduct.²⁸ The public transport authority has the right to independently or through a third party assess the public transport operator's compliance with the code of conduct.

At the same time, it is very difficult to conduct effective human rights due diligence, which involves mapping and managing human rights risks, in China. Companies and organizations that monitor working conditions have come under intense pressure, including the closure of Verité's China office in 2021 after they participated in reports exposing forced labour.²⁹

An excerpt from the common contract terms according to the supplier code of conduct shows that the public transport operator should:

- 1.** Respect the code of conduct in its operations and have adopted a publicly available policy, decided by top management, that includes a commitment to respect the code of conduct.
- 2.** Have appointed a senior-level person responsible for compliance with the code of conduct.
- 3.** Transmit the commitment to respect the code of conduct to subcontractors at all levels.
- 4.** Regularly conduct risk assessments, i.e., identify and prioritize current and potential risks of non-compliance with the code of conduct, including mapping subcontractors at all levels with special consideration for high-risk activities.
- 5.** Regularly monitor compliance with the code of conduct in both its operations and with subcontractors at all levels.
- 6.** Take measures to prevent, mitigate, and limit non-compliance with the code of conduct, and promptly address adverse impacts at the public transport operator and with subcontractors.³⁰

Human Rights Due Diligence

Human rights due diligence (HRDD) is a risk management process to identify, prevent, mitigate, and account for a company's actual and potential adverse impacts on human rights. Some countries already have legal requirements for companies to conduct HRDD. The EU's Corporate Sustainability Due Diligence Directive (CSDDD) will come into effect as national legislation no earlier than 2026.

2.4 ETI Sweden's Working Group for Electric Vehicles

The members of ETI Sweden who are public procurers of transport services and vehicles gather in a Working Group.³¹ The work is led by Västtrafik, Storstockholms Lokaltrafik (SL), and Skånetrafiken together with the smaller transport authority Luleå Lokaltrafik. The working group focuses on setting requirements and monitoring electric vehicle manufacturing.

As a basis for this work and to better understand the situation in China, the leading manufacturing country for batteries and electric vehicles, the Working Group initiated the investigations presented in this report, on working conditions at supplier factories and forced labour in China.

The investigations were conducted in 2022 by Lund-based Globalworks, which developed Social@risk™, a framework for text-based big data analysis.

Globalworks scraped Chinese social media for posts from employees that can be linked to factories in the traffic authorities' supply chains. Workers' complaints, grievances, and photos were then analyzed qualitatively and quantitatively.

Globalworks has also collected and analyzed information from Chinese Government and Party documents that link the same supply chains to state-sanctioned forced labour.

The overview of publicly available information that Globalworks has found substantiates a significant risk of state-sanctioned forced labor associated with the suppliers. The two investigations constitute separate chapters in the full report, where it is also possible to read more in-depth about the methods.

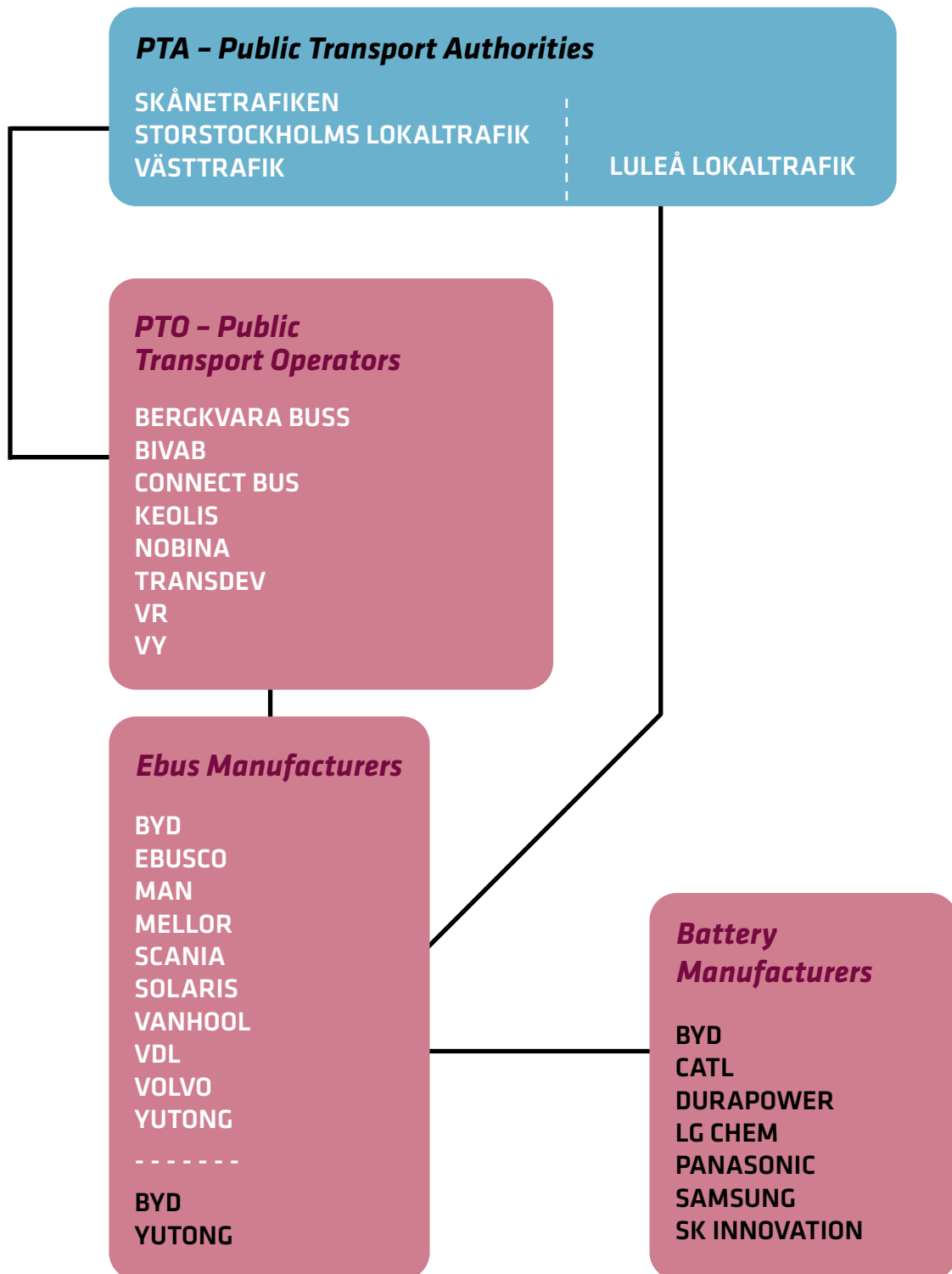
Conclusion

One conclusion drawn from the reviews is that the necessary transition to fossil-free through public procurement comes with challenges. Chinese manufacturing of batteries and electric vehicles that operate on Sweden's streets and roads involves serious risks of state-sanctioned forced labour, as well as violations of human rights and fundamental labour rights.

The important question that needs to be asked and addressed is: how can the transition from fossil-fueled to electrified buses in public transportation be carried out without the immediate and long-lasting negative impact on the environment and the people affected by the manufacturing in the supply chain?

The following page illustrates the supply chain of electric buses operating in Storstockholms Lokaltrafik (SL), Västtrafik, Skånetrafiken, and Luleå Lokaltrafik (LLT).

The Supply Chain for Electric Buses



The PTAs Västtrafik, Storstockholms Lokaltrafik, and Skånetrafiken procure transportation services with personnel, vehicles, and maintenance from PTO's, Public transport operators. The PTO's purchase the buses and hire drivers, and service personnel. PTOs have contracts with bus manufacturers. Luleå Lokaltrafik owns its buses and procures them directly. (The map is not complete. It shows examples of actors in each step of the chain.)

HUMAN RIGHTS AND WORKING CONDITIONS AT BATTERY AND ELECTRIC BUS MANUFACTURERS IN CHINA

AUTHORS

Stefan Brehm and Helena Magnusson,
Globalworks Lund AB

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1. Introduction

China is the largest producer of new energy vehicles in the world with a market share of close to 60%. Market concentration is high. For example, SAIC motors and BYD each produce more than 10% of new energy vehicles sold worldwide.¹ China is also dominating upstream industries. For instance, 6 out of the global top-10 battery manufacturers are Chinese.²

From a human rights perspective, China's dominant position in the new energy vehicle supply chain is a problem. Chinese workers do not have the right to organise independent unions. Strikes and protests are routinely repressed.³ Since Xi Jinping ordered a permanent crackdown on labour activists and lawyers in 2015, almost all critical voices have been silenced.⁴ Moreover, critical raw materials such as Lithium are mined in Tibet and Qinghai, where political repression of non-Han ethnic groups resulted in forced land evictions.⁵

Due to China's repressive labour governance, companies rely mainly on social or ethical audits to ensure respect for human rights. The corporate social auditing system, however, faces challenges as well because workers and other staff have no freedom to express grievances to auditors and may face punishments of various kinds.⁶ Audit effectiveness in China is further weakened due to a lack of transparency. A recent study finds that China's transparency rate has been persistently well below other key sourcing regions.⁷ What is more, the recent revision of the Chinese anti-espionage law further compromises critical and independent assessment of working conditions.⁸ Chinese authorities have recently raided and detained five staff members at Mintz's Beijing office that provides due diligence services.⁹

Rising obstacles and risks in the context of social audits make it paramount to develop alternative methods for gaining insights about working and living conditions in Chinese factories. This report aims to provide information on working and living conditions for Chinese workers in the new energy vehicle supply chain. We focus on a selected group of battery and electric bus manufacturers that were relevant to Swedish public procurement of transportation services in 2022. In particular, we look at six battery manufacturers with production facilities in China, i.e. CATL, Panasonic, Samsung SDI, LG Chem, SK Innovation, and Durapower. Moreover, we examine BYD and Yutong. The former produces both batteries and e-buses, and latter produces only e-buses.

2. Method and data

This report uses a novel approach to identify labour and human rights risks in the Chinese new energy vehicle sector. We collected information about grievances and labour rights violations online from public forums, where workers reach out for help, give advice or share information and experiences. We extracted about 1.12 million posts and analysed them through our platform Social@risk™, a framework for qualitative content analysis and quantitative trend analysis of social media data (see www.socialatrisk.com for further information). This approach allows us to get closer to workers' own agenda and to appreciate grievances as rights holders describe them.

Our data comes from online forums for workers at BYD, CATL, Samsung SDI, and Yutong. We have not found such forums for Panasonic, LG Chem, SK Innovation, or Durapower. However, factories within the new energy vehicle sector are interconnected and since they operate in the same jurisdiction and are subjected to similar political influence, we can assume they also

deploy similar management practices and offer comparable working conditions. Therefore, insights from available data can be used to make general inferences about labour and human rights risks and violations.

The here presented analysis is envisioned to support a human rights due diligence process as proposed in the UN Guiding Principles on Business and Human Rights (UNGPs). In particular, the analysis provides information on the following:

- Violations and grievances that workers mention and describe on social media
- Qualitative descriptions of abusive practices, violations, and grievances
- Quantitative data on rights-violating practices
- Insights into mechanisms and causes of ongoing rights violations

The social@risk™ method relies on workers' use of social media platforms to voice their grievances and share their experiences as well as their comments on other users' posts. Our collection of data is therefore dependent on the online activity of stakeholders and in this case workers. Before engaging in a project, we therefore need to make a preliminary study to identify if and where workers are discussing their working lives.

Depending on industry, size of companies, factories and/or sites of interest the amount of data differs. Generally speaking, the likelihood of finding a sufficient amount of workers' posts increases with the number of workers at a company or factory. But we find also differences for example between large electronic manufacturers and textile producers. Sometimes workers discuss on location specific forums, sometimes on company specific forums and sometimes on industry specific forums. Depending on the data situation, we adapt our method and research design.

Unlike audits or surveys, our analysis does not require managers' approval, factory access, or employee records. It avoids directly influencing workers' views or agendas. Compared to (undercover) investigative reports, this study processes a large amount of data that can be used to systematically identify and quantify (at least in relative terms) industry-related risks for human and labour rights violations.

An analysis of publicly available workers' posts has limitations. Firstly, workers tend to write about topics where they hope for help or advice from anonymous peers. Thus, topics of general interests such as wages and overtime may be over-represented compared to other issues. Secondly, some subjects are rarely discussed publicly due to social norms, shame, or the personal character of an issue. Sexual violence, menstruation issues, or bullying are examples of topics that are probably under-reported in workers' posts. A third limitation pertains to political sensitive topics and censorship. Workers can write about rights violations and exchange information about working conditions. Government authorities are even encouraging citizens to voice problems online because this has become an important information source for authorities to improve public services and detect rights violations. However, workers can face severe punishment if their posts gain much attention or trigger widespread online complaints (regulations use 500 replies or reposts as a threshold). Also, workers may not interpret their grievances as political issues and they must not criticise the CCP or leading politicians. As a result, internet users in China censor themselves to avoid problems. In addition, all internet service providers and social media platforms have the duty to conduct censorship in line with Government and CCP instructions. We sometimes also find information indicating that companies intervene in online discussions or ask local authorities to remove content. It is difficult to assess how

ensorship impacts available information as rules are in flow. From previous studies we know that suicides have been censored throughout the past decade. Our recent analyses indicate that health issues may have become a censored topic since the Covid-19 outbreak.

2.1 Data

In this report, we analyse 1.12 million public posts from online forums for workers at CATL, BYD, Samsung SDI and Yutong. These forums capture everyday problems and management practices. Workers share information, ask for help or offer advice on *bulletin boards*. We captured posts from these sites for the past ten years, from 2012 to 2022. Analysing longer time periods is critical for answering questions like “Do certain rights violations occur more often during certain months of the year?” or “Have certain labour issues become more important over time?”.

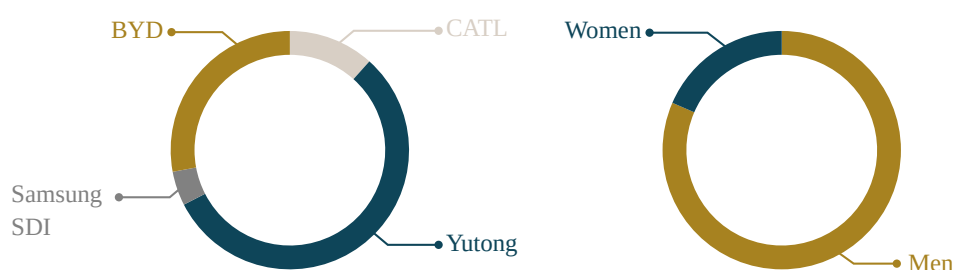


Figure 1: Distribution of number of social media posts according to manufacturing brand and gender.

Figure 1 shows the distribution of posts divided by manufacturer and gender. Posts from Yutong and BYD dominate the sample. To mitigate this bias, we present insights from all brands where possible. About 13.5% of users state in their profile that they are women. This figure, however, understates the share of female users because many women prefer not to reveal their sex or claim to be men to avoid harassment and dating attempts.

Besides the above-outlined primary data sources, we use information about strikes from China Labour Bulletin (CLB), a civil society organisation (CSO) based in Hong Kong. CLB systematically searches newspapers and social media for information about collective action. All information is publicly accessible at CLB Strikes Map. We explicitly state when we make use of CLB data. Finally, we use statistical data, newspaper articles and academic literature to provide context to our analysis.

2.2 Identification of topics

We deployed a four-step procedure to identify labour and human rights-related topics:

1. Identify social media terms and expressions that workers frequently use to describe their problems. Significant keywords are selected through a word count based on all social media posts.
2. Rank words according to their frequency and select words relevant to labour issues. The resulting list consisted of about 150 terms.
3. Link keywords to topics that describe a labour issue or violation. Note that a keyword can be connected to multiple topics.
4. Link topics to the Better Work’s Global Compliance Assessment Tool.¹⁰

There are various social audit standards and certification schemes. This report applies the Global Compliance Assessment Tool (GCAT) of the Better Work Initiative, which is a partnership between the UN's International Labour Organization and the International Finance Corporation. Since GCAT is the result of an international, policy-oriented collaboration it is not tied to national, geographic, or sectorial preferences. Furthermore, the non-commercial nature of GCAT promotes a strong emphasis on capacity and remediation instead of corrective action. This moves GCAT into line with principles of human rights due diligence.¹¹

Table 1 shows six general topics that workers frequently mention in online forums. The topics can be interpreted as the result of a stakeholder consultation, where workers give their views on the most salient problems. The table presents the relative importance of each topic based on the entire data sample and disaggregated by brand. Wages and overtime are the most important topics. More than 35% of all categorised posts are related to these issues. For the case of BYD, wages and overtime represent more than 50%, for CATL, almost 44%, and for Samsung, about 37%. Yutong is an exception, as these topics represent only about 13% of all categorised posts. For workers at Yutong, the most often mentioned issue is health and safety.

Category	Topic	Total	BYD	CATL	Samsung	Yutong
GCAT1	Internships	3.4	2.5	1.7	5.8	5.0
GCAT3	Resignation	7.3	12.0	6.8	5.0	2.3
GCAT5	Wage	22.8	36.6	24.5	15.3	6.4
GCAT6	Recruitment	11.1	17.8	9.7	22.2	2.8
GCAT7	Safety and health	8.7	2.9	3.4	3.7	18.7
GCAT8	Overtime	13.1	15.6	20.2	4.9	7.0

Table 1: Relative importance of topics (measured as % of all posts, 1.12 million posts) on the manufacturing brands' online forums.

We organised the six topics of table 1 in relation to underlying risk factors and the Better Work's Global Compliance Assessment Tool (GCAT). In particular:

- *Internships* are discussed under GCAT1: *Child labour*.
- *Resignations* will be analysed under GCAT3: *Forced labour*.
- *Wages* are examined under GCAT5: *Compensation*.
- *Recruitment-related issues* are detailed under GCAT6: *Contracts and human resources*.
- *Safety and health issues* are analysed under GCAT7: *Occupational safe and healthy*.
- *Overtime* relates to GCAT8: *Working time*.

Some important labour issues listed in the GCAT are poorly represented in online forums.

