



MAY 2024



The TeamHub! Project is Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Directorate-General for Employment, Social Affairs, and Inclusion. Neither the European Union nor the granting authority can be held responsible for them.

Authors: Barbara De Micheli (FGB); Sofia Gualandi (FGB/Ferrara University); Michele Faioli (FGB/UCSC); Chiara Mancini (FILT-CGIL); Michele De Rose (FILT-CGIL); Jens Cassiers and Tom Peeters (ABVV-BTB); Martin Hayford and Sabina Trankmann (Tartu University); Sanna Saksela-Bergholm (Jyväskylä University); Odile Chagny (IRES); Dimitri A. Sotiropoulos and Alexia Mitsikostas (ELIAMEP); Barbara Surdykowska (IPA); Marc Caballero (NOTUS); Pablo Sanz (NOTUS/Zaragoza University); Thomas Haipeter (FGB/Duisburg-Essen University).

Manuscript completed in: May 2024

# **Project partners:**

- FILT-CGIL Italian Federation of Transport Workers <u>http://www.filtcgil.it/</u>
- FGB Giacomo Brodolini Foundation www.fondazionebrodolini.it
- ABVV-BTB –Belgian Transport Federation <u>https://www.btb-abvv.be/en/</u>
- ELIAMEP Hellenic Foundation for European and Foreign Policy https://www.eliamep.gr/en/
- JYU University of Jyväskylä <u>https://www.jyu.fi/en</u>
- IRES Institut de recherches économiques et sociales http://www.ires.fr
- IPA Instytut Spraw Publicznych/Institute of Public Affairs https://www.isp.org.pl/en
- UTARTU University of Tartu https://ut.ee/en
- NOTUS Applied Social Research <u>https://notus-asr.org/en/home/</u>

Find out more about the Team Hub Project at: <a href="https://team-hub-project.eu/">https://team-hub-project.eu/</a>

# Table of Contents

Introduction	3
Methodology	5
TeamHub Findings and Conclusions	6
Economic perspective	6
Social perspective	8
Environmental perspective	10
TeamHub Policy Recommendations	11
Economic perspective	11
Social perspective	14
Environmental perspective	21
References	25

# Introduction

Team Hub! is a two-year project supported by the European Commission, Directorate-General for Employment, Social Affairs, and Inclusion, receiving funding under the call for proposals SOCPL-2021- IND-REL aimed at improving expertise in the field of industrial relations. Running for 24 months (August 2022 – July 2024), Team Hub! combines desk and empirical research, as well as mutual learning and networking activities, in order to analyse features and challenges of the e-commerce supply chain in a set of selected countries; namely Belgium, Estonia, France, Finland, Germany, Greece, Italy, Poland, Spain.

The project brings together a trans-European consortium of universities, research institutes and trade unions from nine EU Member States: Italian Federation of Transport Workers (FILT-CGIL), Fondazione Giacomo Brodolini (FGB), Belgian Transport Federation (ABVV-BTB), Hellenic Foundation for European and Foreign Policy (ELIAMEP), University of Jyväskylä (JYU), University of Tartu (UTARTU), NOTUS – Applied Social Research, Institute of Public Affairs Foundation (IPA/ISP), Institute for Economic and Social Research (IRES)<sup>1</sup>. This consortium jointly engaged in addressing the complexities and challenges of e-commerce supply chains, especially regarding storage and delivery activities, through a set of desk and field research, training, and networking activities and the development of policy recommendations. The aim of Team Hub! is to analyse the implications of the e-commerce boom following the COVID-19 pandemic and to equip trade unions with the knowledge and skills necessary to propose a sustainable reshaping of business models and work organisation in the supply chain, also taking into account the digital revolution and environmental sustainability objectives.

The first phase of the project (**Study**) consisted of a preliminary literature review aimed at producing country-level background analysis of the e-commerce and logistics national panorama. The goal was to identify and assess information and data about key trends and features in the e-commerce supply chains at national level, with a particular focus on key market players and dominant business models, working and employment conditions, social partners activities, and the geography of the supply chains in the covered countries. The output of this activity was the publication of nine Country Fiches offering country-level analysis of the e-commerce and logistics national panorama<sup>2</sup>. Assessing and comparing the analysis conducted at national level provided an overview of the situation at European level. To this end, the Background Report<sup>3</sup> illustrates key trends and ongoing dynamics in the e-commerce supply chain, outlining the issues deserving major attention by unions at national and EU level, and identifying key geographical areas for the storing and delivering of goods traded by major e-commerce companies.

The second phase (**Focus**) consisted of empirical, qualitative research aimed at delivering a number of national case studies analysing e-commerce companies practices, working conditions of the employees of their supply chain, and union practices. The 27 case studies realised by the project partners, i.e. three cases from each country, were compiled in the Case Study Report<sup>4</sup> in English and translated<sup>5</sup> into the

<sup>1</sup> Full list of partners is available here: <u>https://team-hub-project.eu/partners/</u>

<sup>2</sup> TeamHub Country Fiches are available here: <u>https://team-hub-project.eu/resources/</u>

<sup>3</sup> TeamHub Background report is available here: <u>https://team-hub-project.eu/wp-content/uploads/2023/07/TEAMHUB-background\_report.pdf</u>

<sup>4</sup> Case Study Report is available here: https://team-hub-project.eu/wp-content/uploads/2024/01/case-study-report.pdf

<sup>5</sup> National Case Study Reports translated are available here: https://team-hub-project.eu/resources/

language of each country.

The third phase (**Join**) consisted of both networking and mutual learning activities. Thanks to an e-commerce survey<sup>6</sup> dedicated to logistics workers and workers representatives involved in National Assemblies, a set of data about working and life conditions were collected and discussed during the International Mutual Learning Workshops, which also analysed interim findings of the previous phases of the project. Two International Team Hub! Days<sup>7</sup> closed the networking activities involving project partners, social partners, representatives of companies, and workers.

The fourth phase (**Sum Up**) collected the results of the previous project's activities and phases in this Final Report complemented by Policy Recommendations for national and EU policymakers and trade unions to improve working conditions as well as economic, social, and environmental sustainability in the e-commerce and logistics sector.

A communication and dissemination strategy (**Share**) entailed the project's outcomes promotion through a dedicated website, social media, publications, media articles, and a final conference involving a wide audience of national and European policymakers, stakeholders, practitioners, and academia.

