Regional Risk Assessment

The Electronics Industry in Hungary

Contributing organisation:
Periféria Policy and Research Center

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Periféria Policy and Research Center

electronics watch
Responsible public procurement. Rights of electronics workers.

Electronics Watch is an independent monitoring organisation for public buyers. We help public sector organisations work together, and collaborate with civil society monitors in production regions, to protect the rights of workers in their electronics supply chains. Electronics Watch affiliated public buyers are in Australia, Austria, Belgium, Denmark, Germany, the Netherlands, Norway, Spain, Sweden, Switzerland, and the UK. Our monitoring partners work in Bolivia, China, Czechia, DR Congo, Hungary, India, Indonesia, Malaysia, Mexico, the Philippines, Poland, Taiwan, Thailand and Vietnam.

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Periféria Policy and Research Center, the contributing organisation for this report is a Budapest based, non-partisan, independent think tank, engaged with issues related to social and spatial injustice. One of the major foci of our activities concerns the world of work where we investigate employment relations from a global perspective, analysing the interplays between local labour issues and global production processes. Through our narration of injustices at the workplace we aim to give voice to workers and their demands. We further advance conditions for empowerment by matching workers with institutional actors. This report was written by Márton Czirfusz, with contributions by Linda Szabó.

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List of abbreviations

CEE – Central and Eastern Europe

COMECON – Council for Mutual Economic Assistance

EU – European Union

FDI – Foreign Direct Investment

GRETA – Group of Experts on Action against Trafficking in Human Beings

GVA – Gross Value Added

ICT – Information and Communications Technology

ILO – International Labour Organization

ISCO – International Standard Classification of Occupations

LCM – Liquid Crystal Module

LED – Light-Emitting Diode

LFS – Labour Force Survey

NACE – Statistical Classification of Economic Activities in the European Community

NATLEX – Database of national labour, social security and related human rights legislation (ILO)

OEM – Original Equipment Manufacturer

QLED –Quantum Dot LED

TNC – Transnational Corporation

UN – United Nations

WHO – World Health Organization

Summary

Hungary has been a key European production site for electronics manufacturing since the second half of the 1990s. Yet, the sector's importance has faded slightly since the 2008 crisis. A recent revival is occurring with new plants opening in Hungary, particularly in the battery value chain for electric vehicles. The Hungarian electronics industry employed 144,000 workers in 2021, 15% of the total employed in manufacturing.

Hungary became a favourable location for the electronics industry with its cheap and available labour already by the late 1990s. Wages have increased since then and there has been a relative convergence of labour costs within the European Union. The second boom in the recent decade has been built on flexibilising labour, thereby offering favourable conditions for employers. The major current players include OEM global brands such as IBM DSS, Samsung, National Instruments and Lenovo; contract manufacturers such as Flex, Jabil and Foxconn, and companies of the battery value chain such as Samsung SDI and SK On.

Responding to the shifts in this sector, this regional risk assessment addresses the new landscape of risk for workers in Hungary, based on the Electronics Watch Code. This report focuses on harm risks in nine thematic areas. The major risks to workers are the following:

- Employment is freely chosen: Agency workers, especially third-country nationals, are vulnerable to risks concerning freely chosen employment, as their livelihood, such as accommodation and transport, is tied to their employment relation.
- Freedom of association and the right to collective bargaining: National legislation as well as employers' interference at some companies limit workers' capacity to improve conditions through collective bargaining.
- No discrimination in employment: Awareness of discrimination at the workplace is low among electronics industry workers. Female workers are more vulnerable to discrimination.
- Violence-free work environment: Awareness of violence at the workplace is low among electronics industry workers. Female workers are more vulnerable to violence and sexual harassment at the workplace.
- No excessive working hours: Flexible overtime regulations and the extensive use of the time-banking scheme lead to irregular shifts and working hours beyond legal limits.

- Safe and healthy working conditions: Companies' engagement with and workers' awareness of long-term occupational health risks are inadequate. Evidence shows non-ergonomic working environments in the ICT industry, as well as exposure to toxic materials in battery manufacturing.
- Legal and living wages: Wage structures are complicated with base wages, wage supplements, performance bonuses and fringe benefits. Payslips are hard to check and understand. Living wages can only be earned by working excessive hours, flexible shift routines and maximising bonuses.

1. Methodology

The report is based on the following sources of information.

- **Literature review:** Overview of the relevant academic literature and reports presenting the main findings of applied research projects run by employers' organisations, trade unions and other advocacy institutions.
- **Quantitative data:** Built on quantitative datasets available in national registries, with particular concern for occupational health and safety inspections, labour inspections and work accidents. We gained data from the Hungarian Central Statistical Office about employment rates, average wages and other sector-specific information. Through this information, the extent of the potential risks could be assessed.
- **Company mapping:** We identified the most relevant companies in the Hungarian electronics industry based on the Hungarian media outlet HVG's TOP500 company list. We consulted companies' annual financial reports (source: https://e-beszamolo.im.gov.hu/oldal/kezdolap) to learn more about organisational and strategic changes, as well as company activities including business relations, employee figures and data on agency workers.
- **Policy analysis:** We conducted a policy analysis through the study of laws and regulations as well as strategic plans of the national government; to identify risks stemming from the failures of national legislation and employment policies.
- **Expert interviews:** We conducted semi-structured interviews with experts in the field. The interviews included labour lawyers and labour rights researchers, as well as trade unionists – both at the sectoral and company level – and local civil activists. The interviews revealed company-specific information about potential risks as well as general

patterns of non-compliance with the Electronics Watch Code. The identities of interviewees are confidential.

- **Job advertisements:** Job advertisements on company or agency websites and Facebook groups provided us with additional information on wages, benefits and recruitment processes.
- **Media analysis:** Media reports on accidents, labour disputes and company developments revealed additional details on major risks. Our primary source was a news aggregator website that focuses on labour issues (https://szakszervezetek.hu).

The main findings of the draft report – particularly the Recommended actions Chapter 4 – were discussed with relevant stakeholders at a workshop in May 2022. Their feedback helped us highlight the main risks of harm to workers and prioritise key actions.

2. Context: The Electronics Industry in Hungary

The roots of the electronics industry in Hungary date back to the beginnings of industrialisation in the nineteenth century. Western European companies, such as Siemens, were contracted to build electric railways and trams; establish electric infrastructures for public street lighting and telecommunications networks; and provide electronic equipment, such as generators, to manufacturing companies. Some Western enterprises established their subsidiary manufacturing companies in Hungary. While others, such as ABB and General Electric, sold technologies or manufacturing licences to Hungarian domestic companies. The Hungarian company Ganz Works was a global pioneer of electrical engineering in the early twentieth century. Manufacturing was concentrated in the capital city of Budapest at that time.

After 1945, industrial companies were nationalised. State-owned companies opened new production sites in cities outside Budapest, some of these centres prevail until today. Videoton, with its headquarters in Székesfehérvár manufactured TVs and radios, inter alia. The Council for Mutual Economic Assistance (COMECON) coordinated electronics production in the Eastern Block, placing Hungary as a specialist in telecommunications engineering, among others. The economic crisis of the 1970s and the technological change marked by microprocessors and

semiconductor technology heavily impacted the Hungarian electronics industry. In the 1980s, as the electronic industries global supply chains grew, components focused contract manufacturing began for Western companies. These companies utilised imported machines and cheap labour, e.g. retrained female textile workers in a small West Hungarian town produced motor components for IBM electric typewriters. Nevertheless, most of the production for electronic devices was for the internal COMECON market as the Cold War embargo limited international trade.

After 1990, most companies in the electronics industry were privatised, taken over by global TNCs, or collapsed. The manufacturing boom of the second half of the 1990s and early-2000s was marked by an expanding electronics industry, with a few closures at the end of the decade. Global brands dominated greenfield investments, such as IBM, Nokia, Philips, Samsung and Sony. Other global brands took over Hungarian players and streamlined their activities: for example, General Electric took over the lighting electronics company Tungsram. Contract manufacturers opened in several locations with highly fluctuating employment numbers, the largest companies being Elcoteq, Flextronics, Foxconn, Jabil and Sanmina. Temporary work agencies appeared following this boom with transnationals like Adecco, Trenkwalder and Manpower entering the scene. Co-located supplier firms in packaging and plastic components strengthened the local embeddedness of the industry. Until the EU accession in 2004, industrial free trade zones also made Hungarian investments attractive. The Hungarian brand Videoton was reorganised as a major supplier and contract manufacturer and supplied different ICT brands beginning in the early 1990s. They produced parts for IBM HDDs, plastic components for HP products, and television components for Samsung and Panasonic, inter alia.[1]

In the heyday of the mid-2000s, the electronics industry provided 10% of the Hungarian gross value added.

Altogether, in the heyday of the mid-2000s, the electronics industry provided 10% of the Hungarian gross value added (GVA), and more than a quarter of manufacturing GVA.[2] This data refers to the 'manufacture of electronic components and boards' (Statistical classification of economic activities in the European Community, division 26 – hereinafter, NACE 26) and 'manufacture of electrical equipment' (Statistical classification of economic activities in the European Community, division 27 – hereinafter, NACE 27) combined. Seven of the 20 largest companies in Hungary in 2005 belonged to the electronics industry – Nokia being the third largest company in Hungary with revenues over € 4 billion per year.[3]

1 https://www.videoton.hu/vallalatunk/cegtortenet/

2 Hungarian Central Statistical Office data, own calculations – https://statinfo.ksh.hu/Statinfo/QueryServlet?ha=GPKB04.

3 HVG TOP500 data, own calculations.

The 2010s were marked by closures, following a realignment of global production networks. Elcoteq, Nokia, Philips and Sony relocated production either to other countries of the CEE region such as Poland, or to Southeast Asia, landing in Malaysia and Vietnam.

In 2020, the electronics industry (NACE 26 and 27 combined) was providing 6.9% of Hungary's GVA and 18.5% of manufacturing GVA. The sector employed 144,000 workers in 2021: 15% of the total employed in manufacturing. NACE26 (Manufacture of computer, electronic and optical products) employed 84,000 workers in 2021.[4] Agencies employed approximately 23,000 workers in the NACE 26 sector and 10,000 in the NACE 27 sector.[5]

The Hungarian electronics industry employed 144,000 workers in 2021, 15% of the total employed in manufacturing.

Currently, the following groups of major electronics industry players can be defined.

Global Brands

- IBM DSS: large capacity data storage systems manufactured for IBM's Singapore branch, assembled in the city of Vác.
- Samsung: LED/QLED TVs, computer monitors and LCM panels, produced in the city of Jászfényszaru.
- National Instruments: the factory in the county seat Debrecen accounts for 90% of National Instruments' global production.
- Lenovo: assembling desktop computers, workstations and servers in the city of Üllő in the Budapest agglomeration. Production started in 2021, insourced from Flex.[6] Also, Lenovo launched a business unit at the factory, 'dedicated to the circular economy through the reuse, refurbishment and redeployment of hardware solutions.' [7]

Contract Manufacturing Companies

- Flex in the cities of Tab, Sárvár and Zalaegerszeg. Flex was a major manufacturer in the ICT sector for several years, prominently in its Sárvár factory, but as of autumn 2021 with the end of contract manufacturing for Lenovo, there are no contracts for manufacturing ICT products.