- *Child labour*: Our database contains information about student labour, which can constitute a child labour offense. However, there is little information other forms of child labour. We, therefore, use academic articles and statistical data to identify risk patterns. The assessment is presented under GCAT1: *Child labour*.
- *Discrimination*: Workers rarely discuss discrimination. Yet, we find that some discriminatory practices are related to specific employee groups such as students (GCAT 1) and dispatch

workers (GCAT6). In addition, we analyse recruitment advertisements to identify discriminatory selection criteria. We present our findings under GCAT 2: *Discrimination*.

- *Strikes and labour action*: Organising workers' rights and interests is a politically sensitive issue that few users in our database mention. To uncover risk patterns and trends, we rely on data from China Labor Bulletin, a Hong Kong-based CSO collecting information on strikes. We examine this issue under GCAT4: *Freedom of association*.

2.3 Qualitative analysis

We read and assess thousands of categorised posts to find grievances and rights violations. The qualitative analysis rests on the principle that single voices matter because any injustice or violation calls for remedy.

But even though individual posts can provide important information, they could also contain incorrect claims or biased views. Therefore, to ensure that insights are relevant and robust, findings are presented within a broader context featuring posts from different users making similar claims, posts from different users confirming a particular issue or practice, or posts from different users adding up to a pattern of rights-violating practices. This approach ensures that we do justice to single voices and, at the same time, enhance the reliability of the findings.

We code each post informing a qualitative claim. Numbers in brackets ([1], [2], [3], etc) in the following text are references to these posts. The number of codes, therefore, indicates how many sources inform a claim. Coded posts exemplify an issue and are not exhaustive, i.e. there may be more posts in our data that are not coded. To better appreciate the quantitative dimension of an issue we use quantitative textual analysis, which we outline in the following section. The coding list is not part of this report. We keep it encrypted and separate from the raw database to ensure that single users cannot be traced even in case of a data breach on our server.

2.4 Quantitative analysis

We deploy quantitative textual analysis assessing the relevance and relative importance of posts relating to a specific labour issue:

- We discern the number of posts belonging to a topic as a share of all categorised posts. Categorised posts are messages that include one or several of the keywords that we identified in our four-step analysis (see section 2.2). This number informs us about the relative weight of a topic, i.e., its importance in social media discussions.
- We depict this share by month for the past seven years as a trend indicator. We chose the past seven years because we had comparatively few posts for the years before. When little data is available, a small change in the absolute number of posts can cause a large change in shares, making the resulting trend erratic and difficult to interpret.

2.5 Risk assessment

The collected data is suitable for a human rights due diligence analysis as detailed in the UN Guiding Principles on Business Human Rights (UNGPs). The UNGPs advocate a risk-based assessment of human rights issues where brands should prioritise the most salient problems. Salience is “issues that stand out because they are at risk of the most severe negative impact through the company’s activities or business relationships.”¹² A negative human rights impact is salient under one or more of the following characteristics: its scale (gravity of the impact), scope (number of individuals affected) or irremediability (ease of undoing consequences).¹³ The UNGPs do not provide a single standard for evaluating or grading risks, as these may vary across businesses, sectors, regions, and countries. We defined assessment criteria for the following risk assessments as listed in table 2.

Saliency	Scale	Scope	Irremediability
Low	Negative impact limiting economic rights on a single occasion , for a short period	Single cases	Monetary compensation for economic loss is appropriate and sufficient
Moderate	Negative impact limiting economic, plus social and cultural, and/or political rights on a single occasion for a short period	Few cases without a systematic pattern	Monetary compensation for economic loss and other damages appropriate and sufficient
Medium	Negative impact limiting economic plus social and cultural, and/or political rights repeatedly , for a short period	Few cases suggest a systematic pattern	Monetary compensation for economic loss and other damages is appropriate but not sufficient . Assessment of legal liability under civil law and personnel consequences required
High	Negative impact limiting economic plus social and cultural, and/or political rights frequently	Sufficient cases to establish and confirm a systematic pattern	Monetary compensation for economic loss and other damages is appropriate but not sufficient. External review in light of civil and criminal law is mandatory . Personnel consequences are required
Very high	Negative impact limiting economic plus social and cultural, and/or political rights permanently	Sufficient cases to establish and confirm a systematic, widespread pattern	Monetary compensation and external legal action are mandatory but not sufficient to mitigate the harm done

Table 2: Risk grading criteria

Any human rights violation that is grave in nature and/or causes consequences that are difficult to mitigate should have priority, irrespective of the number of people affected. Therefore, we determine salience first with the highest grade in scale and/or irremediability. For example, if an issue is graded “very high” “in terms of scale, the total risk grade will be very high irrespective other grades being lower. The same approach is used if irremediability receives a higher grade than scale and/or scope. If scope constitutes the highest risk grade of an issue, we calculate the average of all grades based on the following weights: low=1, moderate=2, medium=3, high=4, and very high=5.

Taking trends into account helps us assess an issue’s overall risk. An issue may be emerging, declining, or static. A trend may also entail a seasonal pattern i.e., an issue receives relatively more attention during certain time periods each year.

The grey boxes displayed under each of the following topic sections provide a summary that contains information about major risks involved, overall salience grade, sub-grades for scale, irremediability, and scope, as well as the identified trend pattern (rising, declining, static, seasonal).

3. Findings

The findings in this section are structured along the Better Work’s Global Compliance Assessment Tool (GCAT). We assess each topic quantitatively and qualitatively. In addition, we look at the development of each topic over time. At the beginning of each section, we suggest a risk categorisation.

3.1 Child Labour

- Core Conventions: C138 Minimum Age Convention, 1973 and C182 Worst Forms of Child Labour Convention, 1999
- Other relevant ILO documents: R146 Minimum Age Recommendation, 1973; R190 Worst Forms of Child Labour Recommendation, 1999

Risk: Work that is harmful to children’s physical and/or mental development.	
Salience: Very high	Scale: Very high
	Irremediability: Very high
	Scope: Medium
Trend: Declining	

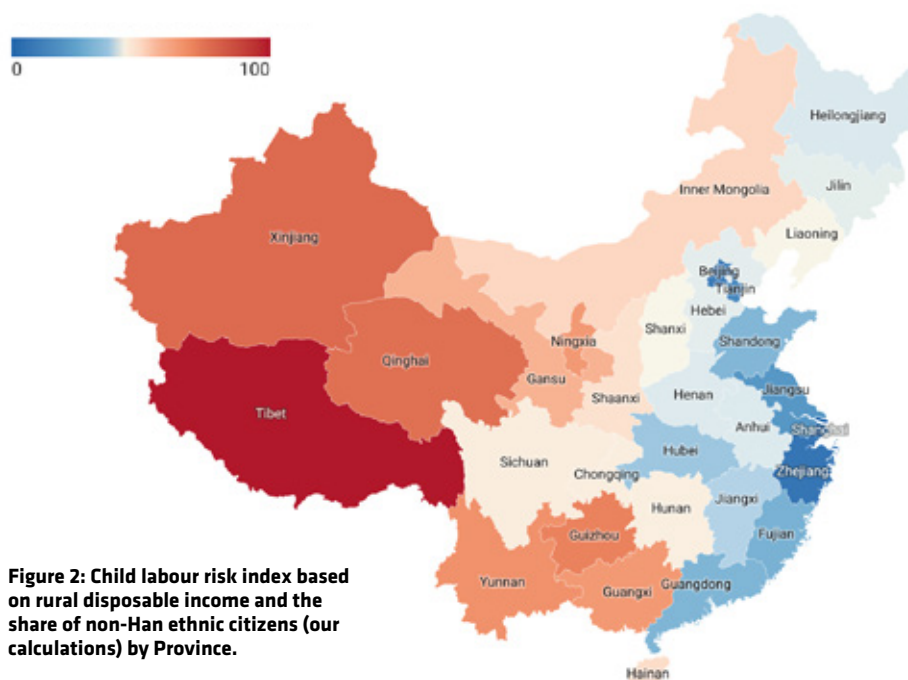
3.1.1 Indicators for child labour

China Labor Bulletin, a Hong Kong-based CSO, concluded in a report from 2019 that ten years ago, child labour constituted a “widespread, systematic, and increasingly serious problem in China.” Today, it is stated, “the forces creating both the supply of and demand for child labour have diminished considerably, and although there are still occasional reports of child labour in the Chinese media, the situation has improved.¹⁴” According to the report, the single most important risk factor remaining is poverty in rural areas, in combination with low educational quality and high school dropout rates.

There are no recent estimates on child labour in China. Still, the academic literature relying on data from the time before Xi Jinping corroborate the observations mentioned above. For example, a study based on nationally representative data from the China Family Panel Study suggests that child labour posed a significant risk ten years ago. Tang et al. (2018) found that 7.74% of children aged between 10 to 15 years were engaged in labour in 2010. About 90% of child labourers were still in school. Children worked on average 6.75 hours per day and spent 6.42 hours less per day on studying. The school dropout rate for working children was 11.57%, which was 9.6% higher than that for children who were not working. The study also confirms that minors in rural areas are more likely to get involved in child labour.¹⁵

Non-Han ethnic groups are often economically marginalised and socially stigmatised. These two factors, in combination, increase vulnerability and, by extension, the likelihood of exploit-

ative practices such as child labour. As a result, the prevalence of child labour remains highest in Northeast China and Qinghai-Tibetan regions.¹⁶ We calculated a regional risk index based on two predictors for child labour: rural disposable income and the share of non-Han ethnic citizens. The index ranges between 0 and 100, where low numbers indicate low risk. Figure 2 shows the results indicating that Tibet, Qinghai, Xinjiang, Ningxia, Yunnan, Guizhou, and Guangxi belong to the highest risk category.



BYD and CATL both run battery factories in Qinghai. Yet, incidences of child labour most likely occur at lower-tier and small-scale suppliers related to these brand-owned factories. Consequently, without information about battery manufacturers' entire supply chain in China, it is difficult to assess and compare child labour risks.

3.1.2 Child labour through internships

Internships are the most common institution facilitating child labour in China. For the past decade, 15-22 million students were enrolled in secondary vocational schools every year.¹⁷ Vocational curricula emphasises practical training through internships. The ILO acknowledges that such programs can facilitate a positive school-to-work transition when they are properly planned, managed, and monitored.¹⁸ Yet, in China, multiple investigations from CSOs¹⁹ and academic research²⁰ showed that, for many students, vocational training means performing monotonous work for long hours with wages below those of regular workers performing the same tasks.

Employing underage students through internships is not a child labour offence if working conditions comply with regulations protecting students. However, when employers and schools abuse students' vulnerable position (they cannot graduate without passing these internship programs), vocational training turns into incidences of forced labour and, for students under the age of 18 years, into incidences of child labour.

The 2019 UNICEF report on child labour in global supply chains analyses child labour in the Chinese electronics industry.²¹ The report cites a study of student interns who were 16.5 years old on average. The interns reported standing for more than 10 hours per day performing tasks unrelated to their subjects. Internships were often extended to meet production needs, ranging from three months to a full year. The report mentions other studies finding that students who work long hours, in violation of restrictions on vocational training, were often not paid production bonuses that regular workers could earn and did not receive social insurance. Refusal to work or the desire to leave early could result in not graduating from school. Our analysis of social media posts indicates that similar violations occur at several battery manufacturers.

The most common offences mentioned are overtime work, unpaid overtime, and forced overtime. Students state:

- *“Internships are very hard, and those assigned to the workshop have to do electric welding, and work overtime until after 11 o’clock during busy periods.”*[2]
- *I was interning here. The basic wage was RMB 1500. When I worked during eight national holidays plus additional overtime, I got RMB 3000. When I left, the company kept one month’s base salary as a deposit.*[3]
- *Don’t come to factory no. 7. At the assembly, quality, and other departments, you will work overtime until you cry, and there is no overtime pay. The salary for the internship period is RMB 4500, and the take-home wage is RMB 3000.*[4]
- *I work overtime every day until I cry without overtime pay. I must work overtime for at least one day on weekends. When there is a project, I work overtime, at least until 11 o’clock every night or all night. During the internship period, the wage is RMB 4,500 and take-home wage is 3,000. I just wanted to leave after a month and a half.*[5]

Overtime work for students is not voluntary: *“Why do I have to work overtime? I am not a XX employee. I am just a student.”*[6] Companies seem to make their own internal rules in violation of national laws. For example, a student writes that interns may not work more than 24 hours of overtime even though regulations stipulate that overtime is not permitted at all.[7] Schools communicate rules to students that seek to normalise overtime: *“When we went to XX, our school told us that there wouldn’t be more than two overtime hours per day. For more hours, higher-level approval is necessary.”*[8] To circumvent regulations, some factories and departments do not count students’ overtime hours. In this context, companies make use of what is called “mandatory overtime (义务加班), referring to extra time after regular work when a stipulated production target was not achieved. Mandatory overtime represents unpaid work. A student writes: *“I registered for the school’s internship last week. This week I began to work overtime. Usually, I work until 7.00 pm, but yesterday we couldn’t leave until after 9.00 pm. The group leader told us there would be no overtime because we didn’t fulfil the quota in time.”*[9] Another student complains: *“I have been on an internship here for one year. Until today I only earn a base wage of RMB 1800. I have to work mandatory overtime if I cannot finish within eight hours.”*[10]

Internal rules and rights-violating practices are widely known among students and make them worried. Some try to find out what they need to prepare themselves for:

- *What are first-year students’ internships like? Is there a lot of overtime? Until what time do we have to work when there is overtime?*[11]
- *Today, the school recruited me for an internship, and the interview felt okay. But I saw a group of students complaining on Zhihu²² about working overtime and poor treatment. I start to panic.*[12]

Students are caught in a vocational education system that exploits their labour despite relatively strict regulations. A student writes: “Because we are students, we are easily cheated. The system here teaches us a lesson about society, which applies not only to Xi’an but to all factories of this kind. If your school is organising your internship, your teachers or leaders will earn an introduction reward of several hundred RMB or more for each student. The worst of them will even go as far as to deduct management fees from your wage.”[13] Another student states cynically that there is no escape from exploitation – even if a student won’t go along with a school-organised internship: “Regarding the choice of your workplace, you know... if you don’t go to your school’s partnering factory, you’ll go to another school’s factory.”[14]

Students write that they are not allowed to resign according to national regulations:

- Normally, you can resign from an internship after three days prior notice. You have to sign a form and leave when the time comes. This is even stipulated in the contract. But when I mentioned my resignation, the squad leader told me that I was in line for resignation (you have to queue for leave). [...] The foreman sat my name on the blacklist, and I lost last month’s wage.[15]
- When I wanted to leave, the foreman didn’t approve my resignation. [...] The internship period is three months, and you earn only RMB 4000.[16]

Generally, the information presented here reflects ILO forced labour indicator no. 1, “abuse of vulnerability”, and no. 11, excessive overtime. Students are vulnerable because if they want to graduate, they must accept internships. Some of the rules they have to follow are illegal, including queuing for resignation. Since students are not allowed to work more than eight hours per day and forty hours per week, any extra work or overtime is also illegal. In the case of students under 18 years old, these forced labour practices would constitute child labour.

3.1.3 Trend analysis

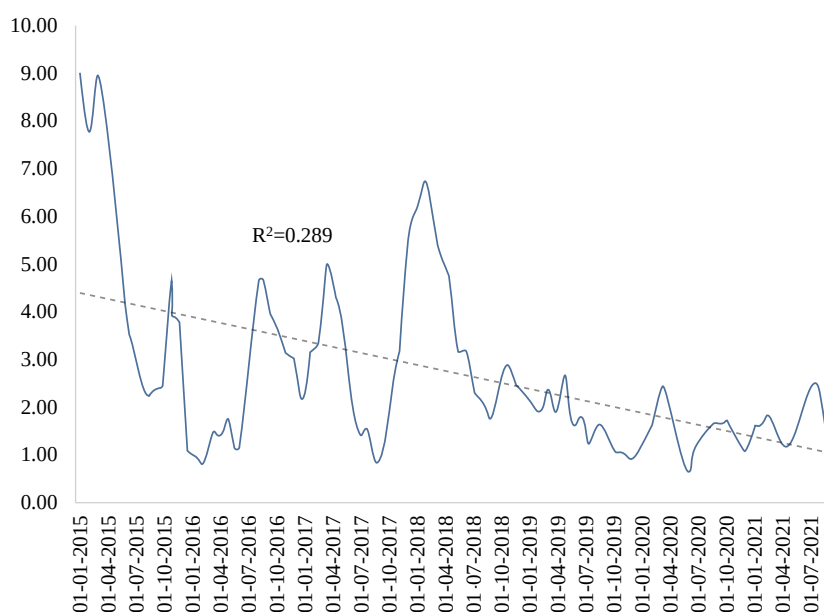


Figure 3: Mentions of student interns by month as a share of all categorised posts.

Figure 3 depicts the topic of student interns since January 2015. The graph shows a declining trend. Before the Covid-19 outbreak, seasonal fluctuations of the topic were erratic and frequently peaked during winter and summer breaks. More recently, the topic gained less attention and mentions fluctuate around 2% (share of all categorised posts per month). The changing pattern could be due to a declining number of internships during the Pandemic and/or intensified censorship.

3.2 Discrimination

- *Core Conventions: C100 Equal Remuneration Convention, 1951 and C111 Discrimination (Employment and Occupation) Convention, 1958*
- *Other ILO references: C183 Maternity Protection Convention, 2000; C159 Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983; C175 Part-Time Work Convention, 1994; C158 Termination of Employment Convention, 1982; R191 Maternity Protection Recommendation, 2000*

Risk: Rights violations are applied systematically to (vulnerable) worker groups, recruitment is based on discriminatory criteria.	
Salience: Medium - very high	Scale: Very high
	Irremediability: Varying degrees
	Scope: Medium
Trend: Unknown	

Discrimination is a complex issue as it intersects with rights-violating rules that are not uniformly applied. Because these practices are illegal or at least in a grey zone, there is little information available allowing to evaluate discriminatory effects of such rules. However, our analysis suggests that student interns and dispatch workers are subject to discriminatory practices because they earn less than regular workers even though they perform the same tasks. Section II.1.2 elaborates on student workers, and section III.6.2 on dispatch workers.