<sup>6</sup> https://team-hub-project.eu/2023/05/10/the-survey-for-e-commerce-and-logistics-workers-is-online/

<sup>7</sup> The first Team Hub! Day took place in Warsaw <u>https://team-hub-project.eu/2023/10/26/international-workshop-and-teamhub-day-in-warsaw/</u> and the second Team Hub! Day took place in Rome <u>https://team-hub-project.eu/2023/11/09/second-teamhub-day-in-rome/</u>

# Methodology

This Final Report is the final deliverable of the TeamHub Project, aimed at summing up conclusions and findings of previous project's activities and to elaborate policy recommendations for national and EU policymakers and trade unions. The activities of the project were guided by a set of research questions defined at the beginning of the project. The new evidence which was uncovered on these question in the course of the project is the base of the conclusions and recommendations given in this report.

The research questions are listed below:

- a. Which are the business models and working conditions in the e-commerce supply chain? How do they affect employment and working conditions across different countries and geographical clusters and how are they going to change in the near future? How do the different models fare in terms of social sustainability?
- b. How is the rise of e-commerce affecting the global value chain? How are the strongest players influencing the functioning of the market and the distribution of added value? Do unions have control over these trends and the direct and indirect effects on workers?
- c. How is the rise of e-commerce and the consequent development of last-mile logistics and of dedicated hubs affecting local development and environmental sustainability?
- *d.* Which are the concerns of e-commerce workers and aspirations for improving their working and living conditions?
- *e.* Which individual and collective rights are strategic to improve working and living conditions of e-commerce workers?
- *f.* Which activities do unions put in place through different channels and with different actors to address workers' aspirations and what are their achievements and limits?
- *g.* Which policy measures could be phased in by unions, social partners or policy makers to meet the e-commerce workers' needs and aspirations concerning their working and living conditions?

Drawing conclusions was possible thanks to the reconstruction of the results from the background report, from the national case studies and their comparison, from the discussions and debates that took place during the first TeamHub Day in Warsaw and the second TeamHub Day in Rome, from the survey administered to the workers in the sector thanks to the dissemination carried out by the trade unions both online and during the national assemblies organised, and from the joint elaborations and discussions carried out by project partners during the mutual learning workshops.

Based on the overview of this information, the third project's mutual learning workshop was constructed, during which the project partners discussed appropriate policy recommendations deducible and directly related to the project results, to be presented to national and European policymakers and trade unions. The policy recommendations gathered in this Final Report are therefore the result of a participatory process, where all demands were collected. The formulation of the recommendations proposed in the next pages clearly refers to the problems and goals addressed in the project, highlighting the links with activities previously developed during the project and issues that emerged in each case.

# **TeamHub Findings and Conclusions**

This section collects and synthesises the main results of the previous activities developed within the Team Hub project, in order to highlight the key issues affecting the e-commerce and logistics sector from a threefold economic, social, and environmental perspective.

This synthesis is aimed at elaborating policy recommendations addressed to stakeholders potentially interested in taking action to strengthen the sustainability of the sector, with particular reference to policy makers, public authorities, and trade unions both at national and EU level. Starting from the main findings indicated in this section, the policy recommendations in the next section of the report were elaborated.

# **Economic perspective**

The various steps and activities of the TeamHub project highlighted the dominant business model of the e-commerce industry. The majority of retail companies have integrated or are integrating e-commerce as part of their business. The online transition of the business-to-consumer commerce sector is transforming both the retail and logistics sectors in terms of productive processes, organisation, and management of the labour force. E-commerce is based on a multistage supply chain process, where the winning business and organisational model proved to be the 'omni-channel' model, entailing the synergic management of the various online and offline touchpoint between the business and the consumer in order to optimise the consumer's experience. Big e-commerce and logistics companies tend to deal with complex services, such as warehouse management, integrated supply chain management, data analysis, strategy development, and organisation of delivery activities. Such control of the supply chain has been called the "verticalization" of the supply chain. In order to shift the business risks, the vast majority of e-commerce companies rely on subcontracting chains, especially for last mile delivery, which implies outsourcing the delivery service to subcontractor delivery companies. This is most often an example of economic dependence, which employs drivers hired with precarious employment forms or as falsely self-employed.

Indeed, digitalisation and automation capacity of companies play a key role in the e-commerce sector (socalled "digital Taylorism" phenomenon). The business-to-consumer e-commerce segment of the sector is dominated by large and highly digitalised companies, which benefits the countries where these companies are present to the detriment of countries with an industrial landscape mainly composed of SMEs with a low rate of digitalisation and capacity to integrate related technologies and skills. As mentioned above, companies in the sector manage a wide range of services and activities, being "digital freight forwarders" which combine functions of marketplaces and software companies for the efficient integration of partners composing the supply chain. However, it must be noted that pure e-commerce *per se* is characterised by low profitability: for the pure players in particular, e-commerce mainly enables the acquisition of data for customers profiling. Therefore, the viability of the business model depends above all on its ability to win new market shares in order to increase the volume of e-sales. This explains why e-commerce and logistics are inextricably linked: the efficiency of the supply chain becomes crucial, and the logistics acquires added value, becoming a key asset due to its strategic role for the rapid satisfaction of consumers' needs and expectations. From this follows the impact of economies of scale on costs and prices. The viability of the business model depends on businesses' ability to win the trust of consumers and new market shares to increase the volume of e-sales. This results in a strong market concentration, producing a gap widening trend between large and small businesses involved in e-commerce as the latter lag behind in terms of financial resources, digitalisation, skilled personnel, and storage space.

National case studies under Cluster 1 of the project (business model and work organisation), collected in the case study report, confirmed the trends described above. Amazon, the world's leading e-commerce company, which applies the above winning business model, was analysed in Italy, France, and Germany. While the company controls the entire supply chain of activities, the more problematic issue from a labour point of view proved to be, on the one hand, the logistics activities (warehouses for storing, picking and packing), where workers are often employees but a high rate of temporary and seasonal work are registered, as well as poor working conditions, frequent accidents at works, and high turnover. On the other hand, last-mile delivery is 100% outsourced to "delivery service partners", i.e., small subcontractor delivery companies under Amazon's economic dependence, where poor working conditions and high rate of bogus self-employment are observed. A particularly bad practice was observed in this framework in France, where the widespread use of the "standard subcontracting contract" in delivery, protecting the lead companies by considering elements that could be associated with subordination (so-called "anti-requalification weapon"), implies that subcontractors have virtually no collective representation nor can any collective bargaining agreement covering delivery drivers be negotiated.