4 Labour Force Survey data, excluding temporary staffed employment. Data source: https://statinfo.ksh.hu/Statinfo/QueryServlet?ha=LD2A04

5 This questionnaire-based data by the Ministry of Innovation and Technology covers 592 of 613 agency locations in Hungary. See the full report at: https://nfsz.munka.hu/nfsz/document/2/4/0/6/doc_url/Osszefoglalo_a_MUNKAERO_KOLCSONZOK_2021_evi_tevekenysegerol.pdf

6 https://g7.hu/kozelet/20201019/milliardokat-fizet-a-kormany-hogy-az-egyik-magyar-gyarbol-egy-masikba-vigyek-a-termelest/

7 https://jobs.lenovo.com/en_US/careers/JobDetail/Operations-Supervisor/33198

- Jabil in the city of Tiszaújváros. Jabil ceased assembling phones as of 2021, but other electronic appliances are still produced in the factory, such as NetApp.
- Foxconn (Cloud Network Technology Kft.) in the city of Komárom. Foxconn produces PCs, server towers and network communication devices.

Hungarian-owned Contract Manufacturing Companies

- Videoton Holding, headquartered in the county seat Székesfehérvár. No major contracts in ICT manufacturing currently.

Within the non-ICT electronics industry, manufacturing is dominated by automotive electronics and lighting technology firms.

The government aims to gain significant positions for Hungary in the battery value chain. In the past years, primarily East Asian OEM battery producers, mostly for electric vehicles, established factories or announced development. Currently, the largest companies are Inzi Controls, GS Yuasa, Samsung SDI and SK On. CATL will open a factory in 2025. The number of suppliers based in Hungary has also increased. Altogether, € 5.4 billion FDI was flowing into the Hungarian battery supply chain between 2016 and 2021, creating 14,000 jobs in the sector.[8] Lithium extraction from thermal water is also expected to be launched in the upcoming decade in Hungary.[9]

Hungarian factories' sizes in the ICT sector range from a few hundred workers, such as the Foxconn factory with 600 employees, to a few thousand – Lenovo in Üllő with about 1,000 workers, Samsung in Jászfényszaru with about 1,500 workers, Jabil in Tiszaújváros with about 4,000 workers. These factories are often the largest or one of the largest employers in the respective cities and are significant employers in their broader regions too. Although free entrepreneurship zones exist with specific tax incentives, negotiation-based 'VIP' subsidies of the Hungarian Government can provide a more attractive financial environment for investors, without any geographical focussing.[10]

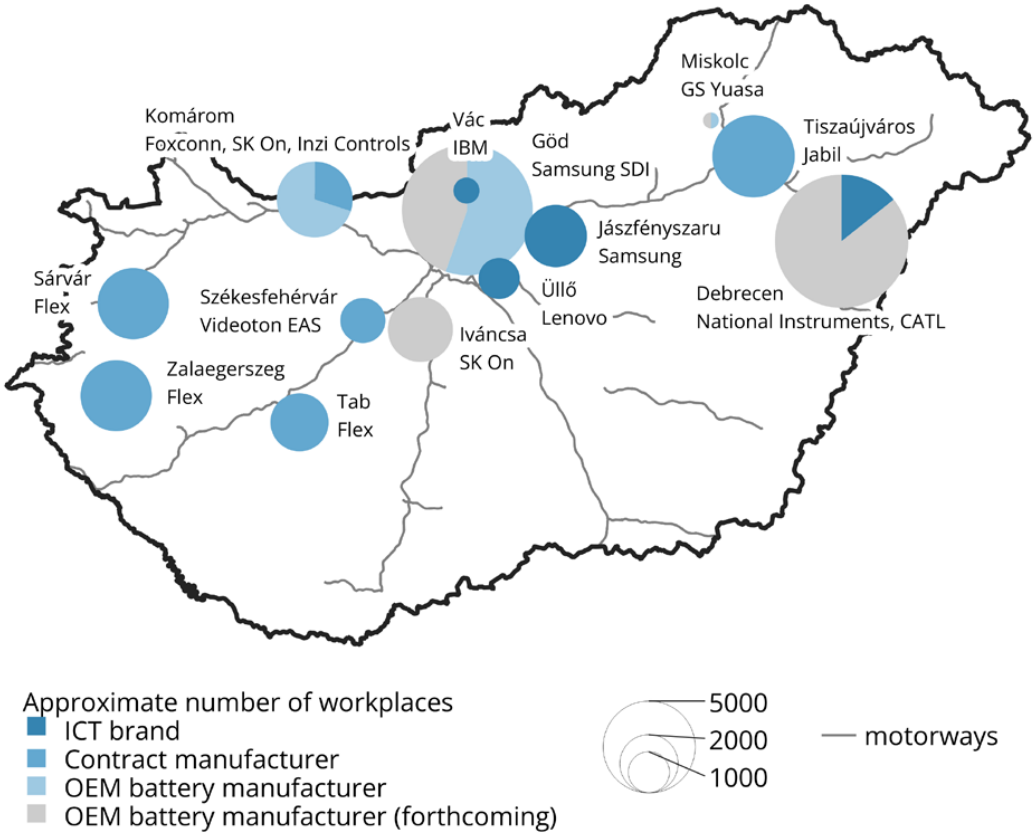
The locations of the factories in the electronics industry which are the focus for Electronics Watch's activities, are depicted in Figure 1. Company-level examples mentioned in the next sections are primarily from these firms.

8 Reference material – A suggested action plan for the Hungarian battery industry with the input of national industrial players. (2021). https://hungarianbatteryday.hu/wp-content/uploads/2021/09/InnoEnergy_Reference_Strategy_Final.pdf

9 https://www.portfolio.hu/gazdasag/20210929/hazai-termalvizbol-nyernek-ki-az-elektromos-autok-egyik-fo-alapanyagat-502744

10 For background information on government subsidies for foreign investors, see HIPA (2021): Invest in Hungary. https://hipa.hu/downloadmanager/download/nohtml/1/id/112

Figure 1: Major ICT and OEM battery-producing factories in Hungary



Source: own compilation based on media sources, company websites and annual reports.

3. Risk of Violations of the Electronics Watch Code

3.1. Employment is freely chosen

Root cause analysis: The current labour shortage and the high fluctuation of the workforce put pressure on employers and workers alike. Agency workers, especially third-country nationals, are vulnerable to risks around freely chosen employment, as their livelihood, such as accommodation and transport, is tied to their employment relation.

Hungary has ratified ILO conventions on forced labour (No. 29 and 105) but has not ratified two major conventions on migrant workers (No. 97 and 143). The Fundamental Law – which serves as the Hungarian constitution –

guarantees that 'Everyone shall have the right to choose his or her work, and employment freely' (Article XII).[11] Trafficking and forced labour have a separate section in the Criminal Code (section 192)[12] and are punished by imprisonment.

The Group of Experts on Action against Trafficking in Human Beings (GRETA), Council of Europe reported in 2019 that the electronics industry – and manufacturing more generally – is not among the economic sectors with considerable risk of human trafficking for labour exploitation in Hungary. However, the report urged Hungarian authorities to strengthen 'efforts to investigate and prosecute cases of trafficking for the purpose of labour exploitation', as it is currently less in their focus. Data collected for 2017–2018 showed that forced labour only consisted of 2% of registered trafficking cases in Hungary, although it was the second most common form of exploitation in the EU-27 with 15% of cases.[13] Closer scrutiny of prosecution proceedings of human trafficking and forced labour also did not mention cases in manufacturing workplaces.[14]

Recommendations by GRETA included strengthening labour inspections to detect more cases, better monitoring of recruitment and temporary work agencies, and working closely with trade unions, civil society and the private sector to prevent trafficking in supply chains.[15]

Trade unions reported the risk of not freely chosen employment in the electronics industry; particularly in the case of third-country nationals working in Hungary, who have arrived through recruiters and temporary work agencies. As labour market intermediaries recruit with services ranging from administration (such as work permits), to transportation and accommodation; workers depend on the recruiters/agencies and are vulnerable when disputes arise. Accommodations are also mostly lost when employment is terminated, which increases workers' dependency.[16] Temporary agency workers, according to a recent study on the electronics and automotive industry, often experience an almost coercive condition of dependency from agencies. This is especially true for vulnerable groups, such as domestic Roma workers migrating from poorer regions of the country and female workers from Ukraine.[17]

11 For the full text of the Fundamental Law, see: https://hunconcourt.hu/uploads/sites/3/2021/01/thefundamentallawofhungary_20201223_fin.pdf

12 For the full text of the Criminal Code, see: https://njt.hu/jogszabaly/en/2012-100-00-00

13 European Commission (2020): Data collection on trafficking in human beings in the EU. Publications Office of the European Union, Luxembourg. https://data.europa.eu/doi/10.2837/45442

14 Windt, Sz. (2021): The unspoken phenomenon: Forced labour in Hungary. Archiwum Kryminologii, 1., 119–141. https://doi.org/10.7420/AK2021.03

15 Secretariat of the Council of Europe Convention on Action against Trafficking in Human Beings (2019): Report concerning the implementation of the Council of Europe Convention on Action against Trafficking in Human Beings by Hungary. Second Evaluation Round. GRETA(2019)13. Strasbourg. https://rm.coe.int/greta-evaluation-report-on-hungary-2nd-evaluation-round-/168098f118

16 Interview with a trade unionist.

17 Meszmann, T. T., Fedyuk, O. (2018): Temporary Agency Work as a Form and Channel of Labour Migration in Hungary. Friedrich-Ebert-Stiftung, Budapest. https://library.fes.de/pdf-files/bueros/budapest/14597.pdf

Third-country nationals[18] working in the electronics industry might stay and work in Hungary generally via residence permits or work permits.[19] If these employees' contracts are terminated, they also lose the legal basis to stay in the country. Since 2018, however, no work permit is required in occupations facing labour shortages, for Serbian and Ukrainian nationals. Occupations also include those typical in the electronics industry, such as assemblers (ISCO 82), lifting truck operators (ISCO 8344), hand packers (ISCO 9321), manufacturing supervisors (ISCO 3122), and electrical and electronics engineers (ISCO 2151, 2152).[20] These Ukrainian and Serbian nationals can stay and work in the country continuously for 90 days (180 days in a calendar year) without a residence permit, based on a unilateral decision by the Hungarian Government. Ukrainian nationals in the electronics industry often arrive through this last channel via agencies.[21] Nationals of fifteen other countries (Belarus, Bosnia and Herzegovina, Brazil, Colombia, Georgia, Indonesia, Kazakhstan, Kyrgyzstan, Mongolia, Montenegro, North Macedonia, the Philippines, Russia, Venezuela and Vietnam) can also work more easily when arriving via private agencies approved by the Government.[22] The share of foreign nationals among the direct employees of foreign-owned companies may legally reach 20% since 2021, up from 10%.[23]

Ukrainian citizens arriving after the war broke out in February 2022 may apply for temporary protection status which also makes them eligible to work without a work permit.[24] Ethnic Hungarians in neighbouring countries often have dual citizenship and therefore can also work easily in Hungary.

The employment of third-country nationals from selected countries by selected agencies shall help reduce the labour shortage in the electronics industry. Because of the dependency on agencies, these workers are more vulnerable when labour disputes arise.