Besides discrimination on the job, unequal treatment occurs during recruitment, i.e., certain groups are preferred or disadvantaged. We tried to grasp this issue with an analysis of job advertisements. We filtered 1820 job advertisements published on forums dedicated to the battery and automotive manufacturers we analyse in this report. The advertisements were published between January 2017 and February 2022. These advertisements mentioned various discriminatory criteria such as specific sex, ethnicity, region, age, or appearance. We find:

- Gender is rarely used as a recruitment criterium. In our sample, 41 advertisements (2.25%) recruit only men, and 11 (0.6%) seek only women. 712 (39.12%) advertisements mention both sexes, and 1056 (58.02%) advertisements do not mention gender.
- Ethnic criteria are rarely mentioned. We find 15 (0.82%) advertisements mentioning ethnicity as a requirement or exclusion criterium.
- Appearance as an exclusion criterium is mentioned in 258 (14.17%) advertisements. 194 (10.65%) advertisements exclude individuals with tattoos, and 69 (3.79%) advertisements rule out job candidates with cigarette burns.

Age is by far the most widespread discrimination criterium. In figure 4, we depict 1612 advertisements that mention an age limit of 35 years or 45 years. The columns show the share of advertisements mentioning an age limit of 45 (black) and 35 (striped) by month. The emerging pattern indicates that there has been a shift since the Covid-19 outbreak in 2019, as there are relatively more advertisements accepting workers up to 45 years of age. We draw two conclusions from this:

- Manufacturers prefer young workers, which suggests that physical hardships are severe.
- With the rising labour shortage, employers have relaxed the age limit, which suggests that age limits represent discriminatory criteria rather than job-related requirements.

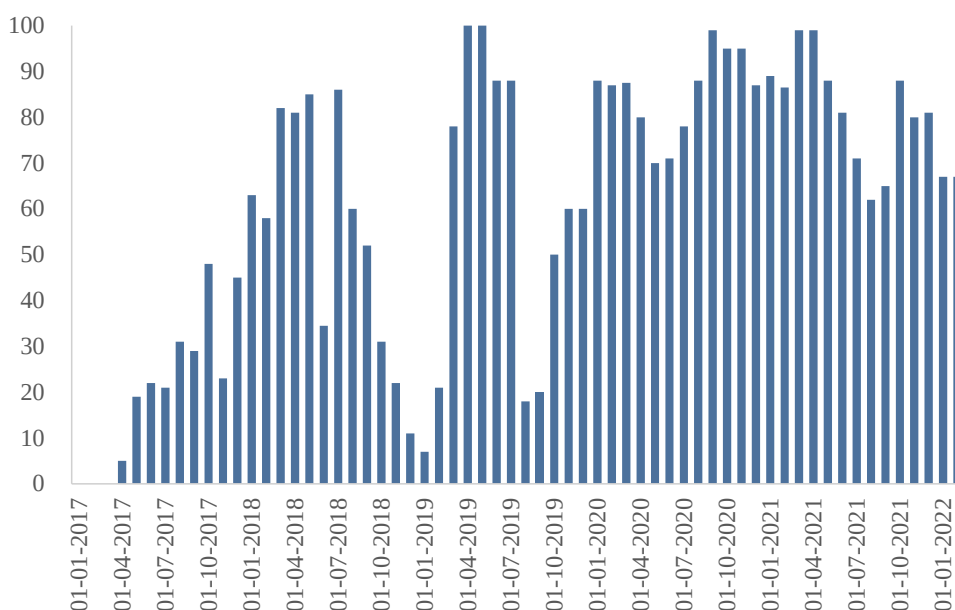


Figure 4: Relative share of job advertisements mentioning age limits 35 and 45 by month.

3.3 Forced Labour

- Core Conventions: C29 Forced Labour Convention, 1930 and C105 Abolition of Forced Labour Convention, 1957
- Other ILO references: C181 Private Employment Agencies Convention, 1997 and C1 Hours of Work (Industry) Convention, 1919

Risk: Administrative obstacles to resign, penalties for resignation, non-wage payment for the last month.	
Salience: High	Scale: Medium
	Irremediability: Moderate
	Scope: Very high
Trend: Static and seasonal	

ILO Convention No. 29 defines forced labour as “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.”[1] In the context of export manufacturing in China, the menace of penalty can be divided into state-tolerated and state-sanctioned forms (figure 5).

The term “state-tolerated” refers to company management practices that abuse power imbalances between employers and workers, such as wage deductions or wage arrears for not committing to overtime. As we discuss in the following section, administrative barriers and financial penalties for resigning are other examples of state-tolerated forced labour. We label practices as state-tolerated when they are initiated and implemented by corporations while state authorities support business interests with regulatory flexibility or weak enforcement.

State-Sanctioned Forced Labour		State-Tolerated Forced Labour
Origin: State Actors		Origin: Private Sector
Targets: Registered Poor, Non-Han Ethnic Groups		Targets: Migrant Workers, Vocational School Students
Economic Coercion	Existential Threats	Management Penalties (Wage Deduction, Wage Arrears, Black Listing)

Figure 5: Systematisation of the Chinese Forced Labour Regime.

State-sanctioned forms of forced labour relate to practices that are state-organised or state-endorsed. The two most common forms under this category are industrial poverty alleviation programs, and vocational training agreements between schools and the private sector. State-sanctioned forced labour targets specific groups, such as registered poor households and non-Han ethnic groups. Among the state-sanctioned forms of enforcement, economic coercion and existential threats can be distinguished. Economic coercion is used to leave targeted individuals with little choice but to accept state-sanctioned employment or vocational training. The menace of penalty in this context refers to measures such as cutting off poor farmers from social guarantees or withdrawing land use rights if they are unwilling to accept state-sanctioned wage labour. Existential threats refer to the deployment of detention, imprisonment, torture, or other forms of physical and psychological violence.

In the following section we’ll look at workers’ difficulties to resign according to legal regulations. Since the related hardships and punishments are a result of corporate management practices they fall under the category of state-tolerated forced labour. We are analysing state-sanctioned forced labour in the E-bus supply chain in a separate report.

3.3.1 Resignations

The Chinese Labour Law allows workers to resign after one-month prior notice (three days during probation). In violation of regulations, many factories establish internal rules for resignation geared towards production needs. In this context, a worker informs about resignation practices on social media stating that workers during probation can leave after 7-15 days prior notice.[17] The most common approaches to control worker turnover, however, are queuing and quota systems:

- *As for regular workers, [approval of resignation] depends on the production situation. At each line, 3-5 people per month can get approval to leave.*[17]
- *The foreman said I had to wait four months before leaving. Each month only one person can resign.*[18]
- *Resigning is easy. I just had to quarrel with the group leader. But I still had to queue (for approval).* [19]

Group leaders, line leaders, and managers must sign workers' requests for resignation. This gives superiors strong discretionary power to decide who may leave and who must stay: "An appalling issue is resignation. The group leader does not help you. You even cannot get hold of a resignation form. When you eventually find one, you must sign all documents. This does not mean that you can leave unless [your leaders] plan to release you." [20] Another worker writes: "The leader didn't provide a resignation form. Is it still possible to receive the wage?" [55] Workers are puzzled and angered about managers' refusal to approve their resignation: "Why does the leader not approve my resignation?" [21]. "The manager does not approve my resignation – how can I make him sign?" [22]

Quota systems and practical obstacles to resign force workers to leave without going through the formal process. Workers call this 'leaving on one's own (自离)'. A worker explains what to do when resigning during probation: "Sign the resignation form, and after three days, you don't go to work. If they register you as absent or as having left on your own, go straight to the local Labour Bureau. Do not communicate face to face because this is hard to prove. Use the company's WeChat Group to communicate with your leader and save the conversations." [23]

When workers do not show up on the factory floor for three consecutive days, they are registered as having left on their own.[24] The HR department will send an SMS informing that the worker has to return in person to handle the formal checkout procedures [25], which is a requirement for receiving last month's wage.[26][27][28] A worker writes: "My resignation was not approved. I, therefore, left on my own. However, my wage is withheld until I return to do the paperwork". [29]

Workers write that managers face pressure to keep resignation rates low and, as a result, workers have no choice but to leave on their own:

- "This manager has a problem. All the time, there is somebody who wants to resign. He forces them to leave on their own to control the resignation rate."
- "When it comes to resignations, they use all kinds of evasive means. When I talked to the leader today, he suggested that I should leave on my own. I didn't agree." [30]
- "Everybody here has to leave on their own to avoid affecting the resignation rate." [31]

Workers state that they didn't get their wages after they left on their own.[32][33][34] If workers eventually get paid, they may not receive their wages in full. Workers write that their employers deduct between RMB 500 – 1000.[35][36][37]

Two workers write that their managers let them either leave without their wages or sign a level-4 violation (staff handbook of a company). In the latter case, they would receive their wage, but at the same time, they'd get fired and blacklisted, which means they become permanently banned from re-employment. [38][39]

Processing formalities in person is a problem for migrant workers if they have returned to their hometowns or moved to other cities. If a worker is not formally discharged, his/her social insurance registration cannot be transferred, and, by extension, it is not possible to become formally employed elsewhere. As a result, workers have to wait idly until further notice.[40] Workers exchange ideas on social media to avoid having to return: *“Ask for a day off. It doesn't matter what reason. Then you extend your vacation. Wait until your last month's wage is on your account. Then leave on your own.”*[41] Another worker writes: *“If your leader does not approve your resignation, work your hours, don't work overtime. After a few days, he'll agree to let you go.”*[42]

Workers who leave on their own may face additional problems: *“Resigning here is difficult. They make us leave on our own. I filled in the resignation form, but HR registered the wrong wage card number on purpose.”*[43] When workers leave on their own, they (temporarily) cannot be re-employed. Some workers state that the prescription period is one month [44] others write that they had to wait for three months [45] and yet another post mentions six months.[46] Managers may also blacklist workers who left on their own.[47][48] Policies determining when and how to register and sanction workers who leave on their own seem to vary across factories.[49]

When workers return to their employers after they left on their own, they may face additional sanctions: *“You can return. Perhaps there will be more deductions from your wage in the beginning. This is because you left on your own the last time, which caused the company some costs.”*[50] A worker confirms that regular workers who have left on their own and return as regular workers face wage deductions.[51] Another worker writes: *“This is a horrible factory! They deliberately make it more difficult to resign. If you don't care about your wage, you can leave on your own. If you want your wage, they put you on the blacklist and you are registered as having left on your own. When you come back next time, they deduct money from your wage. I have a colleague who left on his own two times. When he returned this time, they deducted RMB 1000.”*[77]

3.3.2 Trend analysis

Figure 6 shows mentions of formal and informal resignations since January 2015. Before the Covid-19 outbreak, discussions about formal resignations are erratic without a clear pattern. Informal resignations during this period range around 2.5% of all categorised posts each month. Due to the Pandemic, there was first a wave of formal resignations followed by a second wave of informal resignations. Since then, mentions of both types have followed a seasonal pattern with slight peaks before the Chinese lunar new year and during summer. The peaks develop asynchronously, i.e., when discussions focus on formal resignations, mentions of informal resignations decline and v.v.

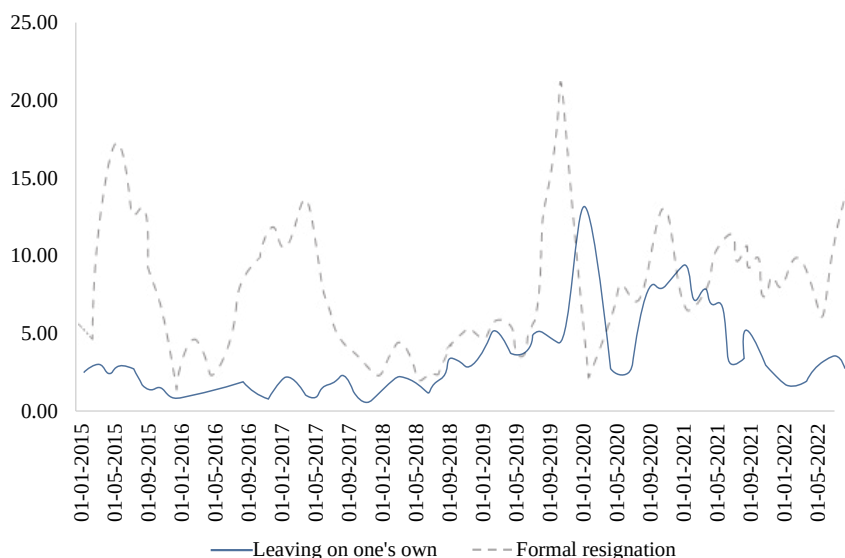


Figure 6: Mentions of formal and informal resignation as a share of all categorised posts by month.

3.4 Freedom of association and collective bargaining

- Core Conventions: C87 Freedom of Association and Protection of the Right to Organise Convention, 1948; C98 Right to Organise and Collective Bargaining Convention, 1949
- Other relevant ILO documents: C154 Collective Bargaining Convention, 1981; R163 Collective Bargaining Recommendation, 1981

Risk: Workers are prevented (with threats and coercive means) from voicing grievances and organising their interests.	
Saliency: Very high	Scale: Very high
	Irremediability: Very high
	Scope: Very high
Trend: Rising	

3.4.1 Strikes and protests

The All-China Federation of Trade Unions (ACFTU) is the sole legal representative of Chinese workers. It is a mass organisation led by cadres pursuing political careers within Party or Government organisations. The ACFTU has been reluctant to defend labour rights and instead sided with employers and managers. Aligning the ACFTU with vested business interests was possible due to a top-down nomination process.²³ As a result, Government and Party officials with strong political incentives to attract investments usually chair local trade unions, while most employee representatives are recruited at the management level.²⁴ By global standards, labour relations in China do not fare well. The International Trade Union Confederation (ITUC) ranks China under its fifth category, i.e., “no guarantee of rights”.²⁵

Although no explicit law prohibits strikes, neither the Labour Law nor the Trade Union Law acknowledges it as a right held by workers and trade unions. As a result, participants in strikes have been prosecuted under criminal and civil laws.²⁶ In recent years, political repression increased with devastating effects for workers and activists who dared to strike or protest or lawyers who filed collective legal actions. Since 2015, CSOs and lawyers have been increasingly under pressure. In a nationwide raid, 300 lawyers and activists were arrested.²⁷ Detentions, disappearances, and forced TV confessions continued and last until today.²⁸

Despite comprehensive repression of labour action, some workers still go to the streets as a desperate means of last resort. In this context we found two recent incidents, both concern BYD. In March 2020, BYD workers went to the company's headquarters to protest wage cuts in response to declining profits during the Pandemic. According to social media posts, BYD cancelled performance bonuses and other extra payments. Moreover, the company adjusted overtime management. Workers protesting showed banners stating that they needed to make a living (figure 7).[52] BYD is not the only e-vehicle producer that lowered workers' wages. Yet BYD is the only company facing public protests. Industry experts state on social media that the protest indicates a particularly unsustainable situation at BYD.[53]



At BYD in Changsha, where the company produces electric buses, hundreds of residents living close to the factory protested in May 2022 (figure 8). Workers complained about strong paint and burned plastic smells. People living close to the factory reported symptoms such as frequent nosebleeds, dizziness, vomiting, coughing and nausea.[54][55]. It was not the first time that BYD in Changsha came under attack for environmental pollution. In 2019, public authorities ordered the company to oversee its production and comply with legal exhaust benchmarks. The company was also listed as one of the units targeted by public complaints in the province.[56]



3.4.2 Trend analysis

Since electronics and electric vehicle production are closely interconnected, we use the former as a trend indicator for labour repression in the Chinese new energy vehicle supply chain. Figure 9 depicts the number of strikes in the Chinese electronics sector by month. The graph shows that protests and strikes have declined continuously after the introduction of Xi Jinping’s permanent crackdown on labour activists and lawyers.

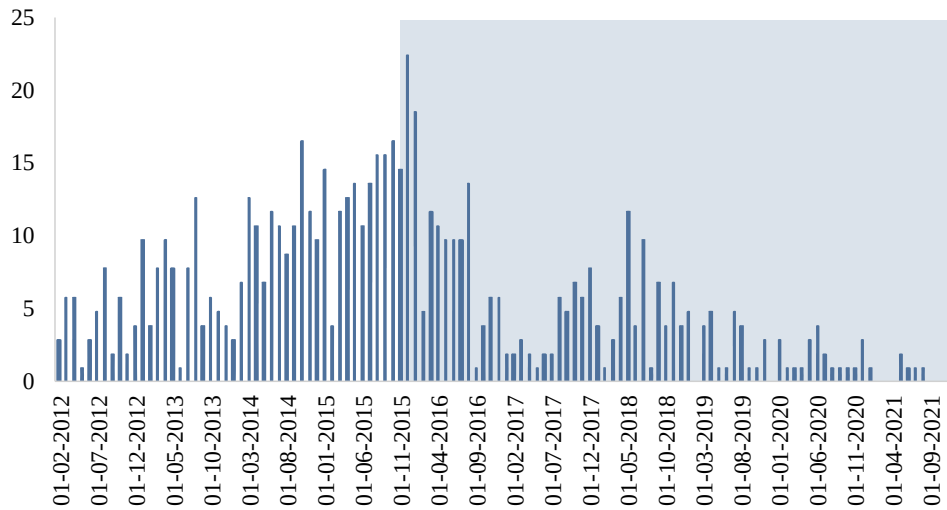


Figure 9: Number of strikes in the electronics sector (source: China Labour Bulletin Strike Map).