Digitalisation is an asset at Amazon to increase performance and efficiency to gain market shares, with the standardisation in warehouses which ensures rigid division of labour and repetitive (physically demanding) work with advanced digital support. Automation in warehouses is developing via Amazon Robotics, whose impact on employment levels is potentially very high, but currently under control. Digital control of workers is, on the other hand, extensive and very advanced, via the use of digital devices, badges and scanners monitoring the work process, breaks, talks, toilet visits, and performance in terms of the number of goods stowed, picked, or packed. The same applies to the tracking of drivers using the technological system provided by Amazon. An example of an EU-based e-commerce player was investigated as well: Allegro (Poland-based e-commerce company). The company can be compared to Amazon in terms of business and operational model, pushing toward the vertical integration of the supply chain to control the entire sales and delivery process and basing its delivery system on an extensive network of parcel lockers.

Alternative e-commerce business models were also detected via the case studies, i.e., the Coolblue company in Belgium and the Mercadona Online company in Spain. In these cases, a direct integration of the entire supply chain was preferred, with e-shop, physical shops and internalised delivery service. As almost no outsourcing via subcontracting chain is realised, the employment status is granted to almost all workers, including drivers, and the vast majority of labour contracts proved to be permanent and satisfactory from an economic perspective. Social dialogue in these companies was described as active and collaborative, contrary to what has been observed in Amazon, and all workers are covered by the same collective bargaining agreement, making it possible to avoid discrimination.

# Social perspective

Project activities, discussions with workers and trade unions, and most national case studies have shown that employment trends in the e-commerce sector have been positive, with a rapid increase during the Covid-19 pandemic and a stabilisation currently. Strong, structural fluctuations are registered and linked to seasonal peaks, implying structural job insecurity at all levels of the supply chain.

TeamHub research and abundant previous literature has shown that working conditions tend to be poor in the e-commerce and logistics sector. As for shipping activities, especially last mile delivery activities, structural precarity of labour conditions linked to the widespread outsourcing and subcontracting processes is reported, as well as the increase of certain risks such as bogus self-employment, excessive work pressure, longer working shifts, intensification of the work rhythms, and lack of trade union rights and collective bargaining coverage. As for storage activities, the precarity of labour conditions is linked to high rate of fixed-term contracts, on-call and intermittent contracts, or agency work due to frequent seasonal peaks, while the poor quality of work is mainly due to the low predictability of working time, the frequency of overtime, the night work, and the physical constraints linked to the carrying of heavy loads and repetitive movements. As for wage trends, precarity in both parts of the supply chain determines low remuneration. Job insecurity brings with it a number of other risks related to lack of skills and training, inadequate knowledge of the working environment, insufficient provision of personal protective equipment, lack of health and safety surveillance, and related high rate of accidents at work and physical occupational diseases. The high tempo of work, the focus on productivity, and the peculiarity of the workplace is combined, for drivers, with the absence of toilets, refreshments, and rest services, which creates difficult working conditions. Finally, technological development and the digitalization of these production processe brings with it a series of labour-related risks such as: decisions based on the algorithmic management, which have an impact on the wages, working rhythms, and health and safety; warehouse automation and robots in distribution centres, which might have an impact on employment levels; and surveillance technology and digital control, which have repercussions on workers privacy and data protection.

With regard to collective and trade union rights, the landscape is very diversified in the e-commerce and logistics sector of the countries studied, but a hostile environment to collective bargaining, obstructionism practices, and non-recognition of the trade union as a bargaining party is generally experienced. National trade unions seem to be generally aware of the e-commerce related trends described above, but control over them and the related responsiveness and ability to implement solutions widely vary from country to country. The difficulty of establishing company-level union representatives or work councils has been widely reported. Indeed, strong trade union presence in the sector proved to be rare, if not completely absent<sup>8</sup>, and this weakness is due to the high fragmentation (for warehouse workers, this is linked to fragmented workplaces and precarity due to seasonality; for delivery drivers, this is linked to subcontracting, self-employment, lack of physical workplace and high mobility) as well as high presence of migrant workers. The role of migrant work in the sector should be stressed, as it plays an important role in several countries, both as a labour force supply for the precarious jobs offered and as an issue for the attempts of the trade unions to organise the workers due to linguistic and cultural barriers. Another element of fragmentation is that of the contractual perimeter and the competent trade union federations: on the one hand the logistics and transport sector, and on the other, the retail and distribution sector, depending on the specific national context – this makes direct comparison difficult. Moreover, even when negotiated, drivers are excluded from the coverage of collective bargaining agreements since delivery activities are highly externalised. This is true in Spain, Germany, France, Finland, and Poland, with the positive exception

<sup>8</sup> Poland and Estonia reported a total lack of trade union strengths and difficulties in entering logistics establishments and organising workers.

reported in the Italian case study. These are the main reasons why difficulties in reaching and unionising workers were reported by unions. At the same time, unions' claiming efforts, strikes, and strategic legal actions reported limited impact until now – with some positive exceptions reported in the case study report (reported below). Therefore, social dialogue, trust and mutual recognition, and understanding need to be built between unions and companies with the support of policymakers, in order to improve the conditions for collective bargaining.