18 Third-country nationals are those people who are not a citizen of the European Union and who are not enjoying the right to free movement within the European Union. For the legal background, see: https://ec.europa.eu/home-affairs/pages/glossary/third-country-national_en

19 Government decree 445/2013 (XI.28.) – https://net.jogtar.hu/jogszabaly?docid=a1300445.kor

20 See the Communication of the Minister of Finance for the list of occupations: http://www.kozlonyok.hu/kozlonyok/Kozlonyok/12/PDF/2018/36.pdf#page=121 For the description of occupations and the correspondence tables with ISCO codes, see the Hungarian Central Statistical Office website: https://www.ksh.hu/feor_eng_menu

21 Exact numbers of how many third-country nationals are currently working in the electronics industry are not available, as we do not know how many agency workers are sent to the electronics industry. Based on our interviews we estimate that there are a few thousand Ukrainians in the sector. Agencies consider Hungary as less attractive for Ukrainians than Czechia or Poland, because of the lower wages. Recruiting from Southeast Asia is seen as a prospect for growth by Hungarian agencies, partly because many workers have experience in the electronics industry. Most players in the electronics industry recruit foreign nationals through agencies; an exception is Flex which recruited directly in Ukraine before the war. https://novekedes.hu/interju/engedelyeztek-hogy-kilenc-eu-n-kivuli-orszagbol-toborozzanak-munkaerot https://www.hrportal.hu/hr/hogyan_talaljak_dolgozokat_a_gyarba__-_kekgalleros_toborzasi_trendek_2021-ben-20210819.html

22 For the list of 14 approved agencies as of July 2022 see https://cdn.kormany.hu/uploads/document/0/0a/0a8/0a87ba795df913f1bc0da3a1fc6c9934136e9902.pdf

23 Pálos, M. (2022): A külügy behívta a vietnámi, mongol, indonéz vendégmunkásokat, de nem tudja, hányan jöttek. G7, March 22. https://g7.hu/vallalat/20220322/a-kulugy-behivta-a-vietnami-mongol-indonez-vendegmunkasokat-de-nem-tudja-hanyan-jottek/

24 See the information sheet of the Hungarian Helsinki Committee on details: https://helsinki.hu/en/information-ukraine-stateless-recognized-refugees/

Prison labour is rarely used in the electronics industry. One known example is a company producing automotive electronics components, where a part of the production is outsourced as contract manufacturing in a prison for 50–60 workers.[25] Prison labourers' employment is legally different from regular employment, where specific regulations apply. For example, international forced labour and slavery conventions do not apply to prison work.[26] In Hungary, prisoners must consent to work for these 'external' companies.[27]

According to the Hungarian Labour Code, Section 44, 'employment contracts may only be concluded in writing.'[28] Trade unions reported that there are generally no risks related to the written contract or with compulsory registration of the employment relationship at the National Tax and Customs Administration.[29] Data and written communication with the labour inspectorate corroborated the latter information: except for a single larger case of one employer in 2018, unreported employment in the electronics industry (NACE 26 and 27 combined) is generally below 1% of inspected cases.[30]

3.2. Freedom of Association and the Right to Collective Bargaining

Root cause analysis: Most Hungarian legislation complies with the ILO fundamental conventions and the Electronics Watch Code. National legislation as well as employers' interference at some companies limit trade union action and the efficacy of collective bargaining.

Both ILO conventions No. 87 on the freedom of association and No. 98 on the right to organise and collective bargaining have been in force in Hungary since 1957 – Convention No. 135 on workers' representatives since 1972. According to the current Fundamental Law, employees have the right to 'negotiate with each other and conclude collective agreements' (Article XVII). Article VIII of the Fundamental Law underlines that 'Trade unions and other interest representation organisations may be formed and may operate freely on the basis of the right of association.'[31]

25 Source: annual financial report of the company, 2020.

26 Ivanics, Zs. (2022): Conceptual issues and theoretical considerations regarding the study of prison labour. Belügyi Szemle, Special Issue 1, 53–68. https://doi.org/10.38146/BSZ.SPEC.2022.1.3 For the exemption see the ILO's Forced Labour Convention (No. 29), Article 2, 2. (c).

27 Law CCXL/2013, 3. §, 13.

28 See the ILO NATLEX database entry for the Labour Code at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

29 Interview with a trade unionist.

30 Data by and written communication with the Department of Labour Inspection, Ministry for Innovation and Technology, provided for a request by Periféria Policy and Research Center.

31 For the full text of the Fundamental Law, see: https://hunconcourt.hu/uploads/sites/3/2021/01/thefundamentallawofhungary_20201223_fin.pdf

Trade union operation is regulated by Chapter XXI of the Labour Code.[32] Employees can form and freely join a trade union. According to the Labour Code, trade unions' 'primary function is the enhancement and protection of employees' interests related to their employment relationship.' The basic organisational units of trade unions are either at the company level or at the factory level. Trade union members elect union officials, whose number depends on the number of direct employees at the company. Officials are entitled to paid working time reductions to fulfil their duties – one hour per month for every two trade union members, excluding agency workers – and they are also legally protected against the termination of employment. Agency workers might theoretically join trade unions, but membership rates are generally low because of higher fluctuation of the workforce, language barriers in the case of foreign nationals not speaking Hungarian and trade unions' limited capacity to reach out to non-local workers.[33]

Although general legislation ensures freedom of association and the right to collective bargaining, the Hungarian Government does not ensure effective social dialogue at the national level. The foreign minister overseeing foreign trade and investment promotion is explicitly against trade unions.[34] Legislation weakens trade unions' actions or makes action difficult to organise. National-level forums of tripartite dialogue are only formally operating, without much influence of employees' organisations on decision-making.[35] Even in cases where, by law, employees' organisations must be consulted, the government does not formally consult trade unions. This has worsened in recent years during the COVID-19 crisis, when legislation limited the full use of collective bargaining.[36]

Effective tripartite social dialogue is missing both at the national and at the sectoral level.

According to Labour Force Survey (LFS) data from 2020, 7.1% of industrial workers (NACE C-F) were members of trade unions among those of 15–64 years of age.[37] Within the electronics industry, the major trade union is the

32 See the ILO NATLEX database entry for the Labour Code at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

33 For the broader picture on non-local workers' unionisation, based on the automotive sector, with similarities in the electronics industry, see: Meszmann, T. T., Fedyuk, O., Zentai, V. (2020): Unionisation of non-local workers: A capacity-building opportunity for trade unions? Policy paper. Friedrich-Ebert-Stiftung, Budapest. https://library.fes.de/pdf-files/bueros/budapest/16271.pdf

34 https://insighthungary.444.hu/2020/08/27/foreign-minister-szijjarto-threatens-public-employees-with-dismissal-if-they-work-from-home-during-pandemic

35 The main tripartite body for social dialogue is the Permanent Consultative Forum of the Private Sector and the Government (VKF). On bodies of social dialogue in detail, see: https://www.eurofound.europa.eu/it/country/hungary#actors-and-institutions During the COVID-19 pandemic this forum was not operating, despite trade unions' calls to schedule meetings. The Government consulted with employers' organisations informally on weekly meetings, also discussing proposals on work and workers. See in detail: Czirfusz, M. (2021): COVID-19 crisis management and the changing situation of workers in Hungarian manufacturing. Friedrich-Ebert-Stiftung, Budapest. http://library.fes.de/pdf-files/bueros/budapest/18847.pdf

36 See the ILO Freedom of Association Case No. 3381. https://www.ilo.org/dyn/normlex/en/f?p=1000:50002:0::NO:50002:P50002_COMPLAINT_TEXT_ID:4111043

37 https://www.ksh.hu/docs/eng/xstadat/xstadat_infra/e_munkmin_9_18_03_02.html

Hungarian Metalworkers' Federation (VASAS). They have strong local units at one OEM and one contract manufacturer. The Federation of Chemical Workers of Hungary (VDSZ) is also a strong union in the sector, present at one large electronics contract manufacturer and at one battery producer. At one large contract manufacturer, three competing trade unions represent workers. One of the large battery producers as well as three OEMs are non-unionized workplaces. Trade unionists reported that successful representation depends on the number and share of membership, on long presence at the factory and the knowledge and skills of elected officials.

Company management's attitudes towards trade unions differ greatly within the sector. Trade union interviewees mentioned some companies where cooperation between the management and the trade union is appropriate. According to their view, company culture and the local managements' level of autonomy from the decisions of the headquarters influence a trade unions' room for manoeuvre. Company management in the battery value chain was mentioned by the interviewees as having less autonomy during negotiations with trade unions – decisions are taken in East Asian headquarters. Compared with the automotive sector, worker representation and participation in the electronics industry is in a worse position. According to trade unionists and previous reports, some companies have restricted the freedom of association among the large companies in Figure 1. At these companies, forming a trade union has failed several times, partly because the management was against the idea, and key workers organising campaigns left the company because of company pressures. An OEM case was discussed in detail in a report published in 2012.[38] At one battery producer, according to a trade union source, management spread misinformation among workers that an agreement between the company and the government had prohibited the founding of a trade union at the company. Trade unions went to court in some cases claiming management interfered with employees' efforts to organise. These cases can rarely be won in court. However, if trade union officials are intimidated or dismissed, the success rate for winning the case and obtaining a remedy is higher. A trade union interviewee with a good overview of the entire sector reported discrimination against trade union officials, including illegitimate limitations of officials' activities, demotion, or management misconduct leading to loss of officials' bonuses.[39]

Freedom of association is restricted in several companies of both the ICT and the battery value chains.

38 Perényi, Zs., Rácz, K., Schipper, I. (2012): The Flex syndrome. Working conditions in the Hungarian electronics sector. SOMO, Amsterdam. https://www.somo.nl/wp-content/uploads/2012/12/The-Flex-Syndrome.pdf

39 Interview with a trade unionist.

Trade unions have the right to collective bargaining. Collective agreements can be concluded by trade unions if they represent at least 10% of the direct employees. Collective agreements are predominantly concluded at the company level. Collective agreements apply for all direct employees of the company, irrespective of their union membership, but not for agency workers.[40] Nevertheless, because of the directive on equal treatment, agency workers also indirectly benefit from collective agreements at the user company.

Collective agreements approximately cover two-thirds of workers in the NACE 26 sector and one-quarter in NACE 27; both are higher than the national average, which is estimated at 21.8% (Table 1).[41] Collective agreements are more prevalent in larger companies in the electronics industry. In most unionised companies shown in Figure 1, a collective agreement is also in effect. Collective agreements do not necessarily provide significantly better working conditions and often lack innovative content that would move beyond the regulations of the Labour Code or definition of wages. Nevertheless, in times of crisis, workplaces covered by collective agreements proved to be more resilient.[42]

Trade unions are present in many of the key companies in the electronics industry, but not all unionised workplaces have strong unions.

Table 1: Collective agreements in the Hungarian electronics industry

NACE	Number of employees in the whole sector	Share of employees covered by collective agreements	Company size							
			–50 employees		51–500 employees		501–2000 employees		2001– employees	
			No.	Empl.	No.	Empl.	No.	Empl.	No.	Empl.
26	45912	63.4%	2	21	8	1978	2	2621	5	24500
27	41159	24.8%	5	37	9	2993	4	3453	1	3760

Data source: Information System on Industrial Relations (MKIR), http://mkir.gov.hu/. Data was downloaded on 29 April 2022. Employee figures are not comparable with LFS data mentioned in Chapter 2.