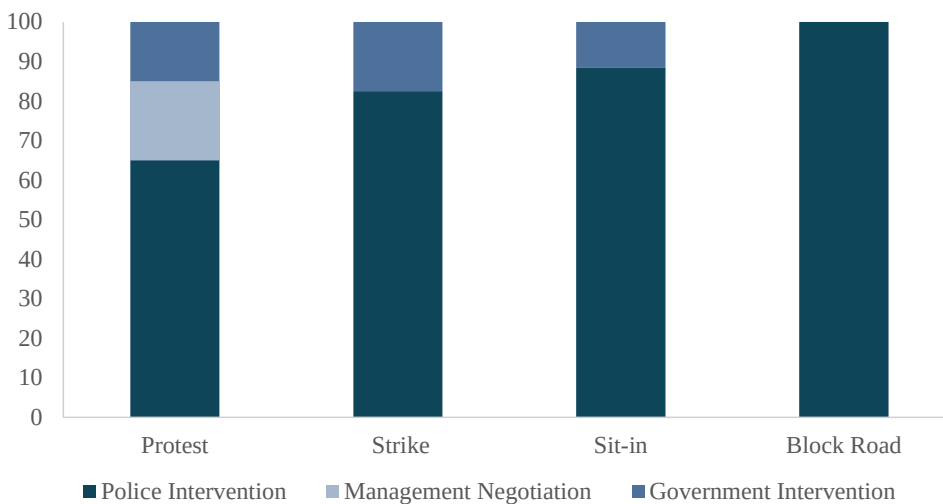


Figure 10: Type of collective action and government response (as share of number of actions).

To discern risk patterns of repression, we looked at protests and strikes in the automotive sector, which is another industry closely intertwined with new energy vehicle production. Figure 10 illustrates various types of collective action and government responses in a stacked bar chart. Protests instigate varied responses including repressive means (detention, police violence) as well as negotiations between workers on the one hand and managers and government officials

on the other. Strikes, sit-ins and blocking roads are mainly handled by the police. Note that a protest is a manifestation against employers who violate workers' legal rights. Strikes and sit-ins, by contrast, may involve non-statutory claims such as higher wages or better working conditions beyond legally stipulated (minimum) standards. Blocking roads involve in addition an element of public disturbance. The observations reflect China's zero tolerance for independent labour organising and aversion for any attempt to get attention by challenging public order.

3.5 Compensation

Risk: Workers are not paid wages in part or in full.	
Saliency: High	Scale: Medium
	Irremediability: Medium
	Scope: High
Trend: Stable	

3.5.1 Base wage and living wage

The following analysis looks at base wages for ordinary workers (普工). A base wage is the wage paid for regular working hours and does not include overtime or bonus payments. We compare the base wage with the average legal minimum wage, the Asia Floor Wage (AFW) and the Global Living Wage (GLW) for China.²⁹ A living wage such as the AFW or the GLW is envisioned to cover food, housing, health, and basic needs, provide room for recreation, support a family, and enable savings. Calculations of living wages are based on ensuring a decent subsistence for workers without. Unlike minimum wages, living wages do not take into account factors such as unemployment rate or investment climate.

There are differences between various living wage calculations. The AFW assumes a household consisting of two adults and two children. The GLW, by contrast, uses the Anker methodology, which relies on the wage earner to age dependency ratio. The Anker method relies on a statistical rationality that has been criticised for lacking gender sensitivity. A methodology that promotes gender equality should consider the ability to pay for care work since women often shoulder productive and reproductive responsibilities and are time-poor (looking after older people or paying grandparents/siblings that help with child rearing).³⁰

We collected information about base wages for regular unskilled workers from job advertisements and workers' posts between 2014-2022. The base wage varies between brands and regions. For example, the base wage for an unskilled worker at CATL is currently RMB 2300 [57], which is RMB 440 above the local legal minimum wage [58]. At BYD in Changsha, the base wage of RMB 1960 [59] is only RMB 30 above the local legal minimum wage [58]. Moreover, the base wage depends on qualifications and entry-level. An operator on entry-level one at CATL, for instance, earns a base wage of RMB 2600. On entry level 2, the base wage is RMB 2700.[60]

Figure 11 displays the development of base wages in relation to the legal minimum wage (national average), the Asia Floor Wage (AFW) and the Global Living Wage (GLW). It is estimated

that base wages are approximately 30-70% of the amount workers need to make a living. The gap between the base wage and the AFW has been widening since 2017 while the GLW remained essentially unchanged for the past seven years. Workers' disadvantaged position becomes even more pronounced when we juxtapose China's high average wage growth with comparatively marginal living wage adjustments. Thus even paying a living wage may not be enough to mitigate workers' rising economic, and by extension, social marginalisation.

General wage developments and living wage benchmarks both indicate that base wages for ordinary workers violate Art. 23 of the Universal Declaration of Human Rights, stipulating that workers should receive a living wage. Wage gaps are robust social risk indicators because low wages are associated with high health risks and risks of exploitation.

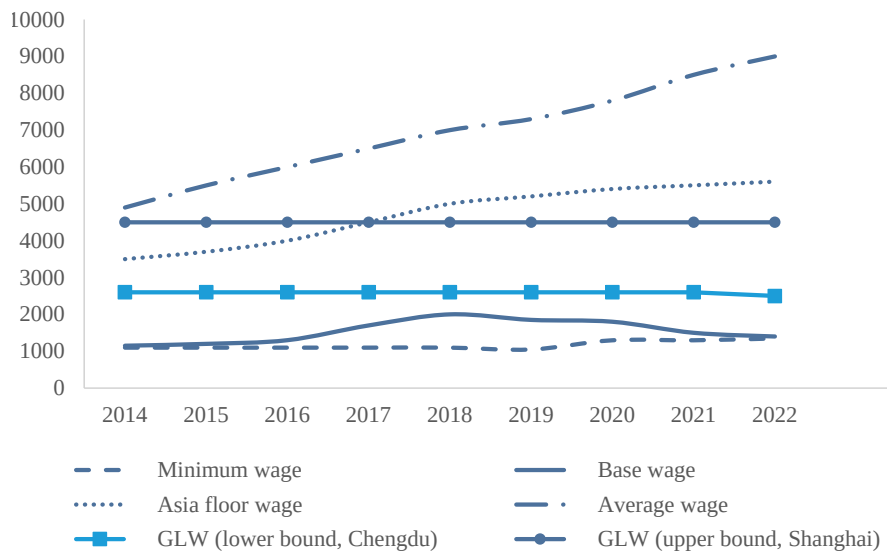


Figure 11: Minimum wage, base wage, Asia Floor Wage, and Global Living Wage for China 2014 - 2022.

3.5.2 Deductions

Take-home wages include base wages plus additional payments such as performance bonuses, full attendance bonuses, regional subsidies, position allowances, work allowances, night shift subsidies, meal allowances, accommodation allowances, duty allowances, and hard work fees. [61][62] Because base wages are low, workers rely on extra payments to meet ends. These additional payments constitute an essential part of a worker's total wage.

The amount of each component varies depending on entry-level and qualifications. Recruitment advertisements help to appreciate the relative importance of bonuses and allowances. For 2022 we found the following information:

- performance bonus: RMB 250/month,
- regional subsidy: RMB 400/month,
- position allowance: 150/month,
- work allowance: RMB 200/month,
- night shift subsidy: RMB 20/day,
- meal allowance: RMB 700/month,
- accommodation allowance: RMB 200/month.[63]

In addition, workers can earn a seniority of up to RMB 500. Thus, allowances and subsidies for a worker with no seniority pay and no night shift subsidies (RMB 1900) almost double the base wage of an entry-level worker.

Extra pay is not included in labour contracts and, therefore, can be reduced and cancelled on a discretionary basis. As a result, managers use extra payments to steer workers' behaviour. Workers are discouraged from taking time off or resigning because of financial disincentives:

- If you ask for leave for one day, they deduct double your wage. Even when it is a factory holiday, they deduct double your wage. [...]. I don't rest when I am tired, and I don't get off when there is a private matter. [...] When you hand in your resignation, they take away all subsidies and the full attendance bonus. Your wage depends then entirely on overtime. [64]
- When you resign, they deduct money from your wage, and you don't get the performance bonus any longer. [65]

Tying resignations to performance pay creates conflicts among employees because when many workers resign, their tasks will be pushed over to those who remain. As a result, it becomes harder to achieve targets, and the performance bonus gets lost. [66]

Besides outright illegal measures such as deducting the double number of leave days, we found information on financial disincentives in a legal grey zone. Many companies deduct leave days from overtime hours, which are paid at a higher rate. [67][68] This practice has a substantial negative effect on total wages. For example, the wage slip in figure 12 indicates that this worker has performed 20 weekend overtime hours and 43 weekday overtime hours. Paid overtime, however, is only RMB 379. The worker took 6.6 vacation days, but the money deducted equals regular pay for 9.3 working days. [69]

Extra pay is also used to impose penalties and disciplining measures on workers. For example, workers caught using their phones during work must accept a deduction of twenty working hours. [70] When a worker does not show up for work for a day, the company will deduct three days from his wage. [71] Hourly workers face a deduction of two hours if they miss the daily production target by more than 15%. [72]



Figure 12: Digital wage slip of a worker.

Deductions seem to be arbitrary and at the discretion of managers. A worker complains that he was transferred to a department with a leader he didn't get along with. He wanted to leave, but then his resignation was not approved. The following month more than RMB 500 were deducted from his wage without explanation.[73] A worker writes: *"The items that are recorded for your wage depend entirely on the arbitrary notes of your group leader. I documented my wage. I wrote down exactly how many days I worked, hours of overtime, and how much was deducted for water and electricity. There was money missing, indeed. I reported this, but my complaint was ignored."*[74]

3.5.3 Wage arrears

Workers have the right to receive their wages in full and in time. According to Chinese labour regulations, a wage payment interval may be fixed in an employment contract, but it must not exceed one month. Social media posts show that these basic principles are not guaranteed. Workers write that factories delay wage payments as a financial threat to those who want to leave. Workers write that their employer pays wages on the 20th of the second month. Workers who resign will receive their last wage on the 20th of the next month.[75] At another battery manufacturer, a worker writes, last month's wages are paid on the 26th of this month.[84] These payment systems ensure that employers owe at least one month's wage.

Suppliers to the investigated manufacturers are another reason for wage arrears. Construction workers building CATL's battery factory in Yibin Prefecture, for example, complain on social media that the construction company CSCEC Strait Construction and Development Co. Ltd. (中建海峡) has not paid wages.[77] Several construction workers posted photographed messages documenting their grievances to avoid immediate, automatic censorship.[78][79]



Figure 13: Complaints and SMS conversations of construction workers.

Workers at BYD in Xi'an complained about a labour dispatch agent called Wang Yang Human Resources (汪洋人力) or Wang Yang Group (汪洋集团), who owes workers' wages.[80] Similarly, workers stated that Xinpengfei (新鹏飞), another dispatch labour agent, defaulted on wages.[81]

3.5.4 Trend analysis

Wages are the single most important topic for workers. Figure 14 shows the relative weight of posts mentioning wages measured as a share of all categorised posts since January 2015. Between 2015 and 2019, mentions are erratic based on a seasonal pattern with peaks during late summer and early autumn. More recently, the seasonal pattern has become less distinct, but mention shares remain high.

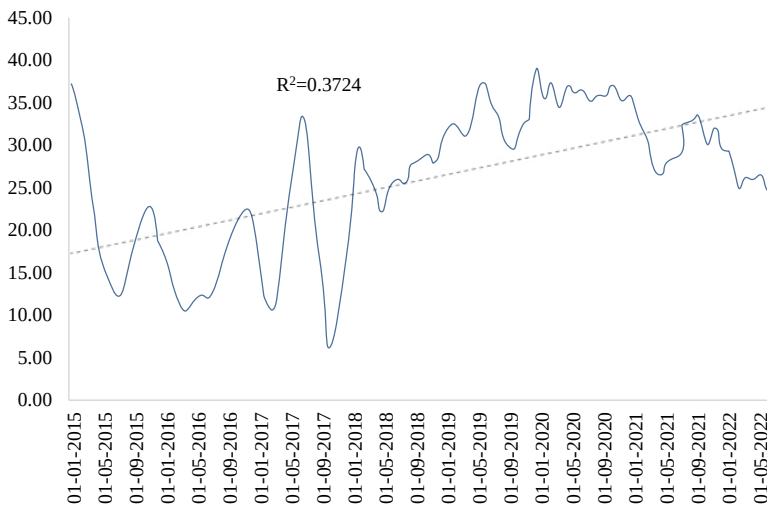


Figure 14: Mentions of wages as a share of all categorised posts by month.

3.6 Contracts and human resources

Risk: Workers are not fully and correctly informed about working conditions, dispatch labour contracts are strategically used to disadvantage workers.

Salience: High	Scale: High
	Irremediability: Medium
	Scope: Medium
Trend: Increasing	

3.6.1 Deception during the recruitment

There are three channels for workers to enter the factory: Direct recruitment through corporations' human resources departments, indirect recruitment through labour agents, and internal recommendations through employees. Among these three channels, labour agents and employees are prone to lure workers into labour contracts without fully understanding the conditions and consequences. As a result, there is a gap between workers' expectations and the benefits stipulated in contracts. Workers are also deceived by information about extra payments. They learn during recruitment that these additional payments increase wages substantially (see section III.5.2). At the factory floor, however, many workers realize that these non-statutory payments are used to impose unfair and arbitrary demands on them.

3.6.1.1 Internal recommendations

Internal recommendation awards are important for workers to increase meagre wages.[82] [83] Workers who recommend a worker can earn RMB 6000, and the recommended worker can receive up to RMB 4000. Figure 15 shows how the incentive scheme currently works. After one month, the recommendation awards are paid out in six instalments.[84] The recommending worker gets RMB 2000 after one month, RMB 500 during the following four months, and an additional RMB 1000 after six months. The recommended worker receives RMB 500 during the first five months and RMB 1500 after six months. Thus, to earn the entire award, a worker must work for seven months.

- 1、招聘岗位：操作工、初级技术员、质检员、机修工、电工、叉车司机、焊工。
- 2、推荐人奖励：奖励6000元，入职满1个月后分6个月发放（2000元*1个月+500元*4个月+2000元*1个月）；
- 3、被推荐人奖励：奖励4000元，入职满1个月后分6个月发放（500元*5个月+1500元*1个月）；

Figure 15: Workers posting information about internal recommendation awards.

Due to high awards, recommending workers deceive job seekers and convince them to enter the factory.[85][86] A post warns workers to stay away from those who recommended them, as they will pressure them to stay and secure the award.[87] Some brands pay recommendation awards only to the recommending worker. Under these circumstances, workers try to attract new employees by offering to share the award.[88][89] These informal agreements, however, cannot be enforced and may lead to conflicts. In addition, internal recommendation schemes anger some workers because high awards have attracted many new employees who do not have the ability to stay and are crowding out workers who could have persisted.[90][91]

3.6.1.2 Labour agents

Workers try to recruit new employees on social media. Their attempts render recruitment risky for job seekers because not only do workers have incentives to deceive them, but there are also dubious labour agents who claim to recommend them internally but instead will charge a service fee. [92][93][94][95][96]. Dubious labour agents create online accounts that look like official company recruitment channels or information from workers. These agents deceive job seekers by promising exaggeratedly high wages.[97] When workers arrive, they discover that they got lured by an agent. But then they will have spent several hundred RMB on travel costs and accommodation, which makes them desperate.[98] Workers write that the costs for travelling, medical examination, and extended accommodation during the seven-day quarantine period make it difficult not to accept work even if conditions are bad and deviant from what was promised.[99][100]

3.6.2 Labour dispatch contracts

Besides regular employees, many manufacturers in China use labour dispatch services. In the latter case, there is a labour contract between the dispatch agent and the worker, which is subject to Chinese labour contract law. In addition, there is an agreement between the manufacturer and the dispatch agent, which is governed by Chinese contract law. As a result, the brand manufacturer bears no legal responsibility for employment conditions and contract enforcement.

In the new energy sector, dispatch workers are frequently paid by the hour. Contract conditions are worse compared to regular workers because the labour agent will pay a lower hourly rate to the worker than the factory pays to the labour agent.[101] Moreover, take-home wages can vary substantially among dispatch companies because some agents deduct extra fees of RMB 1000 or more from workers while others don't levy any costs on workers.[102] When agents arbitrarily deduct money, the factory takes no responsibility.[103]

Labour dispatch contracts entail additional risks. Manufacturers can use labour dispatch agreements strategically to discourage labour arbitration and reduce compensation payments during layoffs. When a factory deploys an agency registered outside of the province where the production site is located, workers have to submit labour arbitration requests to the agency's place of registration. This arrangement increases the time a worker needs to spend on a dispute and incurs costs for travelling and accommodation. These are strong disincentives for submitting a case.

Companies may also ask workers to switch from dispatch contracts to regular contracts and v.v. Company-specific needs can justify such measures. Yet, switching contracts implies a new employment relationship. In practice, changing between dispatch and regular work contracts reduces compensation payments during layoffs because compensation depends on the length of an employment relationship. Workers at one company realised the consequences of contract swaps when the company fired several hundred employees in 2020 and 2021.[104] A worker writes that the company had asked him to change his dispatch contract with regular employment. When he got laid off, he had worked at one company for ten years. His most recent contract, which constituted the basis for compensation, however, was only three years old.[105] Earlier, in 2017, the company laid-off employees and lured them to sign a resignation form, which deprived them of their right to compensation.[106]

3.6.3 Trend analysis

Recruitment has become an increasingly important issue. Figure 16 depicts workers' mentions of labour agents, internal recommendations, and dispatch contracts. The graph shows a cyclical pattern with peaks during autumn and after the Chinese lunar new year. During the past two years, the mentions share ranged between 15 and 25%.

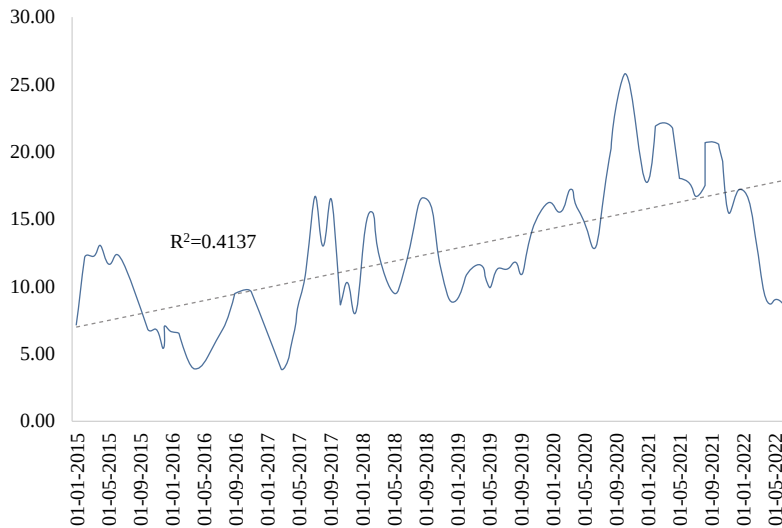


Figure 16: Mentions of labour agents, internal recommendations, and dispatch contracts as a share of all categorised posts by month.