Some trade union good practices emerged from the case study report that deserve to be mentioned. Grassroots campaigns and petitions proved to have important symbolic function and to be useful tool to unionise the workforce in the sector in several countries, especially in Germany and Poland. Strategic litigation proved to be successful in several countries, especially in demonstrating bogus self-employment (Spain) and unlawful obstruction of a labour dispute (Poland), as well as in enforcing compensation for sick leave, accidents at work, and COVID-19 related measures in the sector (France). On the other hand, strike attempts failed every time they have not been general strikes able to involve workers of several warehouses and delivery drivers (Italy), while local strikes not synchronised among different warehouses and not covering the entire supply chain demonstrated to be ineffective in bringing e-commerce companies to the bargaining table (France, Germany, Spain). The ability to mobilise workers obviously comes from their unionisation and activism in the workplace. Union presence and rooting in the workplace level, however, proved to be very demanding, considering the workforce fragmentation factors highlighted above. Representative tools and union physical presence such as union representatives at the company level (Italy), project secretaries (Germany) and works councils (Germany, Belgium, Spain), as well as democratic tools such as union assemblies and referendum, proved to be useful where these already pertain to traditional union practices (Italy, Belgium, Finland, Spain, Germany) – but proper coordination at national level remains a key objective difficult to achieve (possible only in Italy). Moreover, these efforts were rarely extended to delivery drivers (Spain, Germany, France, Finland, Poland, with the exception of Italy). This is reflected in the union's difficulty in gaining recognition from the employer side and in engaging in collective bargaining, which failed in Germany, France, and Poland, with positive exceptions in Italy (signature of a protocol for a shared system of industrial relations with Amazon and start of negotiations at the national level on this basis; signature of a second-level national collective bargaining agreement covering delivery companies in the Amazon's supply chain) and Spain (company-level collective agreement negotiated and applied in an Amazon's warehouse in Madrid; involvement in the negotiation of gender equality plans and Protocol for the prevention of sexual and gender-based harassment). Unfortunately, no union activities in the ecommerce and logistics sector have been traced to Estonia. In Greece, on the other hand, the port logistics sector, which is strongly linked to the e-commerce sector, suffers from the historical legacy of union fragmentation and strong politicisation from which derives a lack of strength to influence the policies of Chinese investors.

# **Environmental perspective**

Project research activities and discussions involving relevant stakeholders that took place during the Team Hub Days showed that the rise of e-commerce, especially during the COVID-19 pandemic, changed the pattern of consumption that impacted the geography of the territory and the management of public spaces.

The supermarket model of consumption that emerged in the 1970s corresponds to an era of mass consumption that negatively impacted and limited the practice of shopping in local businesses. In the last decade, the birth of e-commerce contributed to redesigning productive processes and spaces with the multiplication of logistics warehouses, with particular reference to distribution centres (i.e., medium-sized warehouses for the final stage in the delivery process) in the peripheral areas of cities (industrial and manufacturing production areas) able to ensure rapid home delivery.

The impact of the multiplication of logistics warehouses is, among other things, the unregulated shift from retail and supermarket premises to logistics hubs, which brings with it an uncontrolled land consumption. Indeed, the logistics hub model is experiencing a regulatory vacuum, which implies that the establishment of new warehouses is left to the unequal confrontation between large logistics and e-commerce players who decide to invest in a territory and local administrations. The spread of logistics warehouses, not governed by specific urban and commercial regulation and plans, is a missed opportunity to manage the phenomenon by developing tailor-made procedures, land-use plans, public works, and fair tax systems in order to protect the territory, ensure joint urban planning, and make e-commerce players contribute to the growth of the community.

The impact of last-mile delivery flows linked to e-commerce, on the other hand, brought a strong increase in urban traffic and road safety risks, due to the fact that last-mile deliveries are carried out almost exclusively via wheeled vehicles. The increase in road transport in general, both from one warehouse to another and from a distribution centre to the consumers (houses or parcel lockers) has important implications in terms of pollutant emissions. In this framework, the consolidated consumers' expectations in fast delivery still seems to prevail over the awareness about the environmental impact of the sector and the ability to take conscious and sustainable decisions. Another rising phenomenon, as an alternative to home delivery, is the spread of an extensive network of parcel lockers in urban city centres, which actually seems to have positive effects on reducing urban traffic congestion. While there is an emerging urgency for unions to broaden the perspective beyond working conditions and embrace the environmental issues emerging from the e-commerce sector, the EU-level green and zero-emission objectives, as well as the higher fuel costs reported in recent months, are boosting the transitional efforts of some companies towards the use of hybrid or electric vehicles.

# **TeamHub Policy Recommendations**

Departing from suggestions of the previous project phases, policy recommendations were elaborated addressed to policy makers and trade unions. They are written to encourage the pursuit of sustainable business models and industrial relations in the e-commerce supply chain, in order to enhance the social and environmental sustainability of the sector.

# **Economic perspective**

# 1. Topic: Subcontracting practices

#### **1.1 Recommendation: "Limiting subcontracting chains"**

Target audience: Policymakers (EU level and national level)

#### Rationale:

As highlighted in the background report and the case study report, subcontracting chains are a widespread phenomenon in the e-commerce and logistics sector, producing negative consequences on the guarantee of working conditions for outsourced workers while discharging the parent company of responsibility for guaranteeing good conditions and for compensation in the event of violations of workers' rights.

#### **Description**:

Legislation should prohibit "core activity" subcontracting, i.e. banning subcontracting for companies' primary functions and core business.

Legislation should limit the use of subcontracting tiers by setting a cap of one sub-level, maximum, and prohibit subcontracting when it involves only labour.

In national contexts where this is not already provided for through law or collective bargaining, legislation should establish a comprehensive system of civil joint and several liability (full contracting and subcontracting chain of activities), ensuring that all entities (client, contractors and subcontractors) are accountable for violations. This should cover a range of labour and social issues including remuneration, social security contributions, taxes, health and safety, and collective bargaining rights. This should cover as well environmental adverse impacts of the operations. In this way, labour and environmental abuses perpetrated by any companies part of the subcontracting chain can be claimable and compensable directly against the lead contracting company.

#### **1.2 Recommendation: "Ensuring equal treatment across subcontracting chains"**

Target audience: Policymakers (national level)

## Rationale:

As highlighted in the background report and the case study report, outsourcing of activities and the practice of subcontracting gives rise to unequal treatment between direct workers of the parent company and workers of subcontracting companies. This extends to workers hired through temporary agencies or working under bogus self-employment regime, including through the application of collective agreements with lower economic and regulatory guarantees. In full equality of treatment there is no advantage in subcontracting and outsourcing linked to lower labour and health and safety costs. National legislation would help ensure better working conditions and industrial relations, as it would also support the quality of collective bargaining.

Good practice in Italy: FILT-CGIL introduced a rule in the national collective bargaining agreement of the sector in Italy (art. 42 of the CBA) compelling companies that are part of the supply chain of a lead company applying this CBA to apply the same CBA to their workers. This proved to be a progress leading to important internalisation processes in Italy, in combination with other positive factors.