For cooperation between employees and the employer and to take part in the employers' decisions, works councils are required by law in companies with more than 50 employees. Chapter XX of the Labour Code[43] provides detailed legislation on works councils. Members are elected by a secret and

40 ECO-VISTA Kft. (2021): Kollektív szerződések elemzése a minőségi munka aspektusából – kitekintéssel a feldolgozóiparban kötött kollektív szerződésekre. Tanulmány. https://www.minosegimunkahelyek.hu/images/2021/Kollektiv_szerzodes_tanulmany.pdf

41 The national average is for the year 2019: https://www.eurofound.europa.eu/it/country/hungary#collective-bargaining

42 Neumann, L., Tóth, A. (2018): Hungarian unions under political and economic pressure. In: Lehndorff, S., Dribbusch, H., Schulten, T. (eds.): Rough waters: European trade unions in a time of crises. ETUI, Brussels, 135–159. https://www.etui.org/sites/default/files/06%20Hungarian%20unions%20under%20political%20and%20economic%20pressure.pdf

43 See the ILO NATLEX database entry for the Labour Code at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

direct ballot for five years. Elected members get 10–15% paid reductions of working time to undertake their duties. Works councils monitor compliance with the provisions of employment regulations and shall be consulted when the employer undertakes changes affecting a major group of workers. Yet, works councils have limited power to influence management decisions or working conditions, and they have fewer rights compared to German works councils, for example. Works councils do not have the right to collectively bargain or to organise strikes, but the employer and the works council may conclude a 'work agreement' (plant agreement) for promoting their cooperation with a more limited scope than a collective agreement. Where a trade union operates in a company, the usual strategy is to nominate trade union officials for works council membership.

According to a trade union interviewee, at one OEM company where trade unions are not present, company management misled workers by arguing that the works council serves the same purpose as a trade union. In this case, works council elections were organised by securing the nomination of management-friendly employees, hindering the genuine participation of workers. Some management decisions affecting employees might then be shown as concluded together with the works council. Most workers do not understand the differences between a works council which serves workers' participation in decision-making and a trade union representing workers' interests.

According to Article XVII of the Fundamental Law, employees' organisations are entitled 'to take collective action to defend their interests, including the right of workers to discontinue work.'[45] Strikes are regulated by Act 7/1989 on strikes.[46] The right to strike is guaranteed to individual workers, not only to trade unions. While trade unions can organise strikes in a factory and participate in solidarity strikes, current legislation makes it extremely difficult to organise legal strikes. Gaining permissions for strikes is beyond both the human and financial as well as legal capacities of many trade unions in manufacturing workplaces – there have been no strikes in the electronics industry since 2010.[47] Other industrial actions, such as protest rallies, demonstrations and petitions are much more common.[48] In late 2018 a series of demonstrations manifested involving trade unions in the

44 Interview with a trade unionist. See also the chapters on worker representation in: Perényi, Zs., Rácz, K., Schipper, I. (2012): The Flex syndrome. Working conditions in the Hungarian electronics sector. SOMO, Amsterdam. https://www.somo.nl/wp-content/uploads/2012/12/The-Flex-Syndrome.pdf

45 For the full text of the Fundamental Law, see: https://hunconcourt.hu/uploads/sites/3/2021/01/thefundamentallawofhungary_20201223_fin.pdf

46 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=7607&p_lang=en

47 After the 2008 crisis the number of strikes in Hungary has been below 10 per year for the whole economy (including the public sector), except for 2019. Data source: https://www.ksh.hu/stadat_files/mun/en/mun0073.html In the manufacturing industry, strikes in the last years took place at OEM manufacturers and Tier 1 suppliers of the automotive sector. For a more complete list of strikes see: Berki, E. (2019): Munkaügyi akciók 2010 és 2019 között Magyarországon, különös tekintettel a sztrájkokra. Friedrich-Ebert-Stiftung, Budapest. http://library.fes.de/pdf-files/bueros/budapest/15596.pdf

48 See in detail: https://www.eurofound.europa.eu/it/country/hungary#industrial-action-and-disputes

electronics industry after Parliament amended the Labour Code to increase possible overtime work (see below in Section 4.5.).[49]

3.3. No Discrimination in Employment

Root cause analysis: Awareness of discrimination at the workplace is low among electronics industry workers. Female workers are more vulnerable to discrimination. Legal remedies of unequal treatment are inadequate, with long processes and low fines.

ILO core conventions on non-discrimination (No. 100 on equal remuneration, No. 111 on discrimination) have been in force in Hungary for several decades. ILO Convention No. 183 on maternity protection was ratified in 2003.

The major national legislation in terms of non-discrimination is the Act CXXV of 2003 on Equal Treatment and Promotion of Equal Opportunities, which has a separate part on employment-related non-discrimination. Areas of prohibited discrimination include: access to labour, establishing and terminating employment, training, working conditions, allowances (including wages), membership of employees' organisations, and promotion. Discrimination is not allowed based on sex, racial origin, skin colour, nationality, origin of national or ethnic minority, mother tongue, disability, state of health, religious or ideological conviction, political or other opinions, family status, motherhood (pregnancy) or fatherhood, sexual orientation and identity, age, part-time or short term nature of the employment relationship, as well as membership in employees' organisations.[50] In a representative survey of 2019 across all sectors, 7.4% of respondents reported discrimination in employment in the past year. Only every tenth worker said that anti-discrimination and equal treatment represented an important issue at their workplace.[51] Because of the small sample, however, it is impossible to present these numbers for the manufacturing industry or for the electronics industry, more specifically.

Based on the principle of equal treatment, workers hired by temporary work agencies work under the same working conditions as direct employees do.[52] Agency workers with permanent contracts should receive at least the same wages and fringe benefits as direct workers after six months spent

49 Demonstrations were hijacked by oppositional parties and the focus shifted away from labour issues. For an analysis of the demonstrations, see: Gagyi, Á., Gerőcs, T. (2019): The Political Economy of Hungary's New "Slave Law". LeftEast, January 1. https://lefteast.org/the-political-economy-of-hungarys-new-slave-law/

50 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=68657&p_lang=en

51 Neményi, M., Ságvári, B., Tardos, K. (2019): A diszkrimináció személyes és társadalmi észlelése és az egyenlő bánásmóddal kapcsolatos jogtudatosság. Egyenlő Bánásmód Hatóság, Budapest. http://real.mtak.hu/id/eprint/104962

52 Agency work was introduced into the Hungarian Labour Code in 2001, before EU accession in 2004 and before the EU directive on temporary agency work (2008/104/EC) was adopted. Hungarian regulations were amended several times, also because of harmonisation with changing EU legislation.

at the user company (Labour Code, Section 219).[53] However, under the circumstances of labour shortage, wages and benefits may be higher for agency workers (see Sections 4.8. and 4.9.). While this does not count as a violation of equal treatment according to the law, it causes serious tension between different groups of employees. For example, if agencies provide accommodation for non-local temporary workers in dormitories or other private rentals within their employment scheme, and direct workers do not enjoy the same benefits, this can cause tensions in the workplace. However, a recent study showed that these tensions tend to result from a lack of proper information flows among workers.[54] A recent study also found that Ukrainian temporary agency workers in the electronics industry are often discriminated against by managers on the shop floor, where Hungarian workers enjoy better working conditions (no unpaid overtime, longer bathroom breaks, etc.), compared to Ukrainians.[55] Trade unions reported discrimination based on union membership at an OEM and a battery producer company, leading to the termination of employment.

Trade union representatives we interviewed assessed that discrimination during recruitment is also less common due to the current labour shortage: employers in the electronics industry tend to hire everyone able to work. Women workers with dependent children may, however, be treated as if they do not have children and caretaking duties. At an OEM location, for example, an informant reported several cases of the termination of employment of working mothers who were considered to take sick leave 'too often' to care for their children during the waves of the COVID-19 pandemic.[56] Besides, gender-based discrimination may take different forms across sectors in Hungary, such as inequalities in wages, work schedules, parental and sick leave and career opportunities.[57]

According to one report on the Hungarian electronics industry, direct discrimination against Roma people in transnational companies of the electronics industry is less common than in domestically owned companies. However, this may also relate to the skills required in the electronics industry, which may be lacking in a higher percentage of Roma people who have faced discrimination in the school system.[58]

53 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

54 Meszmann, T. T., Fedyuk, O. (2020): Non-Local Workers in Hungarian Automotives. Changing environments for worker mobility and modes of interest formation. Center for Policy Studies, Central European University Working Papers, 2020/2. https://cps.ceu.edu/sites/cps.ceu.edu/files/attachment/publication/3250/cps-working-paper-non-local-workers-hungarian-automotives-2020.pdf

55 Meszmann, T. T., Fedyuk, O. (2019): Snakes or Ladders? Job Quality Assessment among Temp Workers from Ukraine in Hungarian Electronics. Central and Eastern European Migration Review, 1., 75–93. http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-9b6d27a1-c465-49b8-8a1e-e56621c64c59/c/Meszmann_Fedyuk_Snakes_or_Ladders.pdf

56 Interview with a healthcare worker informant.

57 For a summary, see: Amnesty International (2020): No working around it. Gender-based discrimination in Hungarian workplaces. Amnesty International, London. https://www.amnesty.org/en/wp-content/uploads/2021/05/EUR2723782020ENGLISH.pdf

58 Váradi, M., Virág, T. (2014): Faces and causes of Roma marginalization: Experiences from Hungary. In: Szalai, J., Zentai, V. (eds.): Faces and causes of Roma marginalization in local contexts. Center for Policy Studies, Central European University, Budapest, 35–66. https://cps.ceu.edu/sites/cps.ceu.edu/files/cps-book-faces-and-causes-2014.pdf#page=36

In terms of legal procedures in cases of discrimination, workers or their representatives can submit a claim to the Directorate-General for Equal Treatment at the Office of the Commissioner for Fundamental Rights (Equal Treatment Authority until 2021). The human and financial resources of the Office are small, and the sanctions are not dissuading enough. Fines levied in case of a successful legal action are very low. Cases of discrimination can be taken to the courts, but the number of claims is decreasing as filing a claim has become more difficult recently, costs of legal proceedings are high, and court processes are slow. Although in cases of discrimination the burden of proof lies with the defendant, defending victims in court is found to be difficult by lawyers. Several forms of discrimination are most probably not even reported because of the lack of trust in the legal procedure or because of a lack of awareness on anti-discrimination rights.[59]

Adequate legal remedy procedures are missing in discrimination cases.

3.4. Violence-free Work Environment

Root cause analysis: Awareness of violence-free workplaces is low among electronics industry workers. Female workers are more vulnerable to violence and harassment.

Neither the ILO Violence and Harassment Convention (No. 190), nor the Istanbul Convention[60] has been ratified by Hungary. At several employers where the Hungarian Metalworkers' Federation (VASAS) is present, female workers reported sexual harassment and employers did not have effective measures and internal policies to tackle such issues. This was particularly so in male-dominated manufacturing sectors, such as in automotives. The Women Committee of the trade union has initiated some actions and campaigns in recent years to address this issue and raise awareness about the need for a violence-free work environment more generally.[61] One solution to reduce the risk of violence is to have proper internal procedures against violence at the workplace and to compile an equal treatment plan.

More widespread internal procedures on violence-free work environments would help achieve better working conditions.

3.5. No Exploitation of Child Labour and Young Employees

Root cause analysis: No instances of exploitation of children were found in the Hungarian electronics industry. School cooperatives

59 Amnesty International, 2020.

60 Council of Europe's Istanbul Convention, Action against violence against women and domestic violence https://www.coe.int/en/web/istanbul-convention/home?