3.7 Occupational safety and health

Risk: Exposure to physical and psychological health risks. Insufficient health protection.	
Salience: Very High	Scale: Very high
	Irremediability: Very high
	Scope: High
Trend: Declining	

Many human and labour rights violations have a documented negative effect on health outcomes. For example, weak legal protection and repression of independent labour unions contribute to exploitative practices such as excessive working hours, verbal abuse and harassment. In addition, low wages are an obstacle to access to health services and increase stress and trauma. Therefore, the causes for health problems are not always discernible through an immediate assessment of the work environment. Nevertheless, information about physical and mental issues is important to evaluate overall negative effects on worker wellbeing.

In the following analysis, we assess workers' posts describing pain and stress against the backdrop of the medical literature on occupational health and safety in the export manufacturing sector. We then provide an account of workers' experiences during the Covid-19 outbreak. Workers' fears and concerns show that management plans for crises and emergencies should undergo a human rights review.

3.7.1 Physical and psychological health issues

“There is no time to go to the toilet or drink water. We have to restrain ourselves every day. After holding out for six hours, we can get out and then we must endure thirst again until we get off. The production belt moves as fast as a plane until the evening. The group leader constantly yells at you. Those who cannot keep pace are immediately under fire shouting at them what the fuck they are doing here, and if they cannot cope, get the hell out. We are not allowed to talk. So, I don’t talk. From morning to night, I say perhaps ten sentences”.[64]

Academic research finds that workers in export manufacturing are often exposed to an unhealthy workplace environment, short breaks, and chemical hazards such as dust, smoke, mist, fumes, dusty raw materials, and toxic materials.³¹ Workers’ health is also jeopardised as a result of psychological factors.³² Psychological risk areas are work stress, work-associated demands (i.e. long working hours, worries about mistakes, time pressure, exposure to abusive language and emotional abuse, and physical demand), and work-related values (i.e. lack of freedom at work, lack of job promotion prospects, part-time work and job insecurity). Practices within these risk areas contribute to poverty and intake of low-nutritional food, factors that are associated with poor health outcomes. Other factors impacting workers health and safety are human rights violations, in particular wage theft and lack of living wages.³³

At the factories we are looking at in this report, workers are exhausted: *“We are all too tired. One day working the night shift, and the next day you have to take the early shift. You get cramps in our legs and feet, and the neck hurts.”*[107] Workers complain about foot pain [108][109][110], painful blisters on the soles of the feet [111][112], and varicose veins [113]. A worker writes: *“Running, running! I am so tired, and my feet ache. I thought I could stand it, but now I feel that my body can’t take it anymore.”*[114] Workers experience waist and hand pain [115], aching arms and shoulders [116] and back pain [117][118]. A worker writes: *“I worked with welding last year. Now my waste aches, and my back hurts. In the mornings, I have a tremor in my hands. Not even a toothbrush I can hold properly then.”*[119] Workers perceive their jobs as dirty, poisonous, and harmful to the body.[120][121] Workers warn about sickness from airborne dust.[122][123]. A worker writes that he has been breathing in airborne dust at the workshop for more than five years. He states that he now suffers from chronic bronchitis and is always short of breath.[124] Another worker describes skin problems due to contact with electrolyte solutions.[123]

Workers write about psychological stress and related symptoms such as insomnia.[125][126] [127] [128][129] There is time pressure. During lunch breaks, workers have to rush to the canteens, which requires walking long distances and queueing for food.[130][131][132][133] A worker writes: *“There are too many people, and time is too tight for those who don’t eat fast enough. I only eat half a bowl of rice every time and have to run back. The rice here is hard, and the food is unpalatable.”*[134] Work pressure is high [135][136], which makes workers feel worn out and broken [137][138][139]. Workers are scolded and humiliated [140][141][142]: *“Our supervisor scolds people for nothing. His language is vulgar, and half of the workshop can hear.”*[143]

3.7.2 Trend analysis

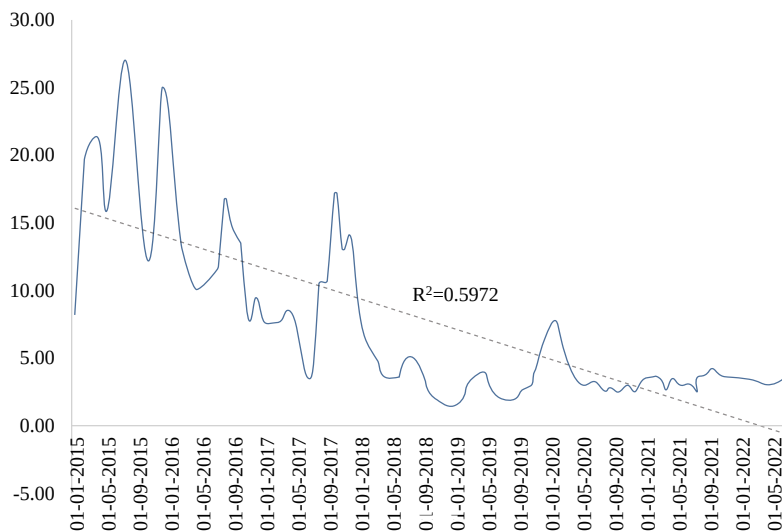


Figure 17: Mentions of health issues as a share of all categorised posts by month

In figure 17, we depict workers' mentions of health issues such as pain, stress, and accidents. There is a long-term declining trend with cyclical peaks suggesting that workers feel more often ill, stressed, or exhausted during intensive production periods. Despite the Covid-19 Outbreak end of 2019 and subsequent lockdowns, there are comparatively little mentions of health issues. Moreover, the cyclical pattern disappeared. Changes in frequency and seasonality of mentions suggest that health issues have become a sensitive topic which is subject to censorship.

3.7.3 Covid-19

Covid-19 restrictions in China shaped the life of workers in many ways. Finding a job and entering the factory had become difficult. When workers came to the factory they could not walk into the wrong area as this would immediately disqualify them and they would be sent back home. Before restrictions were lifted, workers had to live for five days in dedicated quarantine buildings at their own expense. They had to perform three tests during this period. If one of them was positive they were sent back.[144] When restrictions tightened, job seekers got stuck with additional costs and uncertainty if they would be able to enter the factory at all.[145]

Work became even more exhausting because workers had to wear protective gears and masks for 12 hours a day.[146] During temporary lockdowns, workers were not allowed to leave. When restrictions eventually loosened, many workers tried leave but often faced problems to get approval for resignation.[147] Because workers could neither enter nor leave during lockdowns, they were forced to live in factory dorms, which isolated them socially.[148][149][150] Employees were afraid to go to work because they feared to get locked in.[151]

For many companies, the Pandemic brought economic difficulties. Workers were the first who felt the consequences. For example, workers write about layoffs at a company affecting more than 2000 employees in 2020.[152] Workers tried to work as many overtime hours as possible due to the uncertain work situation during Covid restrictions and temporary lockdowns.[153][154]. Yet, efforts to their stabilize income was compromised by company measures that sought to

reduce costs. Workers write that an employer deducted overtime hours when the factory had to close due to Covid restrictions.[155] Managers invented all kinds of measures to reduce costs. For example, the year-end bonus was cancelled for all workers who had not worked at the company for at least one year. To be able to apply for vacation, workers had to be employed for more than one year as well.[156] Workers who resigned after two months did not get any extra pay or subsidies.[157] A worker writes that he produced masks at BYD for six months. After BYD stopped producing masks, workers moved to other factories and then realized that the company had deducted social insurance from their wages but did not register them for social insurance.[158]

3.7.4 Deaths and suicides

High work pressure and inhuman working conditions have been part of public debate in China due to several incidents at BYD and CATL. In January 2022, a worker at CATL died in his dorm due to an intracranial haemorrhage. The deceased had been exhausted as he worked late hours until midnight during many days without rest. The family believes that he died due to overwork, while the company denied that his death was work-related.[159] Two months earlier, in November 2021, a worker at BYD in Xi'an died unexpectedly. In October, the employee worked 280 hours with only two rest days. Before his death, he worked seven nights in a row, of which six lasted more than 12 hours.[160]

Workers have to cope with difficult working and living circumstances. Dramatic incidences bear witness to loneliness and an inadequate environment. In 2019, for example, workers were shocked about a woman who died in bed in her dorm. She had hanged curtains around her bunk bed. It took three days until roommates realised that she had died.[161] In 2018, a child fell out of a window of a dormitory building while the parents were at work.[162]

Some workers cannot cope and try to end their lives. At BYD in Changsha, three workers tried to kill themselves by jumping off dormitory buildings in April 2022 (figure 18). The three suicide attempts happened within one week. One person died. Among the three workers was one woman. All three were young, new employees. The suicides instigated a public debate about the difficult social and economic conditions that workers must tackle.[160] Workers at BYD have committed suicides earlier. Yet, because suicides are a sensitive topic, most information on social media is censored in China. Several workers confirmed in an online forum that a worker jumped from a building at BYD in Shenzhen in October 2021.[163] We also find information about the suicide of a worker jumping from a BYD building in 2012.[164]



Figure 18: Suicides at BYD

3.7.5 Living at the dorm

Living conditions at the dorms are stressful and unhygienic and do not allow workers to get the rest they need. The pictures below show workers' experiences related to living conditions (figure 19).[165][166][167][168][169][170][171]. Dorm standards vary. However, unskilled workers almost always have to lodge in small eight or 12-bed rooms.

- *When I came to the dorm, none of my roommates cared that it was dirty and messy. In particular, the toilet and bathroom made me dizzy.[172]*
- *We are twelve people in this dorm room. We work from 8 in the morning until ten at night. You hear snoring all night, and there is nowhere to wash. Life here is tiring, dirty, and poisoning.[173]*
- *The dorm is like a dog's cave. It is crowded, and drying clothes hang on all the lamp lines. The dorm is dark, as no light comes through.[174]*



Figure 19: Pictures illustrating living conditions - dorm rooms, a cantina, and bed bugs.

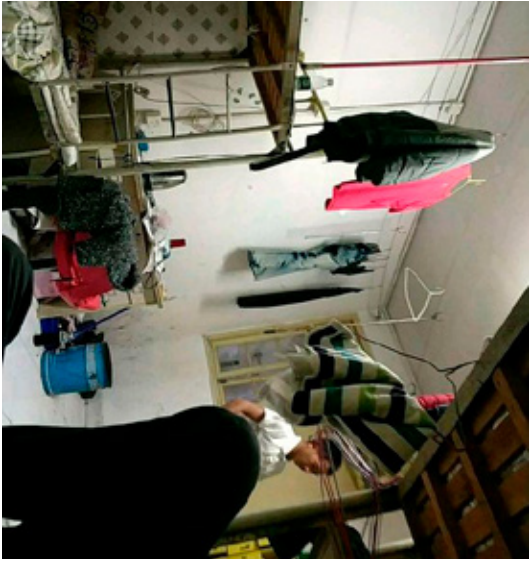


Figure 19: Pictures illustrating living conditions - dorm rooms, a cantina, and bed bugs.

3.8 Working time

Risk: Workers work too many hours and/or do not get overtime premiums.	
Salience: Very High	Scale: Very high
	Irremediability: Moderate
	Scope: Very high
Trend: Stable	

3.8.1 Overtime

Chinese labour regulations stipulate that an employee must not work more than 36 overtime hours per month and no more than three hours per day. Overtime during weekdays shall be paid 1.5 times the regular rate, two times during weekends, and thrice during national holidays. Employees must have one rest day each week.

Since overtime is relatively expensive and, at the same time, an important management tool to adapt to fluctuating orders, managers have strong financial incentives to undermine or circumvent overtime pay. In addition, working long hours is exhausting and makes workers ill. Recent studies show that overtime increases the risk of respiratory diseases.³⁴ And contribute to low-intensity pain, which worsens physical and psychological health in the long run.³⁵ Overtime is also a major contributor to worker dissatisfaction.³⁶



Figure 20: Screenshots of digital wage slips.

Workers in battery and e-vehicle manufacturing work long hours, exceeding national regulations and international labour standards. Their working hours exceeded the legal limit more than three times. Figure 20 shows two digital wage slips.^[175] The receipts indicate that the worker on the left performed 110 overtime hours, and the worker on the right accumulated 136 overtime hours for one month.

Excessive overtime is a systemic issue. Figure 21, for example, shows a post from a Baidu account that a battery manufacturer uses to respond to workers' questions and moderate online discussions.^[176] According to this (semi-official) statement, the company regulates overtime with a maximum of 110 hours. Workers at another brand report a limit of 120 overtime hours.
^{[180][181][182][183][184][185]}

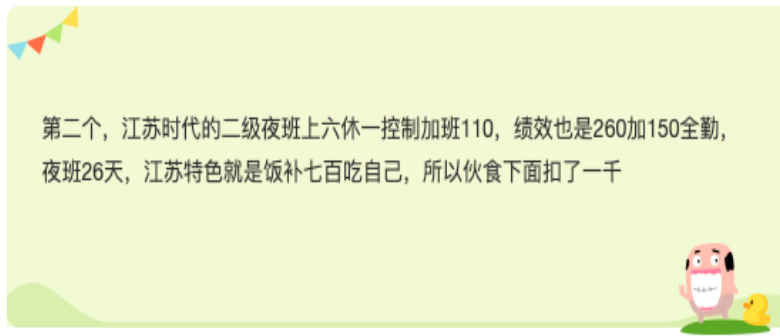


Figure 21: Semi-official company account moderating worker discussions.

Workers' posts confirm that excessive overtime occurs regularly and is not voluntary:

- *I have a base wage of RMB 3050. You cannot work more than 110 overtime hours.[177]*
- *The overtime culture here is very serious. As a technician, you have to work overtime; otherwise, the money is not enough. You need 110 overtime hours or more.[178]*
- *If you are level 7 or above in the ME department, you have to work 110 hours of overtime every month [...]. You can only get off earlier if you have completed 110 overtime hours.[179]*

At two companies, workers report only 30 to 35 overtime hours.[186][187] Yet, on top of regular overtime, workers are forced to work mandatory overtime [188], which is not counted as overtime and is unpaid: “Overtime from Monday to Friday is mandatory. You have to apply for overtime hours with overtime pay, and you need permission from your superior to apply. Due to cost cuts, nobody is called in for work on weekends. As a result, everything you didn’t finish on Friday will become mandatory overtime on Monday.”[189] Another worker writes: “Overtime depends on whether you managed to fulfil your production target. If you haven’t finished, you can work until dawn without getting paid a penny.”[190] At another brand, a worker complains: “When there is a lot to do, and you cannot finish in time, you are forced to volunteer for overtime.”[191] Workers complain about excessive mandatory overtime.[192] They have to work until 10.00 pm, which implies a 14-hour workday (incl. 2 hours rest).[193] During busy periods workers may not get off until 11.00 pm.[194]

Mandatory overtime is a blunt and aggressive approach to reducing labour costs. But there are also subtle bureaucratic practices that seek to circumvent national legislation. For example, one of the brand manufacturers ties entry levels to distinct forms of overtime accounting. Workers at levels seven to ten are not paid an overtime rate but an overtime allowance, which is a lump sum for a predetermined number of hours. A worker writes that current intervals (2022) are 40 or 90 hours.[195] Another worker confirms that he does not get an overtime rate but an overtime allowance. On Sundays, he explains, the hourly wage rate is RMB 20. A worker completing 90 overtime hours during weekdays would receive an extra payment of RMB 400.[196] If these payments were compliant with national overtime regulations, the Sunday wage rate would correspond to a base wage of RMB 1740 and the workday rate to a base wage of RMB 1546. Both base wages would be below the legal minimum. Moreover, this practice forces workers into excessive overtime arrangements.

This specific approach to overtime accounting is currently not applied to workers at lower entry ranks. For example, the highest rank for a technician is level six, an intern from a technical college is at level 3, and after graduation, at level 4.[197] Thus, overtime allowances are a means to curb labour costs for worker groups with comparatively high base wages.

In addition to complicated overtime calculations, some brands undermine transparency. In the case we document below (figure 22), pay slips do not show the number of hours on workdays, weekends, and national holidays. Moreover, digital pay slips further compromise transparency as overtime pay is lumped together with other extra payments such as internal recommendation bonuses (see section III.6.1.1).[198][199] The pay slips in figure 22 illustrates this problem. The worker on the left-hand side has a base wage of RMB 2130 and gets overtime and other extra pay of RMB 1940. The amount corresponds to about 105 weekday overtime hours. The worker on the right-hand side would have to work 329 overtime hours on weekdays or 246 hours during weekends to earn this amount. Consequently, workers have difficulties understanding how their wages are calculated: “Ordinary people do not understand BYD’s wages. When there is money missing, you don’t know why. When they deduct something from your wage, you don’t understand why. It is impossible to understand the wage slip. I get dizzy when I try to figure out the wage slip, so I want to run away.”[64]



Figure 22: Digital wage slips posted by workers.

3.8.2 Trend analysis

Overtime has become an increasingly important issue for workers, with mentions between 15 and 30% in recent years. Figure 23 depicts mentions of overtime as a share of all categorised posts by month. The seasonal pattern indicates that overtime is relatively more discussed during autumn after the summer break and in spring after the lunar new year.