## **Description**:

Legislation providing for economic and regulatory equal treatment of workers throughout the entire contracting and subcontracting chain should be introduced in Member states. This should be realised, among other measures, making it compulsory to apply the sectoral national collective agreement signed by the most representative trade unions to all companies that are part of the contracting and subcontracting chain. Such legislation would make it less convenient for the lead company to outsource activities and services.

# **1.3 Recommendation: "Adopting Corporate Sustainability Due Diligence obligations for businesses"**

Target audience: Policymakers (EU level and national level)

#### Rationale:

As highlighted in the background report and the case study report, subcontracting and other practices of outsourcing activities induce a "deresponsibilisation" of the parent company with respect to the working conditions of the outsourced workers, and a consequent lack of control and monitoring of their activities.

European Union policymakers pursued the path of adopting the Directive of the European Parliament and of the Council of the European Union on Corporate Sustainability Due Diligence<sup>9</sup>, containing the obligation for lead companies to prevent, mitigate, and repair adverse impacts on human and social rights and the environment with respect to their own operations, operations of their subsidiaries, and operations carried out by their business partners in companies' chain of activities.

<sup>9</sup> On 24 April 2024, the European Parliament voted adopting the text.

# **Description**:

When transposing the future EU Directive at national level, Member States should make it mandatory for lead companies to conduct Corporate Sustainability Due Diligence through the entire contracting and subcontracting chain and chain of activities, integrating it in the internal risk management system, and publicly reporting the due diligence process results in an annual statement. The involvement of the comparatively more representative trade union organizations should be guaranteed during this process.

## **1.4 Recommendation: "Make use of due diligence strategic litigation"**

Target audience: Trade Unions (national level)

## Rationale:

As highlighted in the country case report, trade unions' strategic litigations proved to be effective in several countries where workplace level organisation and strikes failed. For example, in France – where the Duty of Vigilance law is already in force (Law n°2017-399 of 27 March 2017)– strategic litigation proved to be effective when jointly organised by trade unions and sectoral NGOs.

Good practice: trade unions and activist legal experts are working together to increase opportunities for strategic litigation in France. This is the approach proposed by *the Intérêt à agir* association<sup>10</sup>. There are potentially many more opportunities for litigation in France. In December 2023, a judgment<sup>11</sup> was handed down against La Poste. The SUD PTT trade union had taken the company to court in 2020 on the grounds that the vigilance plan did not comply with legislation. The ruling ordered La Poste to complete its due diligence plan by including a risk map and a list of subcontractors and suppliers.

# **Description**:

National Trade Unions should organise strategic litigation against lead companies of the subcontracting chains in the event of non-compliance with due diligence obligations (already in force or to be introduced at national level) as well as to engage civil joint and several liabilities for labour, social and environmental abuses (already in force or to be introduced at national level). Unions should develop collective actions and strategic disputes in collaboration with sectoral NGOs.

## **1.5 Recommendation: "Better enforcement"**

Target audience: National public authorities; European Labour Authority

#### Rationale:

As highlighted in the country case report and background report, monitoring, controls and enforcement mechanisms performed by national labour inspectors are still weak in the logistics and delivery sector and needs to be strengthened.

#### Description:

Enforcement of monitoring and controls vis-à-vis the entire supply chain should be strengthened, by intensifying the inspection activities.

<sup>10</sup> https://www.interetaagir.org/

<sup>11</sup> Tribunal judiciaire de Paris, https://web.lexisnexis.fr/LexisActu/laposte.pdf

National labour inspectorates must be strengthened both in terms of staff and skills, in the light of the modern organisation of e-commerce supply chains. Frequency of labour inspections should be tailored according to the specific needs of the storage and delivery sectors.

The effective application of EU and national legislation, as well as the sectoral collective labour agreement, should be verified in all workplaces, in particular in small companies lacking for company-level collective agreements.

Labour inspectors shall ensure that sanctions are effectively enforced, even in cross-border scenarios, with the ELA support and supervision.

# **Social perspective**

# 2. Topic : Health and Safety at Work

2.1 Recommendation: "Ensuring health and safety training for all workers regardless of employment contract"

Target audience: Policymakers (national and EU)

#### Rationale:

A clear disparity in terms of training of employees and outsourced workers has been recorded in the logistics sector, hence a higher rate of accidents at work and occupational diseases for the latter category.

#### Description:

Legislation should be introduced making specific health and safety training for all workers compulsory before entering the workplace, regardless of the type of employment contract or the level of education. Health and safety training must be made enforceable by strengthening checks and controls by labour inspectors. Training must be organised in relation to the H&S Risk Assessment Document of each company, increasing it where the greatest risks are identified. Equal training and reskilling opportunities should be extended to all workers involved in the e-commerce contracting and subcontracting chain, with specific reference to risks related to rhythms and physical constraints in storing and delivering activities.

#### **2.2 Recommendation: "Bargaining the algorithm for drivers"**

Target audience: Local policymakers and local trade unions

#### Rationale:

Algorithmic work organization systems and the devices used by drivers lead in some cases to work overload due to the excessive number of packages to be delivered and the failure to count delivery times (extra-driving) during working hours. Good practice: In Italy, an experimental regional agreement has been signed (Emilia Romagna) in which a permanent workload monitoring table is established with reference to specific situations or routes. The trade union organizations are therefore involved in the concrete effects of algorithmic management and can present their reports to the companies and the employers' associations, which must provide data and tools for resolving the problems encountered. This agreement was possible thanks to national collective agreement signed by CGIL, CILS UIL (trade unions) with Amazon and Assoespressi (drivers' employers' association) which established an industrial relations system in Amazon's supply chain (see the case study report for more details).

# **Description**:

Local policymakers should create bargaining tables with the social partners not only for concluding generic collective agreements on workers' economic and regulatory conditions, but also for monitoring working conditions and improving organisational aspects affecting workers' health and safety. In particular, this could be the appropriate negotiation space at the local level to discuss and monitor delivery routes among companies, trade unions and local administrators, where workers (drivers) and workers representatives can point out problems with workloads, rhythms, and directives provided by the algorithmic management system with respect to their concrete and specific experience.