61 For the interview with the officer of the Women Committee of VASAS, see: Meszmann, T. T. (ed.) (2019): Fókuszban: Kecskemét. Munkafeltételek a dél-alföldi autóiparban. Vasas Szakszervezeti Szövetség, Budapest, 18–22. https://budapest.fes.de/fileadmin/user_upload/dokumente/pdf-dateien/Kecskemet20190618.pdf

provide a flexible scheme of youth labour, excluded from the standard protection of labour law.

Hungary ratified two ILO core conventions on the elimination of child labour (No. 138 on minimum age and No. 182 on worst forms of child labour) in 1998 and 2000, respectively.

According to the Labour Code, employment under 16 years is forbidden; the age limit is 15 years during school breaks.[62] Workers under 18 years cannot be ordered to work night shifts or overtime, they should not work more than eight hours per day, are entitled to longer breaks than adult workers, and a legal guardian should approve their employment (Labour Code, Section 114).[63]

Young people who are still in the school system (either in secondary schools or in higher education) often work through 'school cooperatives'. School cooperatives organise work and provide the workforce for third parties, similarly to agencies. Students, as members of school cooperatives, take job opportunities in a flexible 'pay-as-you-go' scheme. This type of work is not an employment relationship and is excluded from standard protections under the labour law. As students have social security coverage through the school system their payroll taxes are lower. Student cooperatives can be regarded as disguised employment as the identity of the employer is masked by engaging students in a cooperative contract instead of an employment relation.[64]

School cooperatives provide a flexible and cheap form of work for companies, excluded from the standard protection of labour law.

Some jobs through school cooperatives are also offered in the electronics industry, such as operators at one contract manufacturer. In this case, recent job advertisements show that only adults are accepted so that they can work in the same shift routine as direct employees or agency workers.

Companies in the electronics industry also employ university students in dual tertiary degree programmes where practical training in companies is an integral part of the degree programme – like the German model. For companies this is also a form of cheap labour, as these students can be paid 65% of the minimum wage and salaries below the minimum wage are exempt from payroll taxes. The Labour Code applies to this type of employment.[65] For example, at one contract manufacturer, only a few

62 Compulsory schooling is until 16 years.

63 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

64 Kun, A. (2021): Non-standard forms of work in Hungary – Selected issues. In: Mihes, C (ed.): Non-standard forms of employment in selected countries in Central and Eastern Europe. A critical glance into regulation and implementation. International Labour Organization, Budapest, 47–68. https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-budapest/documents/publication/wcms_793096.pdf

65 Details are regulated by the Act CCIV of 2011 on the national higher education: https://net.jogtar.hu/jogszabaly?docid=a1100204.tv

dozen dual degree students were working, which is minimal compared to the size of the company which employed thousands of workers.

Within secondary-level vocational training, similar dual training exists where registered companies offer practical training. Practical training at companies is an employment relationship; wages are not attached to the minimum wage but are set by a separate government decree.[66] According to the official registry,[67] such apprentices are not working at the companies which are the primary focus of this risk assessment.

3.6. No Excessive Working Hours

Root cause analysis: The boom of the electronics industry in the 2010s and 2020s is based on the flexibilization of labour, offering favourable conditions for employers. Overtime regulations and the time-banking scheme – the latter being in conflict with ILO standards – leads to excessive working hours and irregular shifts.

Although Hungary did not ratify ILO Convention No. 1 on hours of work, general domestic regulations largely comply with the Electronics Watch Code. According to the Labour Code, the general working day is 8 hours. The daily working time shall not exceed 12 hours, and the weekly working time shall not exceed 48 hours, including overtime. After employees work six days in a row, one day off shall be scheduled. One rest day in each month shall be a Sunday. Eleven hours of uninterrupted rest shall be provided between shifts at a minimum.[68]

Employers can order 250 hours of overtime work in a calendar year. Since 2019, employers and employees can individually agree on an additional 150 hours of overtime work (i.e. 400 hours in total). Collective agreements might set 300 hours of overtime work, with an additional 100 hours agreed upon individually by the employer and employee.[69] Trade unions contested these overtime hours regulations introduced in the December 2018 amendment of the Labour Code because they took advantage of the uneven power relations between the employee and the employer.[70] Although the two parties shall agree on the 100–150 hours of additional 'voluntary' overtime in written form, employers can easily put pressure on workers to sign such overtime agreements. Also, trade unions reported excessive working hours

66 For more details, see: https://www.cedefop.europa.eu/en/tools/apprenticeship-schemes/scheme-fiches/apprenticeship-dual-vocational-training

67 https://www.isziir.hu/_frontend/index.php?module=gsz_nyilvantartasi_felulet

68 Sections 92, 99, 104 and 105 of the Labour Code. See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

69 Sections 109 and 135 of the Labour Code. See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en Note that the English text contains the Labour Code as of 2018 and new overtime hours regulations are in place since 2019.

70 On the background of the 'Slave law', see Gagyi, Á., Gerőcs, T. (2019): The Political Economy of Hungary's New "Slave Law". LeftEast, January 1. https://lefteast.org/the-political-economy-of-hungarys-new-slave-law/

even beyond the legal maximum, reaching 2800 working hours in one year. In these cases, employees' working hours on pay slips are falsified and extra hours are paid out as bonuses or 'other salary' instead of overtime work.[71] Employees often agree to work excessive hours because of their short-term interest to earn decent wages (on wages, see Sections 4.8. and 4.9.); therefore, the latency of working excessive hours is high.

Regulations enable excessive working hours; the general eight-hours working day with foreseeable shifts is rare.

Overtime work also results in dividing workers, based on gender and migration background. When female workers must work overtime, they have fewer hours left to undertake reproductive work within the family, which might lead to tensions in the domestic sphere. In these cases, husbands rarely take over duties from female family members. In the case of migrant workers, either their short-term contract or the lack of reproductive work in the family (as family members generally remain in the sending countries) mean that they are more willing to work extra hours to earn more.

Flexibilization of working time is furthered by the time-banking system, which is used by almost all large companies in the electronics industry. A previous report assessed that the Hungarian time-banking scheme conflicts with ILO standards and the respective EU directive[72]; regulations have become even more flexible since the writing of that report.[73] In this system, working hours are counted over a longer period and are unevenly distributed. For example, the 48 hour weekly maximum must not be considered each working week, but as an average over a longer reference period. Overtime hours can be levelled-off within the reference period.[74] Reference periods either follow each other or start each week in a rolling version with rolling averages. The maximal reference period of time banking is shown in Table 2. During the COVID-19 emergency period in 2020, employers could unilaterally impose a 24-months reference period, which led to a Freedom of Association case by the ILO. The ILO urged the Hungarian Government to engage in tripartite dialogue before introducing such measures.[75] Agencies can also use the time-banking system. The reference period might differ for direct and agency workers at the same factory.

71 Interview with a trade unionist and a labour lawyer.

72 Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time. http://data.europa.eu/eli/dir/2003/88/oj

73 Perényi, Zs., Rácz, K., Schipper, I. (2012): The Flex syndrome. Working conditions in the Hungarian electronics sector. SOMO, Amsterdam. https://www.somo.nl/wp-content/uploads/2012/12/The-Flex-Syndrome.pdf

74 Take this hypothetical and simplified example with a 28-days February month, starting on Monday. The company uses time-banking with a one-month reference period. The month has 20 standard working days, i.e. 160 working hours. In the first week, the worker is scheduled 12 hours, Monday to Saturday, i.e. 72 hours. Sunday is off. This repeats the second week. On the third week, the employee works 4 hours Monday to Thursday, i.e. 16 hours. The rest of the month is off. Total working hours: 72+72+16=160 hours over the reference period. One day off after six days on is ensured. There are no overtime hours and no overtime payment, as extra hours in the first two weeks are levelled-off in the following two weeks, and total working hours do not go over the standard 160 hours.

75 For the details, see https://www.ilo.org/dyn/normlex/en/f?p=1000:50002:0::NO:50002:P50002_COMPLAINT_TEXT_ID:4111043

Table 2: The maximal reference period of the time banking scheme (discontinued versions in parentheses)

Maximum duration	Applies for	Note
Four months	Standard maximal reference period.	–
Six months	When working in shifts.	Companies in the electronics industry fall into this category, as there are more than one shift. Can be unilaterally introduced by the employer, no collective agreement is needed.
Twelve months	If justified by technical reasons or reasons related to work organization. Introduced only by collective agreement.	Until 2018, substituted by 36 months.
Twenty-four months	Could unilaterally be imposed by the employer, also disregarding existing collective agreements.	Interim COVID-19 regulation, between April and June 2020.
Twenty-four months	New job-creating investments of national interest, when approved by the government.	Introduced By Act LVIII of 2020. Companies must file an application and ask for government approval.
Thirty-six months	If justified by technical reasons or reasons related to work organization. Introduction only by collective agreement.	This maximum length is unfavourable for workers, so trade unions generally do not approve the maximum to be introduced. Twelve months are often reasonable because of the within-year volatility of production.

Source: Section 94 of the Labour Code.

Employers can manage the seasonality and volatility of production with the time-banking scheme without paying overtime hours during peak periods, as peak season overtime is levelled-off in non-peak periods.[76] The time-banking scheme is coupled with the possibility of short-notice shifts: shifts shall be made known seven days in advance, but might be changed four days in advance when unforeseen circumstances occur.[77] High fluctuation of workers and the labour shortage in the sector exacerbate the usage of short-notice shift changes. Short-notice shifts and their cancellations also lead to chaotic registration of working hours: normal shifts, overtime shifts, cancelled shifts, cancelled overtime shifts, days off and holidays often do not correspond to what was occurring in reality in this uneven work scheduling system.[78]

With the time-banking scheme employers can manage the volatility of production. Employees experience short-notice shifts and irregular scheduling with fewer overtime supplements.

Time-banking is a complicated system, which necessitates a competent HR department and an electronic system for the registration of working hours.

76 Sections 93–94 and 156 of the Labour Code. See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en Note that the English text contains the Labour Code as of 2018, and new time-banking regulations are in place since 2019.

77 Section 97 of the Labour Code. See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en Note that the English text contains the Labour Code as of 2018, and new work scheduling regulations are in place since 2019.

78 Interview with a trade unionist.

Trade unions reported the chaotic registration of working hours at several companies in the electronics industry, which might unintentionally lead to lower salaries. Employees cannot easily check how many hours they worked and whether pay slips are correct, and they do not report errors of calculation if the salary on the payslip seems reasonably high.[79]

The labour inspectorate has also reported non-compliance issues with the registration of working hours and work schedules. Labour inspections vary between years, but in 2020, for example, 2100 false or incomplete working time records and 1800 incorrect work scheduling documents were found among 3300 inspected workers in electronics manufacturing (NACE 26). In other years, however, less than 100 such cases were found.[80] Trade unions and some politicians also suspect that labour inspections at strategic partner companies[81] of the government are less common and less strict. According to trade unions, labour inspectorates are understaffed and employers are skilful in hiding overtime violations – therefore, violations often go undetected.[82]

Scheduling and the length of breaks also lead to excessive working hours. According to the Labour Code (Section 103), a 20-minute break shall be provided when the shift exceeds six hours, and an additional 25 minutes shall be scheduled when the shift exceeds nine hours.[83] At some companies in the electronics industry, bathroom breaks are deducted from working hours, as employees shall clock in and clock out with their badges at the working bench, not when entering the shop floor. Breaks are often too short to eat, rest and go to the bathroom, especially when breaks take place at the same time for the entire factory and facilities become overcrowded.[84] Labour inspections have also found some irregularities with breaks, more often between 2015 and 2017, affecting around 200 workers out of 2000–4000 inspected employees in NACE 26 and 27 combined. These violations seem to be less prevalent since 2018, according to inspection data.[85]

3.7. Safe and Healthy Working Conditions

Root cause analysis: There are examples of serious harms at several factories in the electronics industry, including non-ergonomic

79 Interview with a trade unionist.

80 Data by and written communication with the Department of Labour Inspection, Ministry for Innovation and Technology provided for Periféria Policy and Research Center.