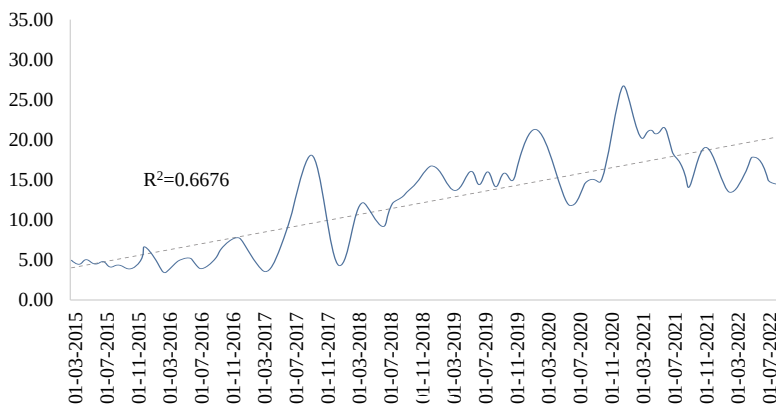


Figure 23: Mentions of overtime as a share of all categorised posts by month.

4. Conclusions

Workers at the four corporations share many grievances. Table 3 depicts the relative weight of six major labour issues discussed on the forums that we analysed in this report. BYD and CATL have the same top-3 issues. Samsung and Yutong have two out of the top-3 issues.³⁷

Category	Risk focus	Total	BYD	CATL	Samsung	Yutong
GCAT5	Wage	22.8	36.6	24.5	15.3	6.4
GCAT8	Overtime	13.1	15.6	20.2	4.9	7.0
GCAT6	Recruitment	11.1	17.8	9.7	22.2	2.8
GCAT7	Safety and health	8.7	2.9	3.4	3.7	18.7
GCAT3	Resignation	7.3	12.0	6.8	5.0	2.3
GCAT1	Internships	3.4	2.5	1.7	5.8	5.0

Table 3: Relative importance of topics (measured as % of all categorised posts). Note that GCAT 2 and 4 are not covered by social media posts data.

Table 4 depicts the priority ranking based on salience.³⁸ When we compare this list with the relative importance that workers' issues receive in social media, specific risk areas come to the fore:

- At BYD and CATL, overtime is among the top-3 issues with a very high salience.
- At Yutong, overtime as well as safety and health are among the top-3 issues with a very high salience.
- At Samsung, none of the top-3 issues has a very high salience. Workers discuss recruitment issues most. The latter has a high salience.

Category	Topic	Salience	Scale	Irremediability	Scope	Trend
GCAT 4	Freedom of ass.	Very high	Very high	Very high	Very high	Rising
GCAT 7	Safety and health	Very high	Very high	Very high	High	Declining
GCAT 1	Student labour	Very high	Very high	Very high	Medium	Declining
GCAT 8	Working time	Very high	Very high	Moderate	Very high	Static
GCAT 6	Contracts and HR	High	High	Medium	Medium	Rising
GCAT 5	Compensation	High	Medium	Medium	Very High	Static
GCAT 3	Forced labour	High	Medium	Moderate	Moderate	Static
GCAT 2	Discrimination	Undetermined				

Table 4: Salience, sub-grades, and trends for identified labour issues.

The rankings above point towards issues that require particular attention, but priorities vary between manufacturers. To develop a common agenda for action we propose to consider shared risk mitigation strategies that are based on qualitative insights from this study.

The first risk mitigation strategy derived from our salience ranking is to support freedom of association and collective bargaining. Workers' voices have the best chance not only to be heard but also to make an impact when they can organize their interests independently and receive the institutional support to negotiate with employers. At the same time, this is the least feasible approach in the context of China. As repression of fundamental human rights has increased during the past decade, it is imperative that responsible exit strategies are considered.

A second risk mitigation strategy touches upon wage regimes and the importance workers attach to this issue (rank 1-3 among all manufacturers). Academic research shows that wages reach into various fields. For instance, the literature on occupational health finds that low wages are associated with health hazards. Several mechanisms may explain this association including poor diet and housing, increased stress and violence, limited time for leisure and exercise, unaffordability of health insurance, and limited access to health care.³⁹ Insights from our study indicate that the same factors extend to rules governing bonuses and allowances, recommendation awards and overtime. Table 5 depicts the relative importance of these wage components in relation to the base wage for a regular, frontline worker. The numbers suggest that overtime, bonuses and allowances, and recommendation awards represent 180-350% of a base wage.

	RMB	% of base wage	% of total
Base wage	2000	100	23 - 35
Overtime	600-3375	30-170	10 - 40
Bonus & allowance	2000	100	23 - 35
Recommendation	1000	50	12 - 18
Total	5600-8375		

Table 5: Base wage and extra pay components.

Each of the components is tied to a distinct set of rules that deprive workers of their legal rights or increase vulnerability for exploitative practices:

BONUSES AND ALLOWANCES are at the discretionary power of managers and, by extension, increase the risk for abusive practices. Workers state that performance bonuses are cancelled if they do not agree to work overtime, and full attendance bonuses are dependent on the waiver of legally mandatory rest days. Non-statutory payments are also subject to deductions or penalties for claiming the right to resign.

RECOMMENDATION AWARDS create financial incentives for workers and dubious labour agents to deceive job applicants. Recruitment incurs costs for new workers, making it harder for them to decline job offers when conditions are worse than expected. In addition, recommendation awards are paid over a six-month period. Therefore, recommending workers monitor and pressure new hires to stay, resulting in bullying and stressful work environments.

OVERTIME PAYMENTS are regulated by law. Still, corporations apply internal, illegal rules. We identified two different approaches. Two manufacturers set no or excessive overtime limits (120 – 180 hours as opposed to legally regulated 36 hours). Instead of mandatory overtime rates (1.5 – 3.0 x hourly base wage), workers receive lumpsum payments when they reach thresholds of 40 and 90 hours. Other manufacturers in our study formally comply with a maximum of 36 overtime hours. However, when workers do not complete pre-defined quotas during regular hours, they must perform unpaid and mandatory extra work. Irrespective the management approach, internal rules force workers to perform excessive hours with potential negative impact on mental and physical well-being and an increasing risk of accidents.

From the above information, we identify a second risk mitigation strategy, which is to replace various wage components with a single base salary. The latter must be commensurate with a living wage, based on a fixed number of working hours, and increase with the general wage growth in China. Stipulating a higher base wage in the labour contract decreases workers' vulnerability and strengthens legal options for enforcement. It is also a measure that can be easily monitored.

The above-mentioned risk mitigation strategies are examples and by no means exhaustive. Yet, most effective risk mitigation strategies will increase costs and, in a competitive market, will reduce profits. Thus, there are strong financial incentives throughout the entire supply chain to search for the least costly options. In this context, insights from this study can help to identify measures that may be less expensive but are inadequate to address human and labour rights violations. For example, repressive labour governance and workers' vulnerable position renders trainings on labour rights ineffective because the bottleneck are credible means to enforce rights rather than a lack of rights awareness. Also, corrective action plans that target symptoms such as excessive overtime hours or lack of mandatory rest days without addressing the root cause of abusive wage regimes will render workers' income situation unsustainable. It is then only a matter of time until illegal or unfair practices are restored.

Insights provided in this report can be useful to inform risk mitigation strategies as well as to evaluate their credibility and effectiveness. As outlined in section II, the applied method has merits and limitations. Thus, data from this report should be triangulated and complemented with additional sources. Important in this context is to rely on data collection approaches that are critical, independent, and ensure the safety of informants and investigators. Research and the design of risk mitigation strategies, therefore, can only be accomplished when stakeholders collaborate openly and transparently.

FORCED LABOUR AT BATTERY AND ELECTRIC BUS MANUFACTURERS IN CHINA

AUTHORS

Stefan Brehm and Helena Magnusson,
Globalworks Lund AB

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1. Forced labour risks in China

President Xi Jinping announced in 2015 that absolute poverty would be gone by the end of 2020.¹ He made this goal one of his signature policies requiring particular attention throughout Party and Government Organisations. Xi's poverty alleviation program officially aims at eradicating absolute poverty in ethnic minority areas through vocational training and promoting employment of surplus labour.

While getting rid of poverty through higher income work is a commendable objective, implementation and real outcomes of poverty alleviation programs in China frequently violate basic human rights of targeted citizens. Coercive recruitment into wage labour, forced transfers to factories, abuse of vulnerability, and horrible working conditions have emerged as a major issue for labour intensive inputs in China's supply chains. Chinese corporations' benefit from poverty alleviation because related programs supply workers and financial support in sectors plagued by labour shortage and rising wages. As a result, programs cannot be negotiated or moderated when targeted citizens do not wish to be included or when brands do not want to be associated with state-imposed labour transfers.

Various reports, newspaper articles, and scholarly publications have documented how poverty alleviation programs in China facilitate forced labour of Uyghurs and other Turkic ethnic groups in Xinjiang Uyghur Autonomous Region (XUAR). Farmers and herdsmen are not only pushed into wage labour but are also part of a comprehensive policy framework for achieving "ethnic unity". They are subjected to vocational training, which consists of "military drill, Chinese language education, ethnic unity instructions, and patriotic education."² Individuals 'graduating' from re-education centres are further transferred to factories. In June 2022, the New York Times published an investigative article which showed that XUAR is a high-risk region for the battery supply chain. The article mentions Xinjiang Nonferrous and its subsidiaries who have partnered with the Chinese authorities to take in hundreds of Uyghur workers in recent years. Forced labour, the article suggests, may be so widespread that "global battery industry could face its own disruptions given Xinjiang's deep ties to the raw materials needed for next-generation technology."³

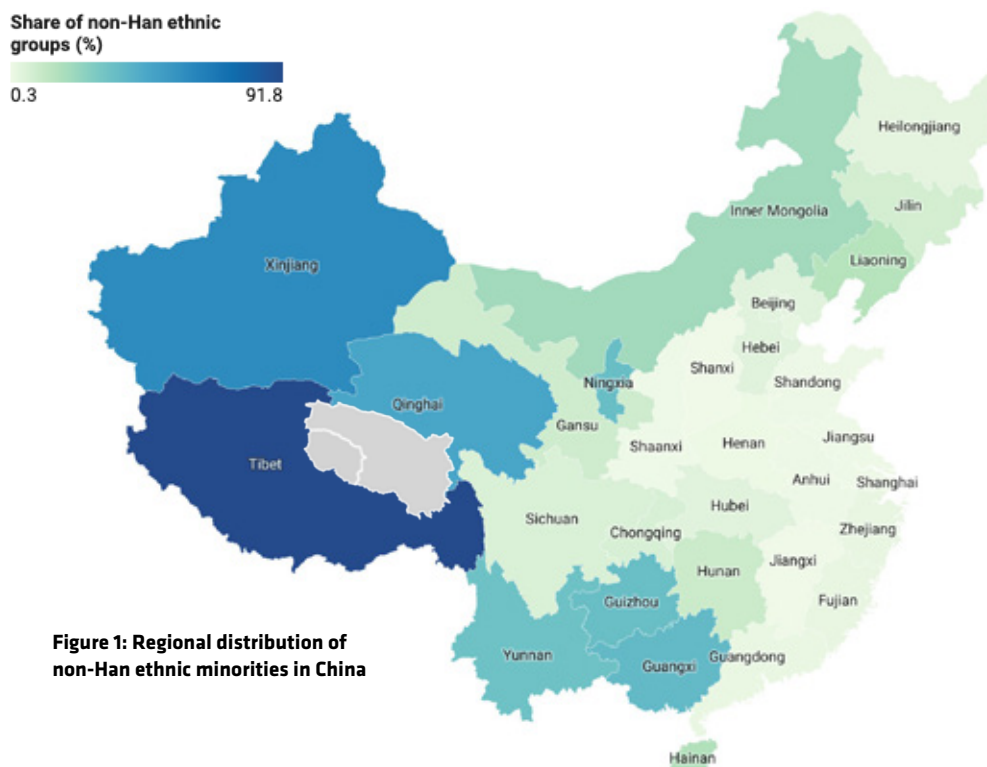
The US Department of Homeland Security publishes a list of entities whose products and services are banned from US markets. Among the organisations mentioned is the Xinjiang Production and Construction Corps (XPCC), a state-run, paramilitary corporate conglomerate, which is a.o. involved in business activities connected to battery production. The XPCC functions as a regional government, a paramilitary organization, and as a large-scale corporate enterprise. It runs prisons, media outlets, schools in Xinjiang. A recent report from Sheffield Hallam University investigates the role of the XPCC and concludes that "the XPCC is involved in a pervasive program of egregious rights violations that affect the most marginalized people in the Uyghur Region. The region, its people, and their identities are seen as critical security threats to China's cultural integrity, the stability of the state's borders, and the absolute authority of the CCP. In the last five years in particular, the XPCC has played a critical role in suppressing Uyghur life, culture, and identity through the following means: extrajudicial internment and imprisonment, land expropriation, forcible migration of people, repressive, pre-emptive policing, social engineering, religious persecution, forced labor."⁴

The risk area related to battery production in China stretches beyond Xinjiang's borders. Recent reports suggest that the Chinese Government is extending its militarized forced labour regime into Tibet Autonomous Region.⁵ In early 2022, China's leaders gathered in Beijing for a conference on "pairing-up support for the Tibet Autonomous Region."⁶ The resulting pairing programs will facilitate the transfer of farmers and herdsmen to factories within the Autonomous Region or to other Provinces. Tibet Autonomous Region and bordering Tibetan Autonomous Prefectures in Qinghai have become core sourcing areas for critical raw material such as Lithium.⁷ Local governments have accelerated the pace of seizing land for mining and raw material processing. As a result, more and more farmers and herdsmen face land evictions and become 'surplus labour', which turns them into targets for labour transfers.

Adrian Zenz, a leading scholar in this field of forced labour in Xinjiang and Tibet, cites official Chinese Government documents stating that the aim to eradicate poverty is commensurate with "military command" and requires that every administrative level imposes pressure on each successive lower level in order to "consolidate poverty alleviation responsibilities and increase the effectiveness of accountability."⁸ The same system of delegated responsibilities is applied in other ethnic autonomous regions, prefectures, and counties. Local cadres working in jurisdictions that are included in the "battle against poverty" face high pressure to fulfil quotas that determine the number of farmers to be transferred into wage labour each year. Academic articles indicate that cadres' have strong incentives for using extreme means.⁹ For example, a case study from a village in Shanxi Province illustrates how local government officials sold agricultural land that impoverished farmers cultivated so that they would be forced to accept resettlement and work in a factory.¹⁰ Another study showed how villagers in Gansu Province were coerced into resettlement and wage labour when the local government threatened to cut them off from basic state support. To ensure that the resettled farmers would not return, the local government revoked their local household registration and sold their land.¹¹

On a general note, resettlement with the aim to assume work in a dedicated factory is not voluntary for registered poor. A Government report from a county in Henan Province exemplifies how forced labour comes about. The document stipulates that "from the perspective of concrete practice, it is difficult for some poor people to eliminate their lazy habits. As a result, the government must rely on ideological education to encourage poor households to work in poverty alleviation workshops and increase their income."¹² Thus, while Uyghurs and Tibetans face the highest level of political repression other non-Han ethnic groups still may be forced into vocational training and labour transfer programs that are based on abuse of vulnerability, military drill, and ideological schooling.

Figure 1 depicts the area where political repression is highest and surveillance excessive. It consists of Xinjiang Uyghur Autonomous Region, Tibet Autonomous Region, and Tibetan and Mongol Autonomous Prefectures in southwest Qinghai that are rich of Lithium. Forced labour through poverty alleviation programs target autonomous regions, prefectures, and counties throughout China. These areas are marked with dark colours in figure 1. The largest suppliers of registered poor for labour transfers are Yunnan, Guizhou, Guangxi, Ningxia, Inner Mongolia, Liaoning, and Hainan.



2. ILO Forced Labour Indicators in the case of CHINA

ILO Convention No. 29 defines forced labour as “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.” In order to provide guidance on identifying forced labour situations, the ILO lists eleven indicators:¹³

- 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
- Excessive overtime

Sometimes the presence of one indicator is sufficient to conclude that a labour relationship is not voluntary while in other cases several indicators in combination are necessary. The ILO provides an e-learning tool¹⁴ and a handbook¹⁵ to support the identification of forced labour and promote appropriate action.

Forced labour risks in China are diverse. We, therefore, systematised forms of forced labour (Figure 2). In the context of export manufacturing in China, the menace of penalty can be divided into state-tolerated and state-sanctioned forms. State-tolerated forms refer to corporate management practices that abuse power asymmetries between employers and workers, such as wage deductions or wage arrears as a punishment for not committing to overtime or unpaid extra working hours. Another common instance of state-tolerated forced labour are administrative barriers and financial penalties for workers who want to resign. We refer to these practices as state-tolerated forced labour because it is the private sector who initiates and implements them while state authorities support business interests with regulatory leeway and /or weak law enforcement. State-tolerated forced labour applies mainly to migrant workers and vocational school students. Since this form of forced labour is widespread and often formalised in enterprise regulations, victims are often not aware of that they have been subjected to forced labour.

State-Sanctioned Forced Labour		State-Tolerated Forced Labour
Origin: State Actors		Origin: Private Sector
Targets: Registered Poor, Non-Han Ethnic Groups		Targets: Migrant Workers, Vocational School Students
Economic Coercion	Existential Threats	Management Penalties (Wage Deduction, Wage Arrears, Black Listing)

Figure 2: Systematisation of the Chinese Forced Labour Regime

State-sanctioned forms of forced labour relate to practices that are state-organised or state-endorsed. The two most common forms under this category are industrial poverty alleviation programs, and vocational training agreements between schools and the private sector. State-sanctioned forced labour targets specific groups, in particular registered poor households, and non-Han ethnic groups. These categories can overlap with groups subjected to state-tolerated forced labour. State-sanctioned forms can be further sub-divided into two modes of enforcement: economic coercion and existential threats. Economic coercion is used to leave targeted individuals with little choice but to accept state-sanctioned employment or vocational training. The menace of penalty in this context refers to measures such as cutting off poor farmers from social guarantees or withdrawing land use rights if they are unwilling to accept state-sanctioned wage labour. Existential threats refer to the deployment of detention, imprisonment, torture, or other forms of physical and psychological violence.