# 3. Topic: Algorithmic Management

# 3.1 Recommendation: "Strategic litigation against automated decisions"

Target audience: National Trade Unions

# Rationale:

As highlighted in the case study report and during the TeamHub Days in Warsaw and Rome, work rhythms, loads and schedules prove particularly intense and stressful for warehouse workers and last-mile delivery drivers. This is often linked to the Al-based or automated systems making decisions for workers and drivers. It would be desirable the presence of a human control making the final decision and/or ensuring a human feedback if and when workers need to discuss and contest the Al-based or automated decisions.

# **Description**:

Strategic litigation on the basis of the Art. 22 of the General Data Protection Regulation (EU Reg. 2016/679) should be developed in order to enforce delivery drivers' right not to be subject to decisions based solely on automated processing. This would guarantee the right to obtain human intervention on the part of the data controller (company), to express the workers' point of view, and to contest the automated decisions.

# **3.2 Recommendation: "Banning uncontrolled automated decision-making systems in e-commerce"**

Target audience: National policymakers

# Rationale:

As highlighted in the background report and case study report, automated decision-making systems are increasingly being applied to storage and packing work in warehouses and transportation and last mile delivery work. It is well documented how the work rhythms, loads and routes imposed on workers by algorithms have provoked discrimination and have increased work-related stress and occupational health and safety risks.

In early March 2024, EU Member states achieved a compromise text with a view to agreement regarding the Proposal for an EU Directive on improving working conditions of persons working through digital labour platforms. The text was later adopted by the European Parliament on 24 April 2024. The new EU rules ensure that a person performing platform work cannot be fired or dismissed based on a decision taken by an algorithm or an automated decision-making system. Instead, digital labour platforms must ensure human oversight and review important decisions that directly affect the persons performing platform work (draft art. 10 and 11).

# **Description**:

Rights to transparency on automated monitoring and decision-making systems, as well as to human oversight and review over it, should be ensured to warehouse workers and delivery drivers subject to algorithmic management by e-commerce companies. This should be enforced via national legislation. Although work in the e-commerce sector is not (necessarily) platform-based, a similarity between the two sectors pertains to the fact that work is organized through an algorithm that, given the settings programmed by the company based on its goals, "autonomously" decides on instructions to drivers and/or warehouse workers. Given this aspect of similarity in decision-making processes, the principles of the future Directive could be extended to e-commerce companies in the framework of its national transposition.

In this framework, considering that technology is not neutral with regard to discriminatory factors such as gender and ethnic composition of the workforce, countermeasures will need to be developed to algorithmic biases that risk causing direct and indirect racial and gender discrimination in the workplace.

# 4. Topic: Minorities and discriminations

## 4.1 Recommendation: "Boosting unionisation of migrant workers"

Target audience: Local trade unions and workplace-level representatives

## Rationale:

As highlighted in the background report and in the case study report, the large presence of (EU and non-EU) migrant workers in the logistics and delivery sector poses problems and limitations in union representation due to the linguistic and cultural boundaries between these communities of workers and national trade unions.

# **Description**:

Effort of trade unions at local level and company level should be spent in identifying, unionising, coaching, and empowering workers from different migrant communities employed in the sector, so that they can act as intermediaries with colleagues from the same communities, both with a view to self-emancipation and to creating dialogue with the trade union, in order to establish unionisation and collective representation practices, possibly by joining the union.

In addition to more traditional trade union activities, national unions should organize targeted initiatives such as the establishment of counselling service at logistics hubs, aimed at workers belonging to different ethnic groups, on issues such as access to housing and public transportation, to facilitate inclusion in the communities of the territories where these logistics hubs are established.

# 5. Topic : Trade Union role and activities

#### 5.1 Recommendation: "Enhancing political support to sectoral collective bargaining"

Target audience: Policymakers and public authorities (national and EU level)

# Rationale:

As highlighted in the background report and in the case study report, the e-commerce and logistics sector has proven to be a difficult space for unionisation and collective bargaining. The lack of political support aimed at overcoming the problem of non-recognition of trade unions as a bargaining counterpart by companies in the sector has been documented. In this difficult framework, a good practice emerged in Italy where, following major union mobilizations that brought the issue to the attention of politics, the Italian Labour Minister recognised the importance of reaching a collective agreement for the country and created a negotiating table encouraging the achievement of this result.

# **Description**:

Policymakers' and public authorities' encouragement and support toward the mutual recognition of companies and trade unions in the e-commerce and logistics sector as bargaining parties should be reinforced in order to speed up bargaining processes and achieve the rapid conclusion of collective agreements for the regulation and improvement of working conditions in the sector.

# **5.2 Recommendation: "Strengthen union strategies with respect to last-mile delivery drivers"**

Target audience: National Trade Unions

#### Rationale:

As highlighted in the case study report, difficulties in unionisation and union representation emerged with particular reference to last-mile delivery activities, where drivers are highly subcontracted and the lack of physical workplace and the high mobility of the working activities prevents workers from meeting, developing class awareness and sharing common concerns related to contractual and working conditions.

## **Description**:

National trade unions shall reinforce their unionisation, mobilisation and collective bargaining strategies regarding the weakest links of the e-commerce supply chain, increasing the focus on the last-mile delivery activities with specific and tailored-made strategies, considering that by now they have focused more in establishing workplace level representation in storage activities (warehouses).

# 5.3 Recommendation: "Addressing difficulties and differences in unionisation in Member states"

Target audience: EU-level trade unions (e.g.: ETUC; ETF)

#### Rationale:

As highlighted in the case study report, huge differences emerged at the national level in the unionisation capacity of national unions with respect to the e-commerce and logistics sector. Indeed, while in some countries involved in the study unions proved capable of operating both at sectoral national bargaining level and at the level of representation in workplaces, in others the experiences have been limited to sporadic workplaces. In a few, unionisation is completely absent.

# **Description**:

European trade union confederation and sectoral federations shall take an interest and put 'pressure' on how and why their national member organisations are failing in organising logistics and parcel delivery workers, as well as coaching and training local unions to improve their capacity to unionise, especially in countries where trade unions are weaker. Mutual learning measures and exchange of best practices with national unions that show to be more effective could be implemented. ETF should develop an annual monitoring tool to verify improvements especially in countries with a total lack of trade union presence in the last mile logistics sector.