81 The Hungarian Government has signed strategic cooperation agreements with around 100 companies since 2012, including some in the electronics industry, such as IBM, Jabil, National Instruments and Samsung as well as agencies such as Prohumán. For the full list, see: https://kormany.hu/kulgazdasagi-es-kulugyminiszterium/strategiai-partnersegi-megallapodasok

82 Eurofound (2022): Overtime in Europe: Regulation and practice. Publications Office of the European Union, Luxembourg. https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21025en.pdf

83 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

84 Interview with a trade unionist.

85 Data by and written communication with the Department of Labour Inspection, Ministry for Innovation and Technology provided for Periféria Policy and Research Center.

workplaces in the ICT industry and exposure to toxic materials in the battery value chain. The strategic engagement with long-term occupational health risks is missing – both at companies and in labour policies. Understaffed state authorities of occupational health and safety, labour inspection and disaster management as well as the small number of inspections and low fines increase the risk of harm and lead to inadequate remedies.

Hungary ratified the fundamental ILO Convention No. 155 on occupational health and safety in 1994. Act XCIII of 1993 established the legislative framework for occupational health and safety in Hungary.[86] The general provisions of the Act underline that: 'All persons working within the territory of Hungary shall have the right to safe, healthy working conditions.' Also the Fundamental Law states that: 'Every employee shall have the right to working conditions which ensure respect for his or her health, safety and dignity.'[87]

The Ministry of Technology and Industry is responsible for occupational health and safety issues within the government from May 2022 (Ministry of Innovation and Technology until 2022). The coordination of health and safety activities lies with the Department of Occupational Health and Safety within the ministry. County-level government offices act as authorities in inspection and enforcement. Some professional tasks related to health issues are located at the National Public Health Center.[88]

The National Occupational Safety Policy 2016–2022[89] outlines the priorities in occupational health and safety issues, drawing also on the Strategic Framework on Health and Safety at Work at the EU level and on WHO's Global Plan of Action on Workers' Health.

Occupational health and safety inspections took place at 104 companies in the electronics industry (NACE 26 and 27) in 2021. 77% of inspected companies were not meeting some legal requirements, which is slightly higher than the 70% share for the entire economy. Inspections covered 14,000 workers in the electronics industry, 7% of whom were affected by severe irregularities. The main occupational health and safety irregularities found by inspectors in 2021 were operational safety deficiencies of equipment – missing protective covers and safety equipment – with 38 cases reported. There were also 25 cases of companies not meeting regulations on risk assessments of hazardous materials.[90]

86 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=38155&p_lang=en

87 The Fundamental Law of Hungary, Article XVII (3). https://hunconcourt.hu/uploads/sites/3/2021/01/thefundamentallawofhungary_20201223_fin.pdf

88 On the institutional framework see: https://oshwiki.eu/wiki/OSH_system_at_national_level_-_Hungary#OSH_infrastructure

89 See the English text here: http://www.ommf.gov.hu/letoltes.php?d_id=7146

90 Data by the Department of Occupational Safety and Health, Ministry of Innovation and Technology, provided for Periféria Policy and Research Center.

The human and infrastructural capacities of labour inspections are limited.

Employers must report accidents at work to the government offices acting as occupational health and safety authorities. The Department of Occupational Health and Safety within the Ministry of Technology and Industry compiles accidents at work data at the national level, according to a common methodology within the European Union (European Statistics on Accidents at Work, ESAW).[91] The Department also regularly publishes analyses of accidents at work data on its website in Hungarian.[92] The National Occupational Safety Policy as well as the annual reports of the Department of Occupational Health and Safety underline a general trend in the whole economy of employers not reporting accidents, and stressing the responsibility of the employee by overemphasising the carelessness of workers in accident reports.[93] Our interviews with trade unionists confirmed this statement for the electronics industry.

Accidents at work in the electronics industry (Table 3) decreased in the early-2010s, increased until 2018 and stagnated since then. Both absolute numbers and the incidence rate (accidents per 100,000 workers) are higher in the NACE 27 sector than in NACE 26. Incidence rates in Hungary in both sectors were generally lower than the European Union average (27 countries) between 2008 and 2019.

Between 2008 and 2021 there were two fatal accidents, both in 2017, in the NACE 26 sector, and eight fatal accidents in the NACE 27 sector, with three fatal accidents occurring in 2021. The number of non-fatal accidents with mutilation averaged 2.1 (NACE 26) and 5.2 (NACE 27) between 2008 and 2021.

Table 3: Number of accidents at work in the Hungarian electronics industry (2008–2021)

NACE	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
26 – Manufacture of computer, electronic and optical products	668	429	556	436	402	241	299	349	394	405	414	393	353	363
27 – Manufacture of electrical equipment	645	386	397	301	284	357	421	423	466	507	535	512	505	469

Source: Department of Occupational Safety and Health, Ministry of Innovation and Technology, http://www.ommf.gov.hu/index.php?akt_menu=223.

91 On the ESAW methodology, see: https://ec.europa.eu/eurostat/documents/3859598/5926181/KS-RA-12-102-EN.PDF

92 http://www.ommf.gov.hu/index.php?akt_menu=223

93 See for example the 2020 annual report on labour safety here: https://mvff.munka.hu/letoltes.php?d_id=8198

A detailed analysis of accidents at work in 2021 for NACE 26 and 27 combined reveals the following general patterns.[94]

- About half of the accidents occurred in large workplaces employing at least 500 workers.
- Out of 832 accidents 23 involved non-Hungarian workers.
- Full-time workers with permanent contracts represented 91% of the wounded persons.
- 55% of accidents corresponded to ISCO group 8 jobs (plant and machine operators and assemblers), 24% to ISCO group 9 jobs (elementary occupations) and 13% to ISCO group 7 jobs (craft and related trades workers).
- 60% of accidents occurred during production, manufacturing and processing; 14% during movement, including aboard means of transport and 11% during storing storage.
- Most prevailing accidents were open wounds of fingers with 11%, superficial injuries of fingers with 9%, and superficial injuries to a leg, including the knee with 6%.
- Only a small per cent of accidents occurred with various safety equipment and safety solutions present, but not working, present but not used, or not present but needed.

Media sometimes also covers labour accidents and other major issues of occupational health and safety. Within the electronics industry, battery-producing factories have featured more frequently in recent years in media reports, partially because of active local NGOs who are concerned primarily about environmental issues and disruptions of the quality of life.

To mention some examples, one of the large battery producers started production without a completion certificate for some buildings. Disaster Management, as the responsible state agency, reported shortfalls of fire protection which might have caused a risk for employees working with toxic materials and therefore fined the company several times in 2020 and 2021.[95] Another battery-producing facility was in the news as 14 workers were transported to a hospital for a health check after an assumed leakage of the toxic material hydrogen cyanide in January 2022.[96] In this latter

94 Data by the Department of Occupational Safety and Health, Ministry of Innovation and Technology, provided for Periféria Policy and Research Center. Analysis of raw microdata on accidents were undertaken by the author of this report.

95 For a summary of the case, see: https://atlatszo.hu/2021/09/24/samsung-gyar-a-tiltas-es-buntetes-ellenere-engedelyek-nelkul-folyt-a-gyartas/ For the official documents of the disaster management about the lack of the completion certificate, see: https://kimittud.hu/request/hatarozatok_es_katasztrofavedelm

96 https://24.hu/fn/gazdasag/2022/01/20/komarom-akkumulatorgyar-baleset-uzemzavar-veszelyes-anyag-szivargas-tuz-robbanas/

company, the trade union reported several cases involving the labour inspection, and raised several occupational health and safety issues – such as nickel levels in urine samples being tenfold of reference values – during negotiations with the employer in early 2022.[97] Also, a trade unionist highlighted exposure risks due to the usage of lead-based solders in ICT manufacturing. An occupational health and safety expert confirmed the previous use of lead in the ICT industry. As exemptions to the use of lead in ICT production expired in 2021, a transition to lead-free materials occurred, in line with the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.[98]

Risk of exposure to toxic materials is higher in the Hungarian battery production value chain than in the manufacturing of ICT products.

Workers' representatives for occupational health and safety shall be present at all employers with at least 20 workers. Representatives should be elected by a secret and direct ballot. The representatives have wide consultative rights. At unionised workplaces, union officials are often elected for the role of occupational safety representatives and the union provides additional training for them. However, if a trade union is not present, management-friendly occupational health and safety representatives are often elected who have neither interest nor training in occupational health and safety issues.[99] Data on accidents at work in the electronics industry (NACE 26 and 27 combined) reveal that in 14% of cases there were no workers' representatives for occupational health and safety at the respective companies. This share is the same for companies with at least 500 employees.

Also, workers can directly participate in occupational health and safety measures as well as decision-making. In a non-representative survey of the electronics industry (both NACE 26 and NACE 27) in 2018, half of the workers reported that they were not consulted about working conditions before changes in the production process were implemented.[100]

Employers must provide safe and healthy working conditions for their workers. Risk assessments are to be undertaken regularly, and employers should adequately train employees on occupational health and safety when they are hired and change positions. In two-thirds of cases, labour accidents lead to additional training of workers, according to the self-filled

97 http://www.vdsz.hu/hirek/6/munkavedelmi_egyeztetes_az_sk_on_hungarynel/1401/ see also https://www.youtube.com/watch?v=3A1pz-31chM

98 Interview with a trade unionist; e-mail correspondence with an occupational health and safety expert. For the EU directive, see http://data.europa.eu/eli/dir/2011/65/oj; the corresponding Hungarian legislation is the Government decree 274/2012 - https://net.jogtar.hu/jogszabaly?docid=A1200374.KOR

99 Interview with a trade unionist.

100 Toldy A. (2018a): A gyártósori és szalag mellett végzett munkák egészségügyi és pszichés károsító hatásainak vizsgálata, különös tekintettel a megelőzés lehetőségeire – "a számítógép, elektronikai, optikai termék gyártása" nemzetgazdasági ágazatban. Vállalkozók és Munkáltatók Országos Szövetsége, Budapest. https://vosz.hu/data/file/2020/07/06/szmtgp_gazat_kutatsi_eredmny.pdf; Toldy A. (2018b): A gyártósori és szalag mellett végzett munkák egészségügyi és pszichés károsító hatásainak vizsgálata, különös tekintettel a megelőzés lehetőségeire – "a villamos berendezések gyártása" nemzetgazdasági ágazatban. Vállalkozók és Munkáltatók Országos Szövetsége, Budapest.

accident reports of companies. A potential risk found in non-representative surveys of the electronics industry (NACE 26 and NACE 27) in 2018 is that line managers are not adequately trained in occupational health and safety, although they serve as the primary contact points for assembly line workers if questions or issues arise.[101] The cause is partly the high fluctuation of the workforce, leading also to the promotion of workers to line managers without adequate knowledge and skills.[102]

Line managers are not adequately trained in occupational health and safety, although they serve as primary contact points for assembly-line workers.