In this report we look at state-sanctioned forms of forced labour. The remainder of this chapter outlines the two main frameworks for economic coercion: poverty alleviation and vocational education. In section “1.3 fight against terrorism and extremism” we explain how these frameworks are embedded into existential threats in the context of politically repressed ethnic groups in particular Turkic and Tibetan ethnicities.

3. Forced labour due diligence

We systematise the scale and severity related to the menace of penalty in a four-grade risk classification:

- **Moderately high risk:** All Chinese citizens registered as poor and all vocational school students participating in mandatory internships face a risk of being assigned to jobs against their will or being prevented from resigning in accordance with labor legislation.
- **Medium high risk:** The risk of abusing vulnerability of economically marginalised citizens and students increases when they belong to ethnic minorities due social stigmatisation and prejudices.
- **High risk:** Politically repressed minorities are frequently the target of poverty alleviation programs and vocational training because these measures are considered essential for implementing political control and re-education. The combination of economic marginalization, social stigmatisation and deprivation of political rights results in a high risk of forced labour.
- **Very high risk:** Uyghurs and other Turkic minorities in Xinjiang as well as Tibetans are subject to systematic political repression and coercive means. Indicators of vulnerability are the same as those under “high risk”. Due to the scale and scope of coercive poverty alleviation measures and vocational training, the risk of becoming victim to forced labour practices increases to “very high”.

The responsibility to prevent and end forced labour involves not only Government authorities and legislative bodies, but also multinational enterprises and other firms sourcing from countries where regulations to protect workers from forced labour are lacking or are not enforced. In this context, the UN Guiding Principles (UNGPs) on Business and Human Rights require from enterprises to conduct regular Human Rights Due Diligence (HRDD), which refers to the process through which businesses can identify, prevent, mitigate and account for how they address their actual and potential adverse human rights impacts. This general framework is supplemented with specific documents such as the ILO’s 2014 Protocol to the Forced Labour Convention calling on Member States to ‘develop a national policy and plan of action for the effective and sustained suppression of forced or compulsory labour in consultation with employers’ and workers’ organizations. The UN 2030 Agenda for Sustainable Development leveraged this call in 2015 as it demands under target 8.7 ‘accelerated action to eradicate forced labour, modern slavery, human trafficking and child labour’.

Section 13 of the United Nations Guiding Principles on Business and Human Rights stipulates that business enterprises shall:

- Avoid causing or contributing to adverse human rights impacts through their own activities and address such impacts when they occur.
- Seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products, or services by their business relationships, even if they have not contributed to those impacts.

Enterprises causing or contributing to forced labour can face legal charges, while being linked to forced labour through a business relationship, currently, has no legal implications. However, failure to identify forced labour risks can lead to sanctions.¹⁶ As intended and progressively so, states are putting legislation in place to implement the UNGPs national level system of justice. In France, for example, large corporations can be held legally accountable according to the 2017 Corporate Duty of Vigilance Law.¹⁷ In the UK, corporations have hitherto only risked reputational damage as the Home Office is prepared to name and shame businesses that are not compliant with the 2015 UK Modern Slavery Act (MSA).¹⁸ However, with the upcoming overhaul of the MSA with the Modern Slavery Bill the legislation is turning far stricter, and transgression of the regulations will lead to sanctions.

The distinction between causing or contributing on the one hand and being linked to adverse human rights impacts on the other is relevant for public buying decisions given that the former constitute a criminal offense while the latter is a breach of contract. Art. 57 (4a) in combination with Art. 18(2) and Annex X of the Directive 2014/24/EU of the European Parliament and the Council on Public Procurement requires that public buyers exclude tenders from enterprises that are causing or contributing to forced labour.¹⁹

When corporations cause/contribute to forced labour, public buyers need to assess whether the brand manufacturer can be excluded from the tendering process. If a brand manufacturer is found to be linked to forced labour, commentaries to the UN Guiding Principles and the OECD Guidelines for Multinational Enterprises specify that appropriate action will depend on the degree of leverage that the company has over its business relationship:²⁰

- If the company has leverage to mitigate the adverse impact, it should exercise it, as would be required in the event that the company had contributed to the impact
- If the company lacks leverage, it should try to increase it
- If the company finds increasing its leverage impossible, it should consider terminating the relationship

In this report, we divide corporations that cause/contribute through their own actions and those that are linked through business relationships along the lines of ownership:

- When corporations wholly or partly own the factories or production sites where we find forced labour, the corporations actively cause/contribute to the presence and occurrence of forced labour. Furthermore, corporations cause/contribute to forced labour when they collaborate with equity or joint-venture partners that are involved in the Chinese state-sanctioned forced labour regime.
- When corporations buy products and services or otherwise link their operations to factories or production sites where we find forced labour, the corporations are linked to forced labour through their business relationships.

4. Research Design

4.1 Scope of this research

This report explores forced labour risks at seven battery manufacturing companies; BYD, CATL, Durapower, LG Chem, Panasonic, Samsung, and SK Innovation. Besides battery production we explored upstream links to raw material sources and processing as well as downstream links to electric bus production sites. In this context we included even Yutong, which is a major Chinese electric bus manufacturer yet without an integrated battery production. The purpose of this investigation is to identify and compare forced labour risks associated with the above-named manufacturers.

4.2 Data

Insights for the analysis in this section come exclusively from publicly available online sources. No information was retrieved through onsite visits, interviews, or soliciting individuals or organisations.

We collected documents from WeChat, and conducted a general search through China's largest search engine Baidu. For each query, we went through the 100 most relevant hits, i.e., pages 1 – 10 in search results. We used company names in combination with functional keywords such as “transfer” or “poverty alleviation” as well as in combination with regional keywords such as “Xinjiang” or specific jurisdictions that are known for participating in labour transfers. We limited our search to hits after 2015, i.e. the time after President Xi Jinping began to deploy labour transfers as a means for poverty alleviation and political control.

Besides Chinese language sources we refer to legal documents, academic articles, CSO reports, and English language newspaper articles in order to provide context, assess implication, and broaden the research field on human rights violations in the Democratic Republic of Congo.

4.3 Method

In a first step, we searched for companies registered in China and that are wholly or partially owned by BYD, CATL, Durapower, LG Chemical, Samsung, Panasonic, SK Innovation or Yutong. For the analysis we selected all companies that were related to battery production and followed up on joint-venture partners or shareholders. When there were no relevant joint-venture partners or shareholders, we traced supplier relationships instead. In these cases, we searched for publicly available supplier lists or press releases that would inform about relevant suppliers downstream and upstream.

After identifying relevant sites to investigate, we searched for (Chinese language) government documents, reports, and news articles online. WeChat (a major social media platform in China), government websites, and online news outlets are the main platforms for publicly communicating information on poverty alleviation and labour transfer schemes as well as national unity policies (which are often cited as the main framework for justifying political repression of targeted ethnic groups).

The analysis for this report was not automated, i.e., we read all information, and decided on its relevance based on our subject matter expertise and additional context research. We evaluated government documents, articles, and reports connecting suppliers with labour transfers, worker mobilisation through poverty alleviation programs or vocational training.

5. Findings

5.1 Overview

The documents presented in this section shine light on the circumstances and conditions surrounding state-imposed forced labour in China within the context of the investigated seven battery brand manufacturers and in addition one major electric bus manufacturer without integrated battery production. We find that:

- BYD performs own business operations in Tibet and in a Tibetan Autonomous Prefecture, where the risk of political repression and state-imposed forced labour is very high.
- BYD, CATL, and Durapower may be linked to state-imposed forced labour in Xinjiang via their joint-venture partners or shareholders, which perform own business activities in cooperation with Xinjiang-based mining and processing enterprises.
- Samsung, LG Chem, and Panasonic may be linked to state-imposed forced labour in Xinjiang through products, operations or services from suppliers.
- BYD, LG Chem, and Panasonic may be contributing to state-imposed forced labour as they participated in labour transfer programs in Western and Central China.
- At Yutong, forced labour risks are mainly linked to a supplier contract with CATL providing batteries for all of the companies electric buses at least until 2032.

We identified a total of 28 labour transfers involving three of the investigated manufacturers. Note these manufacturers have various products and production lines that are not related to battery or e buses. There is not enough information to determine where workers are employed. Information about labour transfers, therefore, represent risk indicators for forced labour at these manufacturers in general but not for battery or e bus production specifically.

BYD

- Feb 2020: Poor/ethnic from Shaanxi (Xingping) to Xi'an
- March 2020: Poor/ethnic from Gansu (Qingning) to Xi'an
- March 2020: Poor from Hunan (Shaoyang) to Changsha
- March 2020: Hui from Yunnan (Taoyuan) to Shenzhen
- March 2020: Mongols from Duerbert Mongol Auto./Heilongjiang to Shenzhen
- May 2020: Li-people from Hainan (Ledong Li Auto.) to Shenzhen
- May 2020: Li-people from Hainan (Baoting Li Auto.) to Shenzhen
- May 2020: Li-people from Hainan (Baisha Li Auto.) to Shenzhen
- May 2020: Miao from Hainan (Miao Auto.) to Shenzhen
- May 2020: Poor from Hainan (Dongfang) to Shenzhen
- May 2020: Poor from Hainan (Qionghai City) to Shenzhen
- June 2020: Utsuls from Hainan (Sanya) to Shenzhen and/or Shanghai

- June 2020: Poor from Hainan (Lingao) to Shenzhen
- June 2020: Poor from Hainan (Wenchang City) to Shenzhen
- Feb 2021: Hui from Yunnan (Ludian) to Shenzhen
- Feb 2022: Hui from Yunnan (Zhaotong) to Shanghai

Panasonic

- 2018: Poor from Yunnan (Dalian) to Pudong, Shanghai
- 2019: Poor from Yunnan (Dalian) to Pudong, Shanghai
- 2020: Poor from Yunnan (Dalian) to Pudong, Shanghai
- 2017: Poor/ethnic from Guizhou (Meitan County, Yanhe County) to Panasonic (no information about destination)
- 2018: Poor/ethnic from Guizhou (Meitan County, Yanhe County) to Panasonic (no information about destination)
- 2019: Poor/ethnic from Guizhou (Meitan County, Yanhe County) to Panasonic (no information about destination)
- 2020: Poor/ethnic from Guizhou (Meitan County, Yanhe County) to Panasonic (no information about destination)
- 2017: Vocational students from Yunnan (Sinan county, Yingnan county) to Panasonic (no information about destination)
- 2018: Vocational students from Yunnan (Sinan county, Yingnan county) to Panasonic (no information about destination)
- 2019: Vocational students from Yunnan (Sinan county, Yingnan county) to Panasonic (no information about destination)
- 2020: Vocational students from Yunnan (Sinan county, Yingnan county) to Panasonic (no information about destination)

LG New Energy

- Jan 2022: Poor/ethnic from Guizhou (Qianxinan Buyei and Miao Autonomous Prefecture) to LG New Energy in Nanjing

5.2 BYD

5.2.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

In 2016, BYD's joint venture partner Qinghai Salt Lake Industry signed a strategic collaboration framework with Xinjiang Investment Development Co. Ltd. (Xintou). Xintou owns the exploitation rights for 11 mines in Hami, Xinjiang. Xintou supplies coal to Salte Lake Industry and collaborates on battery related products such as salt chemicals and magnesium metal.²¹ Given that energy is a crucial component for both Lithium mining and processing, coal mines represent an important supply chain link for battery production.²² According to the US State Department's Xinjiang Supply Chain Business Advisory there is evidence of forced prison labour in the mining of coal, uranium, and asbestos. Prisoners are forced to work under threat of penalties, such as solitary confinement. Working conditions are harsh with long hours, poor food quality, and little to no pay.²³

The risk of forced prison labour is strongly reflected in a document on Hebi Energy, another Xinjiang-based strategic collaboration partner of Salt Lake Industry since 2019.²⁴ Hebi Energy runs a large-scale coal mine in the Gobi Dessert. An online article mentions regular ideological education to “detect religious extremist activity and promote national unity”. The document further states “employees who are emotionally unstable have regular “heart-to-heart” talks. A total of 17 people had “personal talks to eliminate unstable factors.” According to the document, the coal mine receives armed assistance from the Local Government, “everywhere there are cameras, shields, hooks, and guns as well as other anti-riot weapons in important places.” The coal mine has invested more than RMB 1 million in “anti-riot” equipment and was awarded the titles “Advanced Unit for Stability Maintenance and Comprehensive Management” in Aksu Region, as well as “Advanced Collective” and “Friendly Cooperation Unit” in Baicheng County.²⁵ Hebi Energy is also linked to Durapower (see section V.4.1).

5.2.2 Poverty alleviation

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

BYD owns 49 % of Qinghai Salt Lake BYD Resource Development Co. Ltd. while 49.5% are held by state-owned Qinghai Salt Lake Industry Co Ltd. The risk of forced labour at this joint-venture is very high, not only because the company operates in a high-risk region but also because of the joint-venture partner’s political role and function. Qinghai Salt Lake Industry Co Ltd.’s mines and trades Lithium. It is located in Golmud City, Haixi Mongol and Tibetan Autonomous Prefecture, Qinghai Province.²⁶ As a state-owned company Salte Lake Industry collaborates closely with local CCP organizations. For example, the company sends staff to impoverished Tibetan autonomous villages to implement poverty alleviation tasks.²⁷ As a key enterprise in Salt Lake District, the company is involved in industrial poverty alleviation measures and shares responsibilities with party organisations to meet poverty alleviation quotas.²⁸

BYD holds an 18%-share of Tibet Shigatse Zabuye Lithium High-Tech Co. Ltd., which is involved in mining and sales of lithium ore, boron ore, sodium chloride and potassium chloride. Brine harvesting of Lithium from lakes and hard rock mining, both carry environmental and social risks as toxic substances have contaminated air, soil, and water of Tibetan communities.²⁹

5.2.3 Labour transfers (to Shanghai and Shenzhen)

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

We found information on labour transfers to two locations where BYD runs battery manufacturing plants – Shenzhen and Shanghai. However, BYD operates a broad range of business operations from surgical masks to car manufacturing at these locations. Hence the forced labour risks we identified are location rather than product specific.

BYD receives workers from various districts in Sanya (Hainan).³⁰ Documents use a terminology such as ‘point-to-point transfers’ and ‘nanny-style services’ that have been used euphemistically to describe isolated, forced transfers of Uyghur farmers and herdsmen to various destinations in China.³¹ Sanya is home to the Utsuls, a Muslim minority which faces increased political repression.^{32 33}

A report states that poor workers from Ledong Li Autonomous County in Hainan undergo ideological training (conducted by CCP cadres) “to change their mindset” as well as military training (conducted by Chinese army instructors) before they are transported “point-to-point” to BYD in Shenzhen.³⁴

Labour transfers from Baoting Li and Miao Autonomous County in Hainan indicate that local authorities mobilise poor workers after requests from BYD for workers. The terminology such as “point-to-point fashion”, and “one-stop services” are indicative for forced labour. A worker expresses his gratitude in a statement that seem not to be his own words “The County gave us this job and even provides free transportation to Shenzhen – Thank you CCP! I’ll go there to work hard, honour my family, and increase our income.”³⁵



Figure 4: Labour transfer of Li-people from Hainan Ledong in Hainan to Shenzhen.

Dongfang in Hainan sends workers to BYD in Shenzhen after the company had screened the City Government’s offer and selected suitable candidates. Poor workers were transported in buses and each group was accompanied by two staff. Also here mobilization, degree of organization, and terminology used indicate risks of forced labour.³⁶



Figure 5: Labour transfer of registered poor from Qionghai City in Hainan to Shenzhen.



Figure 6: Labour transfer of Li-people from Baoting in Hainan to Shenzhen



Figure 7: Labour transfer of registered poor from Dongfang in Hainan to Shenzhen

BYD in Shenzhen received a large number of Hui minority workers through labour transfers from Taoyuan Hui Ethnic Town, Ludian County, Yunnan Province.^{37 38} Another batch of Hui “surplus labour” from Zhaotong City, Yunnan province was sent to BYD in Shanghai.³⁹ Hui people are the second Muslim ethnic minority after the Uyghurs that faced repression and internment.

Labour transfers to BYD are comprehensive. Besides the above mentioned locations we found information on labour transfers from Qionghai City in Hainan to BYD in Shenzhen⁴⁰, Lingao County, Hainan Province⁴¹, Wenchang City, Hainan Province⁴², Baisha Li Autonomous County, Hainan Province⁴³. Moreover, workers were transported “point-to-point” from Duerbert Mongol Autonomous County, Heilongjiang Province to BYD in Shenzhen.⁴⁴



Figure 8: Labour transfer of ethnic Hui from Ludian county in Yunan to Shenzhen



Figure 9: Labour transfer of ethninc Hui from Ludian county in Yunan to Shenzhen



Figure 10: Labour transfer of ethninc Hui from Zhaotong City in Yunan to Shanghai

5.2.4 Labour transfers (to Xi'an and Changsha)

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

Labour transfers as those described in the above section target other BYD production sites as well. Xi'an and Changsha, for example host plants for BYD bus manufacturing. Online posts indicate that these locations received workers through poverty alleviation programs. In particular we find: Labour transfers from Xingping County, Shaanxi Province⁴⁵ and from Qingning County, Gansu Province to BYD in Xi'an⁴⁶.

In Shaoyang County, Hunan Province government cadres went to villages for “point-to-point recruitment”⁴⁷, which essentially meant that workers were taken on the spot and sent to BYD in Changsha.



Figure 11: Labour transfer registered poor from Xingping County in Shaanxi to Xi'an



Figure 12: Labour transfer registered poor from Shaoyang County in Hunan to Changsha

5.3 CATL

5.3.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

CATL has a complicated shareholding structure and invests in many other corporations. Cross-holdings and complex organizational structures make it difficult to assess the impact and role of such relationships. For example, we find that one of the top-10 shareholders of CATL is an asset management company based in Tibet. The company is solely owned by Yuan Honglin who is also a legal representative of China Molybdenum. The latter operates i.a. a molybdenum mine in Hami Prefecture, Xinjiang.⁴⁸ Molybdenum in turn is an essential component for the battery manufacturing sector. Investor relations between CATL and China Molybdenum reflect joint operations. We find information showing that the two corporations collaborate in nickel and lithium processing.⁴⁹ Therefore, ownership structures in combination with joint operations raise concerns that CATL contributes to forced labour.