#### **5.4 Recommendation: "Bottom-up approach to unionisation"**

Target audience: National Trade Unions and Local trade unions

#### Rationale:

As highlighted in the country case study, some national trade unions find it difficult to organise union activity and collective bargaining in the e-commerce and logistics sector at the national level, given the fragmented nature of workplaces and the lack of recognition as a bargaining counterpart by large companies. However, good experiences of unionisation and representation in the workplace and at local level have been documented. In this context, some classic union tools such as workplace assemblies and unionisation campaigns have been positively used.

#### **Description**:

Considering that the e-commerce and logistics sector is not very unionised yet, and taking into account the few resources available, the trade union strategy should start building union power and union representation in the workplace rather than the sectoral level, in order to get into a positive feedback loop and then try to reproduce it on a larger scale.

The trade union communication strategy should be renewed, with respect to how workers are reached by the information and the benefits of union membership and engagement at workplace level. This could be particularly important in those countries where trade union activity is weak and where there's a high likelihood that individual workers are not members of the unions. In these countries, simply increasing visibility among these workers in any way could result in some traction, as awareness of trade union activities in the sector is low and thus sentiment is more absent than negative. Traditional media operations like earned or paid media coverage and new media channels such as social media presence or targeted online ads could serve as a spark in these locations. New media specifically can help to address the fragmented nature of the audience–workers are often not tied to a single location or even a single employer. In some cases, even more basic operations could be effective, but often trade unions lack the appropriate resources to even organise "on the ground."

## **5.5 Recommendation: "Top-down approach to strikes"**

Target audience: National Trade Unions

#### Rationale:

As highlighted in the case study report, only general strikes proved to be effective, demonstrating the ability to influence and improve overall conditions in the highly fragmented e-commerce and logistics sector. These strikes involved the entire supply chain from warehouses to transport and delivery activities (e.g. Italy, March 2021, where a national strike involved all the large hubs, all the medium and small warehouses and the entire delivery chain throughout the country). On the other hand, unsynchronised strikes or strikes carried out in single warehouses had little impact on the progress of negotiations (e.g. France, Germany).

#### **Description**:

Mobilisations and strikes in the e-commerce and logistics sector, when organised, should involve the whole supply and subcontracting chain, and not individual sites and warehouses only, covering both storage and delivery activities.

# **Environmental perspective**

# 6. Topic : Fighting greenwashing in e-commerce

#### 6.1 Recommendation: "Strengthening non-financial reporting obligations for companies"

#### Target audience: EU Policymakers

#### Rationale:

As highlighted in the background report, in the case study report and in the TeamHub Day in Warsaw, e-commerce and logistics companies are beginning to understand the importance of environmental policies, especially in the framework of the European Green Deal. However, often the policies presented and reported by companies are in fact ineffective in reducing the pollutant emissions generated and their negative impact on the environment and climate change.

#### **Description**:

Corporate Non-Financial Reporting obligations, in particular with regard to environmental and climate impacts in the e-commerce sector, should include corporate's direct as well as indirect impacts, i.e. subcontractors' environmental impacts, and prevention and mitigation policies put in place by the lead company of the subcontracting chain. Data and information about e-commerce corporates' environmental impacts and policies should be easily accessible and auditable for users and consumers.

Further, even when they are perhaps effective at addressing environmental issues, certain "green" policies may come at the expense of employees, e.g. efficiency increases which result in less emissions or more efficiently operated logistics hubs but result in redundancy of employees or contractors. Thus, the impacts on employees should be elaborated in any such non-financial reporting.

# 6.2 Recommendation: "Setting up an Environment and Work Radar in companies and administrations"

Target audience: National and local trade unions

#### Rationale:

As highlighted in the case study report and at the Warsaw and Rome TeamHub Days, national trade unions are beginning to understand the importance of integrating policies in defence of the environment into their claims and bargaining platforms, given the close interconnection of these issues with industrial policies and the protection of occupational health and safety. While the work vs environment dilemma seems to have been overcome in many contexts, the consciousness and ability and commitment to build claims and actions that intersect the social and the environmental issues are still lacking in many national unions.

Good practice implemented in large enterprises in France: the General Union of Engineers, Executives and Technicians-CGT trade union proposed the idea for trade unionists in an enterprise to build an envi-

ronmental radar<sup>12</sup> enabling them to identify what is done or not done at the enterprise level.

# **Description**:

The first stage in setting up an "environment and work radar" in a company or local administration involves survey work by union members to assess their organisation's preparedness for the ecological challenges that threaten it, and the possible consequences of inadequate preparation for employees.

The survey proposed is carried out on 7 issues - combating global warming, combating the collapse of biodiversity, combating pollution, reducing the consumption of resources, aligning economic strategy, and involving employees and company stakeholders.

# 7. Topic : Traffic and pollution due to last mile delivery

## 7.1 Recommendation "Extending parcel lockers' networks for safer and cleaner cities"

Target audience: National and local policymakers and authorities

## Rationale:

As emerged in the country case study and during the TeamHub Day in Warsaw and Rome, last-mile delivery activities in urban centres, even if very convenient for consumers, give rise to a variety of issues, including: sharp increase in pollution and road traffic, and increase in road insecurity; dangerous stops of drivers on the street related to the shortage of parking spaces and the need for rapid delivery; lack of services for drivers (e.g., rest and refreshment areas; toilets; etc.). Therefore, it is necessary to balance the interests of consumers with the interest in protecting the environment and workers.

# **Description:**

Policymakers shall introduce legislation at national, regional or local level and/or urban planning tools that incentivise the development and equitable distribution of parcel lockers' stations within city centres, accompanied by safe parking areas and services for delivery workers (e.g. toilets, refreshment and rest areas), which can be used also by food delivery and grocery riders.

Parcel lockers are automated postal boxes that allow users/consumers for a self-service collection of delivered parcels. The organisation of deliveries by means of an extensive network of locker stations with related parking, toilet and rest services for drivers can lead to numerous improvements: decongestion of traffic; efficiency of the delivery service; environmental sustainability; prevention of dangerous stops, work safety and increased road safety for all road users; availability of services for workers.