A non-representative survey in 2018 in the electronics industry covering 25 employers and 100 employees (NACE 26) as well as 25 employers and 110 employees (NACE 27) found that only a third of the companies had internal action plans on occupational health and safety, and they mostly fail to address health-related risks and provide solutions for workers. The most prevailing health risk is the monotonous labour process with static working postures at the assembly line. The rotation of employees across positions was typical in only less than half of the respondent companies, which leads to constant physical stress on workers' bodies. Employees are also often against rotation across different positions, as they fear decreasing wages because of output-based pay. Typical work-related health problems are joint disorders, which are partially caused by non-ergonomic working environments: half of the employees in NACE 26 reported that workstations cannot be adjusted. Also, 40% (NACE 26) and 52% (NACE 27) of respondent workers reported that they regularly do physical work in their free time, presumably in the household, which poses a risk to the regeneration of the body after shifts; explaining why almost half (NACE 26) or a quarter (NACE 27) of workers complained about decreased energy levels and exhaustion.[103]

Companies should have strategies in place to deal with the long-term health-related effects of monotonous labour processes on the assembly line.

Trade union interviews also highlighted that companies have no strategies for dealing with long-term health-related effects of work in the electronics industry. This means that workers who are physically unable to work on the assembly line after 5–10 years have difficulty finding new jobs. Employees and employers should both be motivated to constantly train people for future jobs after they quit the electronics industry.[104]

101 Toldy 2018a, 2018b.

102 Interview with a trade unionist.

103 Toldy 2018a, 2018b.

104 Interview with a trade unionist.

3.8. No Abusive Termination of Employment

Root cause analysis: The current labour shortage reduced the risks of abusive termination of employment, but trade unions reported some cases, even in well-organised factories.

Hungary did not ratify ILO Convention 158 on termination of employment. Sections 64–76 of the Hungarian Labour Code describe the circumstances of the termination of employment, which conform to the Electronics Watch Code. The reason for the termination shall be clearly specified; reasons must be in connection with the employee's behaviour in relation to the employment relationship, with their ability, or in connection with the employer's operations. Additional protection against the termination of employment is given to pregnant women, parents on maternity leave, women receiving treatment related to a human reproduction procedure and mothers and single fathers with a child aged less than three years. Also, employees aged between 60 and 65 (the latter is the general retirement age) enjoy protection against some forms of termination of employment. Trade union officials' contracts might only be terminated after prior consent of the trade union (Section 273 of the Labour Code).[105]

Abusive termination of employment occurred at one contract manufacturer in the early-2010s during a mass layoff: the employer suspended workers because they broke rules, but workers argued that these layoffs were only executed to cut the costs of dismissals. Our informants reported that the new management has treated workers better in the past years in the same factory, also because of the current labour shortage and trade union efforts. Mass layoffs have not taken place recently in the electronics industry; even contract manufacturers could offer relatively stable employment opportunities.[106]

Another technique of termination of employment has been to use probationary period contracts in peak months of production. Probationary periods might last a maximum of three months according to the Labour Code, and the contract can be terminated without justification.[107] These and other short-term contracts have less often been used in the past years in the electronics industry, as companies have difficulties finding workers with the current labour shortage.[108]

105 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

106 To name an example, as Lenovo's production was insourced from Flex in late 2021, nobody lost their job in the Sárvár plant because of this move: Flex had other non-ICT contracts which could 'absorb' workers. https://g7.hu/kozelet/20201019/milliardokat-fizet-a-kormany-hogy-az-egyik-magyar-gyarbol-egy-masikba-vigyek-a-termelest/

107 On such practices with Hungarian workers and their substitution with Ukrainian nationals in the past years in the electronics industry, see for example: https://magyarnemzet.hu/hetvegi-magazin/2017/02/hozzaszoktak-a-tulorahoz-ugy-kell-oket-visszafogni

108 Interview with a trade unionist.

The current labour shortage has reduced the risks of abusive termination of employment, as employers struggle to find new workers.

A trade union informant cited several cases of the termination of contracts of employees seeking to form a local trade union at several companies in the electronics industry. There have also been cases of threatening workers with dismissal if they do not work overtime. Other cases of abusive dismissal include disputes over occupational health and safety – for example, if an employee refuses to work with an unsafe tool or machine – or responsibilities related to labour accidents.[109]

3.9. Legal Wages

Root cause analysis: The Hungarian economic model is based on cheap labour. Current wage structures are complicated, with base wage, wage supplements for working at certain hours and overtime, performance bonuses and fringe benefits. This wage system favours younger male workers who have fewer duties of care work at home. The time-banking scheme might practically result in unpaid overtime hours and payslips that are difficult to understand.

Hungary ratified ILO Convention No. 95 on the protection of wages but did not ratify convention No. 131 on minimum wage fixing and No. 173 on the protection of workers' claims. The government sets the statutory minimum wage in a government decree after yearly consultations with the main national civil dialogue organisation (National Economic and Social Council).[110] Negotiations take place within the national tripartite body, the Permanent Consultative Forum of the Private Sector and the Government. Minimum wages must be set, 'based on the requirements prescribed for specific occupations, the indicators of the national labour market, the status of the national economy, and the unique requirements of certain economic sectors and geographical areas in terms of workforce', but not on living wage standards (Section 153 of the Labour Code).[111] Geographical or sectoral differentiation in the minimum wage has never been present.

Currently, there are two different statutory minimum wages in Hungary: a higher minimum wage applies for jobs requiring at least secondary educational attainment. Since January 2022, the monthly minimum wage for a full-time employee has been HUF 200,000 gross (€ 534), and HUF 260,000 gross (€ 694) in jobs requiring at least secondary educational attainment.[112]

109 Interview with a trade unionist.

110 The Council includes members beyond employees' and employers' organisations, such as churches, representatives of artists or scientists. Therefore, it is not a functioning social dialogue body; it also lacks any negotiation function. See in detail: https://www.eurofound.europa.eu/it/country/hungary#pay

111 See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

112 HUF–€ exchange rates as of April 2022. Eurostat data: https://ec.europa.eu/eurostat/databrowser/product/view/ERT_BIL_EUR_M

Corresponding general minimum net earnings are HUF 133,000 (€ 355) and HUF 172,900 (€ 461), respectively.[113] In-kind benefits cannot substitute for the minimum wage. Minimum wages also apply to agency workers and third-country nationals. Operator jobs in the electronics industry do not require secondary school attainment; therefore the HUF 200,000 is their statutory minimum wage.

A 50% wage supplement is paid for working on Sundays and for working overtime. 100% wage supplement is paid for working on holidays and for working on a scheduled weekly rest day. If the scheduled start of the working time changes at least in one-third of the working days, employees receive a 30% wage supplement for work performed between 6:00 PM and 6:00 AM.[114] The time-banking scheme often results in unpaid overtime: if overtime hours are levelled-off by fewer working hours, and the average working hours do not go over 40 hours per week within the reference period of the time-banking scheme, no overtime supplement is paid.

The time-banking scheme often results in unpaid overtime, when average working hours during the reference period do not exceed standard working hours.

Actual wages in the electronics industry typically contain the base wage, mandatory wage supplements in the case of alternating shifts and performance-related bonuses. Fringe benefits in the sector might include free transportation to the factory by buses, free meals, a cafeteria plan and health insurance. Agency workers might also have accommodation arranged – this is rare for direct employees. Non-local third-country nationals often get organised transportation between their hometown and the factory/dormitory before and after their short-term contract. Bonuses are paid for attendance, no sick leave, or meeting the production goals.[115] Bonuses paid for attendance or no sick leave indirectly discriminate against women with children who have care duties, resulting also in a gender pay gap. Also, non-local workers who have no families to care for have more freedom to take overtime shifts and can therefore expect higher wages through wage supplements.[116]

Fringe benefits might legally differ between direct employees and agency workers if there is an objective reason for differences. For example, it is not illegal if a Ukrainian employee gets free accommodation from the

113 Families with children are entitled to family tax allowance. Low-income persons under 25 years as well as mothers with four children or more do not pay personal income tax which is 15% of the gross wage. Total labour cost equals the gross wage plus 13% payroll taxes paid by the employer.

114 Sections 140–143 of the Labour Code. See the ILO NATLEX database entry at https://www.ilo.org/dyn/natlex/natlex4.detail?p_isn=89886&p_lang=en

115 Source: interviews with trade unionists, job advertisements. See also: Meszmann, T. T., Fedyuk, O., Zentai, V. (2020): Unionisation of non-local workers: A capacity-building opportunity for trade unions? Policy paper. Friedrich-Ebert-Stiftung, Budapest. https://library.fes.de/pdf-files/bueros/budapest/16271.pdf

116 Interview with an expert on migrant labourers.

agency, but the direct employee of the company does not, as it cannot be assumed that the Ukrainian worker can commute from distances of several hundred kilometres. Because of the current labour shortage in Hungary, agency workers sometimes receive higher wages and benefits in total than direct employees of the companies. Especially in recent years, direct employees who have worked for the company for several years often did not get significant pay rises. This has in turn resulted in tensions around small or non-existent wage differences between experienced workers and newcomers.[117] These tensions around remuneration also warrant the attention of trade unions, and new strategies are needed to remedy the structural disadvantages of vulnerable worker groups, combined with recognition of the expertise of established workers.[118]

Written payslips are mandatory and must 'allow the employee to check the authenticity of calculations, as well as the grounds and sums of deductions' (Labour Code, Section 155). Because of the complicated wage structure and the complicated calculations beyond what counts as overtime in the time-banking scheme, pay slips are often not understandable for the employees. For migrant workers, this is even more significant, as they have less contextual knowledge and have language barriers in understanding Hungarian labour regulations, even if payslips are in their mother tongue.[119]

Payslips are often not understandable for employees, because of the complicated time-banking scheme.

3.10. Living wages

Root cause analysis: For families with children, living wages can only be earned with overtime supplements and bonuses. Overburden due to housing costs is a significant issue, both for direct and agency workers.

The Hungarian Central Statistical Office used to calculate and publish living wages for different household types until 2015.[120] Since then, only non-government expert estimates are available. For the latest figure, 2019, a single-person household's living wage was HUF 101,398 (€ 312) per month; a household with two adults and two children needed HUF 294,055 (€ 904). The former figure roughly corresponded to the net minimum wage (HUF 99,085 = € 305) of the same year.[121]

117 Interviews with a labour lawyer and trade unionists.

118 See in detail: Meszmann, T. T., Fedyuk, O., Zentai, V. (2020): Unionisation of non-local workers: A capacity-building opportunity for trade unions? Policy paper. Friedrich-Ebert-Stiftung, Budapest. https://library.fes.de/pdf-files/bueros/budapest/16271.pdf

119 Meszmann, T. T., Fedyuk, O. (2019): Snakes or Ladders? Job Quality Assessment among Temp Workers from Ukraine in Hungarian Electronics. Central and Eastern European Migration Review, 1., 75–93. http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-9b6d27a1-c465-49b8-8a1e-e56621c64c59/c/Meszmann_Fedyuk_Snakes_or_Ladders.pdf

120 https://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_zhc011.html

A comparable figure by the Hungarian Central Statistical Office is on the necessary amount of income for different subsistence levels. According to the latest estimation for 2020, an average person at an average subsistence level needs HUF 148,700 (€ 423) a month.[122]

Average wages in the electronics industry are summarised in Table 4. Average wages for the entire sector can be misleading because they hide wage differences between companies or workers, and do not inform about the wage structure (base wages, mandatory wage supplements for overtime, bonuses etc.). Moreover, agency workers are excluded from these statistics, as the wage statistics are based on the sector of the employer.