CATL Lithium Power Co. Ltd. is a joint venture of CATL New Energy Technology Co. Ltd. and China Development Bank (CDB) Development Fund Co. Ltd. The latter is a shareholder of Xinjiang Guoheng Investment Development Group. 72% of this company is owned by Xinjiang Production and Construction Corps (XPCC). The Business and Human Rights Resource Centre raises concerns about transparency at CDB as the bank ignored all information requests during the past decade.⁵⁰ CDB as a joint-venture partner will make it more difficult to request information and engage in an open dialogue.

5.3.2. Forced labour in the Democratic Republic of Congo

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

According to a press release CATL and China Molybdenum (a.k.a. China Moly) jointly run a cobalt mine in the Democratic Republic of Congo. A Congolese court ruling in favour of a worker who got injured suggests that the site in question is Kisanfu mine.⁵¹ CATL seems also to receive raw materials from Tenke Fungurume mine, which is owned (80%) by China Moly.⁵² An investi-

gation of the Guardian indicates that Congolese workers at this site are exposed to a system of abuse, precarious employment and paltry wages.⁵³ According to a statement from the US Department of Labor, China Molybdenum has blocked safety inspectors from entering its mines and called on Congolese troops to expel artisanal miners, which has resulted in fatalities.⁵⁴

5.4 Durapower

5.4.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

Durapower is battery manufacturer headquartered in Singapore. Banpu Next, a Thai Energy Conglomerate, holds 47% of Durapower.⁵⁵ Banpu China is also a joint-venture partner of Henan Energy (see section V.2.2). The latter runs coal mines in Xinjiang and is deeply involved in China's Uyghur forced labour regime. Given that there is an ownership relationship between Banpu and Durapower and Banpu's products are complementary to Durapower, we categorise Durapower as causing/contributing to forced labour.

5.5 Samsung

5.5.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

Previous reports suggested that Samsung benefited from Uyghur forced labour through contractual relationships with Universal Electronics Inc., which received workers from Xinjiang through state-imposed labour transfers.⁵⁶ To assess whether forced labour risks remain even after comprehensive media coverage, political pressure, and Samsung's subsequent action, we screened two Chinese-owned suppliers to Samsung: AAC Technologies, and BOE Technology Group. Note that Samsung provides names of suppliers that are responsible for 80% of the company's electronics sourcing AND agreed to be publicly listed.⁵⁷ Our screening did not generate any results for AAC Technologies.

For the case of BOE, we found information on a comprehensive collaboration with the Xinjiang Production and Construction Corps. A document from 2017 cites BOE chairman Wang Dongsheng stating "Our company will give full play to its own advantages and potentials and make use of the Xinjiang Corps location, resource, and policy advantages to create a win-win for both parties, and drive more enterprises and talents to come to the Xinjiang Corps".⁵⁸ We do not find documents detailing how this relationship developed during the past five years. Given that BOE is a supplier to many global brands the lack of documents may be owed to a 'digital clean-up' in an attempt to avoid international critique. It is unlikely that BOE's commitment did not materialize because a high-level conference sponsored by the two parties would not take place without a clear plan negotiated beforehand and political endorsement in Beijing and Urumqi. Furthermore, BOE Technology Group is owned by Beijing Electronics Holding Co., Ltd. (BEHC),

which is a state-owned high-tech group under the Beijing Municipal State-Owned Assets Supervision and Administration Commission.⁵⁹ Thus, BOE is tied to CCP loyalty and political demands through ownership structures similar to those of BYD and CATL.

5.5.2 Poverty alleviation

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

Samsung is involved in several poverty alleviation projects in China. These projects aim at developing local industries in particular agricultural production and processing as well as tourism.^{60 61} We find no information that Samsung receives labour transfers or invests in poverty alleviation workshops related to its business operations.

5.6 Panasonic

5.6.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

Similar to Samsung, forced labour risks at Panasonic are mainly related to sourcing relationships. The two brands rely on the same Chinese-owned suppliers namely AAC and BOE. In addition, Panasonic sources from ZTE, a large-scale, Chinese state-owned IT communication brand. ZTE complicates the picture because the company engages with industrial poverty alleviation on a deeper, politically integrated level. For example, ZTE is a key enterprise pairing with poor villages. Together with CCP cadres the company shares responsibilities to implement poverty alleviation policies and assigned targets. According to a report, cadres have to live and work with registered poor people in the village to find solutions for their situation. The cadres' success is a crucial criterion for their annual performance assessment and hence their career prospects.⁶² Thus, there are strong incentives to force poor households to accept employment at designated ZTE factories. Moreover, ZTE collaborates with Xinjiang Shihezi Vocational and Technical College, a school that also trains soldiers for the Xinjiang Production and Construction Corps. For admission, ethnic minority students have to submit a political clearance certificate issued by the local police department.⁶³ In addition ZTE collaborates with a vocational school in Aksu prefecture, Xinjiang Province.⁶⁴ These agreements suggest that ZTE is deeply involved in the Xinjiang labour regime and, by consequence, might contribute to severe human rights violations.

V.6.2 Poverty alleviation

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

Panasonic is mentioned in the 2020 China Blue Book on Industrial Poverty Alleviation.⁶⁵ The report commends Panasonic's participation in a West-East pairing program. It is stated that the company receives about 80 registered poor persons from Dali in Yunnan Zhuang Autonomous Region through labour transfers each year.⁶⁶

Panasonic cooperates with vocational schools in ethnic autonomous Provinces. Panasonic receives both students and graduates. There are many reported cases of student exploitation in the electronics sector, because vocational students have no choice but accept internships organised by their schools. Interns have served as cheap labour with little regard to educational objectives and specific labour rights protection of minors and students. Students with a non-Han ethnic background are even more vulnerable to exploitation and forced labour.⁶⁷

5.7 LG Chem

5.7.1 Uyghur forced labour

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

LG New Energy signed a joint venture agreement with China Huayou Cobalt Industry. In this context Huayou “guarantees the stable supply of core metals”.⁶⁸ Huayou, in turn, has multiple links to the Uyghur forced labour regime. A press release from May 2023 states that Huayou and Xinjiang Nonferrous Metals are working on a partnership.⁶⁹ An article from November 2022 reports that the CEO’s of Huayou and Xinjiang Zhongtai lead a delegation to visit Xiangyu Group in Xiamen. The joint appearance of the two CEO suggests that the companies collaborate.⁷⁰ Previous investigations on Xinjiang Nonferrous Metals and Xinjiang Zhongtai show that the companies are participating in the Uyghur forced labour regime.^{71,72} A document from January 2018 states that Yao Xinmin, member of the Standing Committee and Deputy Commander of the Party Committee of the Xinjiang Production and Construction Corps, Secretary of the Party Committee and Political Commissar of the First Division of Alar City led a delegation visiting Huayou. The purpose was to discuss “in-depth cooperation, and achieve win-win results”.⁷³

5.7.2 Labour transfer

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

LG Chem participates in West-East labour transfer programs. Anlong County in Qianxinan Buyei and Miao Autonomous Prefecture, Guizhou province lists LG Chem (Leyou New Energy) in Jiangsu as one possible destination.⁷⁴

5.7.3 Forced labour in the Democratic Republic of Congo

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

Due to its partnership with Huayou, LG Chem is contributing to forced labour in the Democratic Republic of Congo. Huayou is the sole owner of Congo Dongfang, a company that has relied on child labour according to Amnesty International who investigated the company in 2016.⁷⁵ An article in The New Yorker from 31. May 2021 states: “At some sites, the treatment of Congolese by

their Chinese bosses is reminiscent of the colonial period. In a video shared with me by Mutindi, of Good Shepherd, a Congolese guard with a Kalashnikov slung across his back beats a man who is lying, semi-naked, in mud, his arms bound. Behind the camera, a man otherwise speaking Mandarin starts yelling “Piga!”—the Kiswahili word for “beat.” In the background are seven of the trucks that Congo Dongfang uses to transport cobalt ore...”⁷⁶ Huayou’s use of child labour became subject to a court case in the US, where 14 families of former child laborers sued Apple, Google, Dell, Microsoft and Tesla.⁷⁷ In 2022, Senator Marco Rubio from Florida criticized Volkswagen for signing a joint-venture agreement with Huayou Cobalt.⁷⁸

5.8 SK Innovation

5.8.1. Poverty alleviation

RISK CATEGORY: VERY HIGH
LEVERAGE: CAUSING/CONTRIBUTING

SK Innovation is a Korean battery manufacturer with production facilities in China. Among the none-Chinese brands studied in this section, SK Innovation is the least transparent as there is no information about their supply chain available. In China, SK Innovation seems to assume social responsibility mainly through charity projects.⁷⁹⁸⁰⁸¹ In this context, the company claims to contribute to the policy of revitalizing the country side by employing a large number of skilled labourers.⁸² There is no information if this statement is related to state-organised labour transfers or poverty alleviation programs.

5.9 Yutong

5.9.1 Uyghur forced labour, and forced labour in the Democratic Republic of Congo

RISK CATEGORY: VERY HIGH
LEVERAGE: LINKED

Yutong is a major Chinese bus manufacturer with a large electric bus production site in Zhengzhou, Henan Province. In contrast to BYD, Yutong does not develop or produce batteries. More than 90 percent of Yutong e-vehicles run with CATL batteries.⁸³ The supplier agreement between Yutong and CATL was renewed and expanded in August 2022 and will be valid until 2032.⁸⁴ As a result, downstream forced labour risks enter Yutong’s supply chain through CATL; a company that we analysed in section V.4.

6. Conclusions

Formally, the Chinese State is committed to eradicate forced labour. On 12 August 2022 China ratified the ILO's "Forced Labour Convention" No. 29 and "Abolition of Forced Labour Convention" No. 105. This implies that China agreed to prohibit the use of forced labour in all its forms and make forced labour practices punishable as a penal offence. Convention No. 105 calls for the immediate abolition of compulsory labour as a means of political coercion or education or punishment for the expression of political views, mobilizing and using labour forces for purposes of economic development, labour discipline, punishment for participation in strikes; and racial, social, national or religious discrimination. This State commitment is not reconcilable with coercive forms of poverty alleviation employment. And there are no signs that the ratification had an effect on the situation in Xinjiang or other parts of China. On the contrary, the recently promulgated Chinese Counter-Espionage Law potentially renders all investigations and information collection a criminal offense.⁸⁵

At the same time, legislation in the European Union and the United States are stepping up requirements for human rights due diligence. The EU "Proposal for a ban on goods made using forced labour"⁸⁶ and the "Directive on corporate sustainability due diligence"⁸⁷ urge corporations to do more and be more effective in preventing forced labour risks. And in the US, the "Uyghur forced labour prevention act" establishes a rebuttable presumption that all goods originating entirely or partly from Xinjiang are banned from entering the US market.⁸⁸ The 2023 updated "OECD Guidelines for Multinational Enterprises on Responsible Business Conduct" call on enterprises to contribute to "the elimination of all forms of forced or compulsory labour and take immediate and effective measures towards the elimination of forced or compulsory labour as a matter of urgency." The line between repression and responsibility will become increasingly difficult to navigate.

Identifying state-sanctioned forced labour in China is difficult as informants and investigators may be subjected to threats, repression, or persecution. Our research relies on information that local governments, newspapers, and companies publish online. The retrieved data has to be interpreted against the backdrop of what we know about forced labour practices from leaked documents and witnesses. Due to a lack of access and the severity of the violations, corporations cannot base decisions on social audits but must act in accordance with risks assessments. Also, corporations need to be aware that state-sanctioned forced labour goes beyond Xinjiang and involves non-Han ethnic groups and registered poor in Western and Central China. Our research shows that three manufacturers have received workers from registered poor households from seven provinces (Shaanxi, Gansu, Heilongjiang, Hunan, Yunnan, Guizhou, and Hainan) through 28 labour transfers during the past five years. Similar to poverty alleviation workshops and poverty alleviation employment in state-owned companies, these transfer schemes entail a very high risk of forced labour which goes beyond Xinjiang. A second channel for state-sanctioned forced labour are state-owned corporations which have the responsibility to engage in industrial poverty alleviation. Research in this report suggests that battery and electric bus manufacturers' reliance on minerals and energy involves the state-owned sector and, as a result, constitutes a major entry point for severe human rights violations. Figure 12 summarises our findings geographically:

- High-level risk areas Xinjiang, Tibet, and Southwestern Qinghai are associated with forced labour in resource extraction and manufacturing. Five out of seven brands are associated with business activities in high-level risk areas.
- Labour transfers originate from Central, South, and Northeast China. These regions host the majority of ethnic autonomous regions, prefectures, and counties in China.
- Two out of seven brands seem to participate in labour transfer programs. BYD makes extensive use of state-sanctioned labour transfers. LG Chem has at least considered to participate.
- Two manufacturers maintain joint-ventures with Chinese mining corporations which are associated with forced labour allegations in the Democratic Republic of Congo.

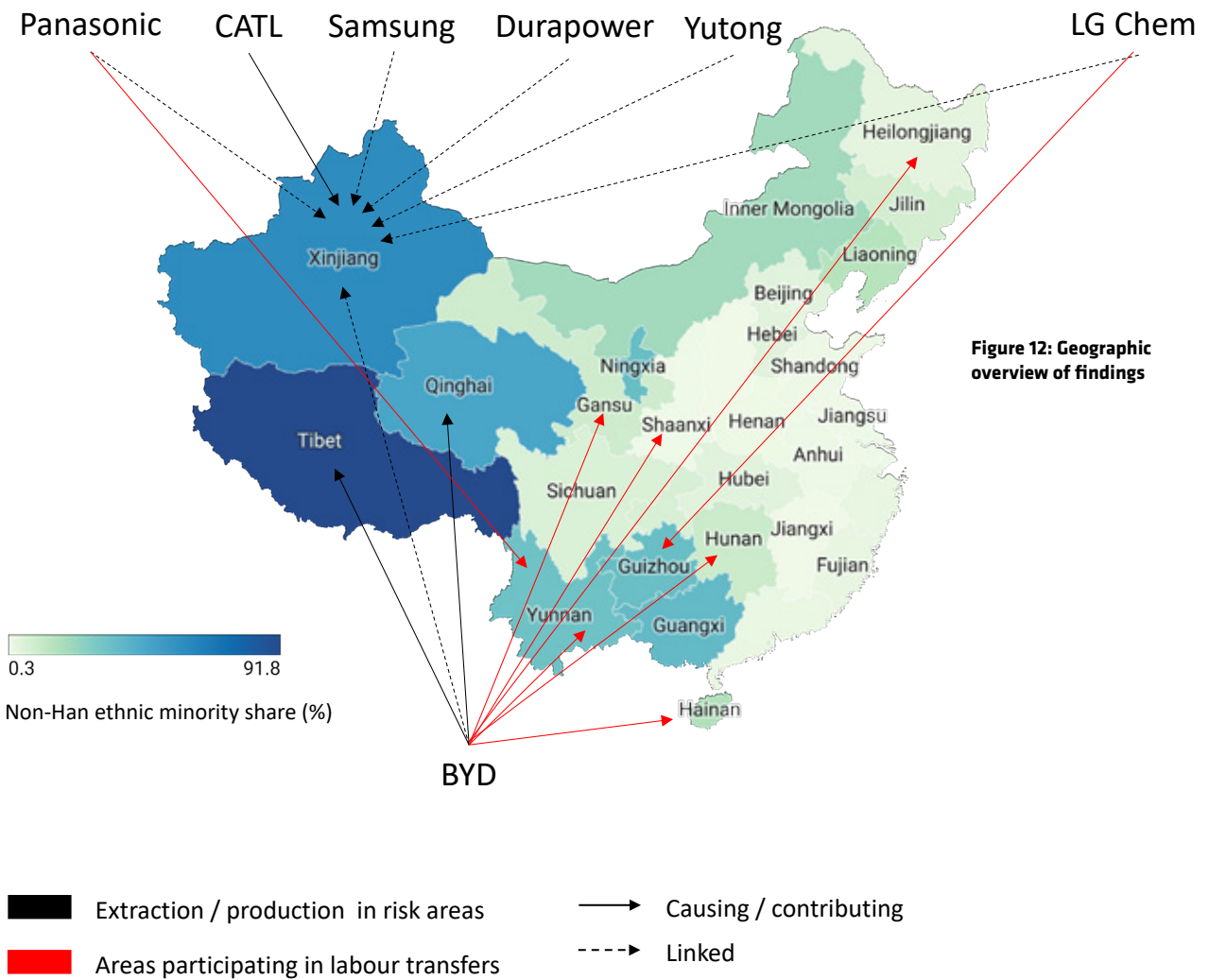


Figure 12: Geographic overview of findings

To mitigate human rights risks, companies should avoid ties with suppliers or business partners that meet any of the following criteria:

- Operating in the primary or secondary sector located in Xinjiang, Tibet, and Tibetan autonomous prefectures in Sichuan and Qinghai.
- Receiving workers through state-organised labour transfers.
- Participating in state-sanctioned employment programs for registered poor households.
- Receiving vocational students from registered poor households through poverty alleviation programs.

The UNGPs divide responsibilities along the line between causing and contributing on the one hand and being linked on the other. Thus, at a minimum, corporations with production facilities in China must not get involved in any of the above activities. Furthermore, they must give up partial ownership in companies engaged in any of the above activities. The bulk of state-sanctioned forced labour, however, most likely will enter global supply chains through domestic factories at lower tiers. The risk of being linked to forced labour is high due to the enormous scale of state-sanctioned worker mobilization. A report from 2020 states that seven provinces (Guangxi, Sichuan, Guizhou, Yunnan, Gansu, Ningxia, and Xinjiang) sent out 18.8 million impoverished labourers to work.⁸⁹ Since poverty alleviation cadres have to fulfill quotas, many of these workers will have experienced political persuasion, pressure or threats before they agreed to leave their homes temporarily for work in factories elsewhere or get resettled permanently. For the time being, the only sensible way for companies to respond is to commit to zero tolerance, identify risks, and cut ties to implicated suppliers.

ENDNOTES >

Introduction

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