In addition to Table 4 data on the sector of the employer, earnings according to occupation are also available. For example, electrical and electronic equipment assemblers (ISCO 8212) earned HUF 326,808 (€ 912) monthly gross in 2021.[123]

Table 4: Average gross and net wages of full-time employees in the electronics industry (first quarter of 2022)

NACE	All employees – gross wages	Manual workers – gross wages	All employees – net wages	Manual workers – net wages
26 – Manufacture of computer, electronic and optical products	HUF 537,112 € 1426	HUF 396,722 € 1053	HUF 357,179 € 948	HUF 263,820 € 700
27 – Manufacture of electrical equipment	HUF 497,377 € 1321	HUF 383,162 € 1017	HUF 330,756 € 878	HUF 254,802 € 677

Source: Hungarian Central Statistical Office Dissemination database – https://statinfo.ksh.hu/Statinfo/QueryServlet?ha=LG1005KN; on March 2022 currency exchange rates of Eurostat – https://ec.europa.eu/eurostat/databrowser/product/view/ERT_BIL_EUR_M

There are significant wage differences between companies in different parts of the country. At a contract manufacturer in a peripheral location, the base wage for operators is always only slightly above the minimum wage – wage supplements are paid additionally, after night shifts for example. At an OEM manufacturer in a central location, the base wage for operators is around HUF 200,000 net. A battery manufacturer recently advertised operator jobs with one-year work experience for HUF 510,000 gross with wage supplements, bonuses and fringe benefits; presumably the maximum wage which can be achieved in this position, with the legally possible overtime. All in all, assembly-line workers in the electronics industry can earn living wages

121 For the living wages see Policy Agenda (2020): Létminimum és társadalmi minimum 2019-ben Magyarországon (előzetes adatok). https://policyagenda.hu/wp-content/uploads/2020/09/L%C3%A9tminimum-%C3%A9s-t%C3%A1rsadalmi-minimum-el%C5%91zetes-adatok-2019.docx HUF-€ exchange rates are based on Eurostat yearly data: https://ec.europa.eu/eurostat/databrowser/product/view/ERT_BIL_EUR_A

122 https://www.ksh.hu/stadat_files/jov/en/jov0011.html

123 https://www.ksh.hu/stadat_files/mun/en/mun0059.html

only if they work overtime, in alternating shifts as well as if their bonuses are not jeopardised.[124] Also, because of the current housing crisis in Hungary, where 20-30% of the population lives in housing poverty,[125] affordable housing – e.g. owning a house without a mortgage, or paying below market price rent in the narrow private rental sector – is often a prerequisite to covering monthly expenses.

Living wages can only be earned by most assembly-line workers if they work overtime, in alternating shifts, and do not lose bonuses.

Employers cannot easily mitigate the labour shortage of the past years with workers from neighbouring countries, as was the case during the late-1990s to early-2000s boom of the electronics industry. Particularly, commuters from Slovakia disappeared from the sector, because of higher wages when working in their home country.[126] Experts and trade unions often consider third-country nationals working as migrant labourers in the electronics industry as contributing to the wage dumping of Hungarian workers. Other experts, however, emphasise that third-country workers represent a small share of workers, and government incentives to ease their employment only make the profit of some agencies higher, but do not considerably change the wage outlooks of direct employees.[127]

Living wages can be kept lower for agency workers for whom accommodation is arranged and paid for. Conditions in the dormitories, however, are often unsatisfactory; for example, people cannot properly rest because roommates have differing shift routines. The Hungarian Government launched a programme for supporting the construction of new dormitories in 2017. This increased the profitability of agency companies and other enterprises running the dormitories in certain locations but did not solve the general lack of adequate and affordable housing for a large and increasing number of non-local workers in the electronics industry and other sectors. Also, these workers' hostels only make the basic social reproduction of the labour force possible.[128]

124 Interviews with trade unionists; job advertisements of companies and temporary work agencies.

125 See for example Ámon, K. et al. (2019): Annual Report on Housing Poverty in Hungary – Executive Summary. Habitat for Humanity Hungary, Budapest. https://habitat.hu/sites/lakhatasi-jelentes/wp-content/uploads/sites/5/2020/01/HFH2019EN_V2.pdf

126 https://szakszervezetek.hu/dokumentumok/mibol-elunk/3115-panikhelyzet-alakul-ki-a-kronikus-munkaerohiany-miatt

127 https://nepszava.hu/3157803_munkaero-kolcsonzes-orban-kormany-vendegmunkas-tavol-kelet

128 Nagy, K. (2020): Robotnak nem kell munkásszállás. Munkásszállás-építés a globális munkakereslet szolgálatában. BA thesis. Eötvös Loránd Tudományegyetem, Budapest.

4. Recommended Actions

This regional risk assessment of the electronics industry in Hungary, based on the Electronics Watch Code, identifies the main risks of harms that electronics workers face. The key actions to mitigate and prevent risks to workers in the short term are the following.

Risk area	Main risks identified by the report	Key actions for companies
Employment is freely chosen	Third-country nationals employed through agencies are dependent on agencies	Reduce vulnerability of third-country agency workers by developing secure ways of terminating contracts without losing livelihoods in Hungary
Freedom of association and the right to collective bargaining	Freedom of association is restricted in some companies	Ensure that workers can exercise their right to form unions Ensure collective bargaining in good faith
	Agency workers are unionised to a smaller share and they are not covered by collective agreements	Ensure in contracts with agencies that agency workers and direct employees are treated equally
No discrimination in employment	Workers' awareness of discrimination is low	Reveal possible cases of discrimination, primarily across gender and ethnicity. Train all workers on non-discrimination
Violence-free work environment	Workers' awareness of violence at the workplace is low	Train all workers on violence-free working environment
No exploitation of child labour and young employees	Working through a school cooperative, which is practically an agency, is excluded from the standard protection of labour law	Limit contract work through school cooperatives; substitute with direct employment
No excessive working hours	Seasonal fluctuations of production put an excessive burden on workers in peak periods	Reduce the extensive use of time-banking and short-notice shifts. Introduce overtime regulations after dialogue with trade unions and works councils
	Labour shortage leads to the intensification of production with faster production and tighter shifts	Introduce breaks of adequate length to eat and rest

Safe and healthy working conditions	Workers' knowledge and awareness of occupational health and safety is often not adequate	Strengthen workers' awareness of occupational health and safety issues. Train line managers adequately on occupational health and safety. Guarantee full reporting of accidents at work
	Non-ergonomic assembly lines and exposure to toxic materials lead to health-related risks	Introduce more ergonomic working environments after consultations with workers. Reduce exposure to toxic materials, primarily in the battery value chain
	Excessive overtime leads to health risks and the exhaustion of electronics industry workers	Introduce effective remedies for workers for long-term health harms, after discussions with workers' representatives for occupational safety
No abusive termination of employment	Employees sometimes threaten workers who ask for better working conditions with dismissal	Ensure that employers do not dismiss workers who report occupational health and safety risks or raise their voice on work-related issues
Legal wages	Payslips are often not understandable because of complex time-banking calculations and bonus systems	Develop solutions with workers' representatives to ensure that all workers can understand and check the correctness of their payslips
Living wages	Most assembly-line workers can only earn living wages with overtime, wage supplements and performance bonuses	Ensure that living wages can be achieved without working overtime and meeting strict bonus criteria

5. Appendix

Appendix 1: Ratification of ILO and UN Conventions by Hungary, mentioned in the Electronics Watch Code (core conventions are shown with grey backgrounds).

Note that as Hungary is an ILO member state since 1922, all fundamental conventions apply to the country.

Convention	
ILO Conventions	**Ratification by Hungary**
C1 – Hours of Work (Industry) Convention, 1919	Not Ratified
C29 – Forced Labour Convention, 1930	In Force – 08 Jun 1956 (Re-ratified 25 Jun 2000)*
C87 – Freedom of Association and Protection of the Right to Organise Convention, 1948	In Force – 06 Jun 1957 (Re-ratified 25 Jun 2000)*
C95 – Protection of Wages Convention, 1949	In Force – 08 Jun 1956 (Re-ratified 25 Jun 2000)*
C97 – Migration for Employment Convention, 1949	Not Ratified
C98 – Right to Organise and Collective Bargaining Convention, 1949	In Force – 06 Jun 1957 (Re-ratified 25 Jun 2000)*
C100 – Equal Remuneration Convention, 1951	In Force – 08 Jun 1956 (Re-ratified 25 Jun 2000)*
C102 – Social Security (Minimum Standards) Convention, 1952	Not Ratified
C105 – Abolition of Forced Labour Convention, 1957	In Force – 04 Jan 1994 (Re-ratified 25 Jun 2000)*
C111 – Discrimination (Employment and Occupation) Convention, 1958	In Force – 20 Jun 1961 (Re-ratified 25 Jun 2000)*
C115 – Radiation Protection Convention, 1960	In Force – 08 Jun 1968 (Re-ratified 25 Jun 2000)*
C119 – Guarding of Machinery Convention, 1963	Not Ratified
C120 – Hygiene (Commerce and Offices) Convention, 1964	Not Ratified
C131 – Minimum Wage Fixing Convention, 1970	Not Ratified
C135 – Workers' Representatives Convention, 1971	In Force – 11 Sep 1972 (Re-ratified 25 Jun 2000)*
C136 – Benzene Convention, 1971	In Force – 11 Sep 1972 (Re-ratified 25 Jun 2000)*

C138 – Minimum Age Convention, 1973	In Force – 28 May 1998 (Re-ratified 25 Jun 2000)*
C139 – Occupational Cancer Convention, 1974	In Force – 10 Jun 1975
C143 – Migrant Workers (Supplementary Provisions) Convention, 1975	Not Ratified
C148 – Working Environment (Air Pollution, Noise and Vibration) Convention, 1977	In Force – 04 Jan 1994 (Re-ratified 25 Jun 2000)*
C155 – Occupational Safety and Health Convention, 1981	In Force – 04 Jan 1994 (Re-ratified 25 Jun 2000)*
C158 – Termination of Employment Convention, 1982	Not Ratified
C161 – Occupational Health Services Convention, 1985	In Force – 24 Feb 1988
C170 – Chemicals Convention, 1990	Not Ratified
C173 – Protection of Workers' Claims (Employer's Insolvency) Convention, 1992	Not Ratified
C174 – Prevention of Major Industrial Accidents Convention, 1993	Not Ratified
C182 – Worst Forms of Child Labour Convention, 1999	In Force – 20 Apr 2000
C183 – Maternity Protection Convention, 2000	In Force – 04 Nov 2003
C187 – Promotional Framework for Occupational Safety and Health Convention, 2006	Not Ratified
C190 – Violence and Harassment Convention, 2019	Not Ratified
UN Conventions	
UN Convention on the Rights of the Child, 1989	In Force – 7 Oct 1991
Other Conventions	
Council of Europe Convention on preventing and combating violence against women and domestic violence ('Istanbul Convention')	Not Ratified

**Several ILO Conventions were ratified by the Presidential Council of the Hungarian People's Republic in its legislative power before 1989. The Parliament – now responsible for ratifying international law – re-ratified many of these ILO conventions in bulk in 2000.*

electronics watch

Responsible public procurement.
Rights of electronics workers.