<sup>12 &</sup>quot;Radar environnement et travail" https://radartravailenvironnement.fr/

# 8. Topic: E-commerce logistics establishments land consumption

# 8.1 Recommendation: "Negotiating Plans for Logistics"

**Target audience**: National policymakers and national Trade Unions; Regional policymakers and regional/ local trade unions

## Rationale:

In recent years, as emerged during the TeamHub Day in Rome, many countries experienced an uncontrolled land consumption due to the spread and multiplication of logistics distribution centres in the peripheral areas of cities. This phenomenon originates from the lack of regulation of these activities at the national level and therefore from the unequal confrontation between large companies and small local administrations. Therefore, while local administrators are pleased when new warehouses are established in their territory, helping to create jobs and thus gaining political consensus, they are not in a bargaining position to ask and/or companies to compensate for the negative impacts of these activities on the environment and the local communities.

# **Description:**

National Plans for Logistics should be formulated by the national government/policymakers after negotiations with stakeholders and social partners, in order to offset and prevent the imbalance of bargaining power between large logistics companies and the local administrators of the territories in which they operate. National plans for logistics should include tailor-made procedures for the establishment of new warehouses, environmental sustainability criteria to be met, public works, and dedicated tax regimes to compensate for the impact of new establishments on the local community.

On the basis of the national plan for logistics, regional and local plans for logistics can be formulated by regional/local policymakers after negotiations with regional/local stakeholders and social partners. Negotiators should take into account variation among EU countries and among locations within countries where companies are located.

# 9. Topic : E-consumers information and accountability

## 9.1 Recommendations: "Option for environmentally sustainable delivery"

Target audience: EU and national policymakers

#### Rationale:

The TeamHub Day in Warsaw brought to light the unconsciousness of citizens and e-consumers with respect to the social and environmental risks and costs of fast home-delivery of goods and poorly thoughtout purchases due to current return policies.

#### **Description:**

Legislation should make it mandatory for e-commerce companies to provide an option for e-consumers for environmentally sustainable delivery, clearly illustrating at the purchasing stage the differences in

terms of lower carbon footprint, delivery timing, grouping of goods ordered, etc.

The development of awareness-raising campaigns and media campaigns targeting consumers, in collaboration with trade unions and environmental NGOs, combining social, labour and environmental claims, should spread the information that e-commerce is not free of social, labour and environmental risks and costs. The combination of these efforts and issues is aimed at educating e-consumers and influencing sustainable consumption choices with respect to current habits about online shopping.



#### **Project-related bibliography:**

Cassiers J. (2023), *TeamHub Country Fiche - Belgium*, February 2023, available at: <u>https://team-hub-project.</u> <u>eu/wp-content/uploads/2023/05/countryfiche-Belgium.pdf</u>

Chagny O. (2023), *TeamHub Country Fiche – France*, February 2023, available at: <u>countryfiche-France.pdf</u> (<u>team-hub-project.eu</u>)

De Micheli B., Gualandi S. (2023), *TeamHub Background Report*, June 2023, available at: <u>https://team-hub-project.eu/wp-content/uploads/2023/07/TEAMHUB-background\_report.pdf</u>

De Micheli B., Gualandi S., et alt. (2024), *TeamHub Case Study Report*, January 2024, available at: <u>https://team-hub-project.eu/wp-content/uploads/2024/01/case-study-report.pdf</u>

Erbsen H., Bachmann J., Trankmann S. (2023), *TeamHub Country Fiche – Estonia*, February 2023, available at: <u>https://team-hub-project.eu/wp-content/uploads/2023/05/countryfiche-Estonia.pdf</u>

Gualandi S. (2023), *TeamHub Country Fiche – Italy,* February 2023, available at: <u>https://team-hub-project.eu/</u> wp-content/uploads/2023/05/countryfiche-Italy.pdf

Keller R. (2023), *TeamHub Country Fiche – Germany*, February 2023, available at: <u>https://team-hub-project.</u> <u>eu/wp-content/uploads/2023/05/countryfiche-Germany.pdf</u>

Sanz P., Caballero M. (2023), *TeamHub Country Fiche – Spain*, February 2023, available at: <u>https://team-hub-project.eu/wp-content/uploads/2023/05/countryfiche-Spain.pdf</u>

Sotiropoulos D., Mitsikostas A. (2023), *TeamHub Country Fiche – Greece*, February 2023, available at: <u>https://team-hub-project.eu/wp-content/uploads/2023/05/countryfiche-Greece.pdf</u>

Surdykowska B. (2023), *TeamHub Country Fiche – Poland,* February 2023, available at: <u>https://team-hub-project.eu/wp-content/uploads/2023/05/countryfiche-Poland.pdf</u>

## **Other references:**

Allamprese A., Bonardi O. (2020), *Studio sulle condizioni di lavoro nella logistica: tempo e salute*, DLS 2-2020, avilable at: <u>https://journals.uniurb.it/index.php/dsl/article/view/2403</u>

Allamprese A., Bonardi O. (a cura di) (2018), *Logistica e lavoro*, Fascicolo RGL 3/2018, available at: <u>https://www.futura-editrice.it/wp-content/uploads/2019/01/RGL-Quaderno-3-2018\_DEF-2.pdf</u>

Buresti G., Boccuni F., Cagliano R., Canterino F., Di Nunzio D., Arlati C., Bellomo S., Persechino B. (2023), *Sistemi di prevenzione, partecipazione e rappresentanza dei lavoratori nel tempo della trasformazione digitale.* 

*Metodologia e prime evidenze*, Fact sheet, INAIL, February 2023, available at: <u>https://www.inail.it/cs/internet/</u> <u>docs/alg-pubbl-sistemi-prevenz-partec-rappr-lavor-tempo-trasf-dig.pdf</u>

Di Nunzio D., Casula C., Mancini C. (a cura di) (2023), *Trasporti 4.0. Innovazione, qualità del lavoro e azione sindacale: tendenze e prospettive sulla base di casi di studio*, FILT-CGIL, Fondazione Giuseppe Di Vittorio, March 2023, available at: <u>https://www.fondazionedivittorio.it/sites/default/files/content-attachment/FDV-FILT-Trasporti Innovazione Qualita Report 2023.pdf</u>

EFBWW, EFFAT, ETF (2024), *Joint Position Paper: Subcontracting Chains and Intermediaries – Stop Exploitation*, April 2024, available at: <u>https://www.etf-europe.org/wp-content/uploads/2024/04/Brochure-EFBWW-EF-FAT-and-ETF-web-RED.pdf</u>

Faioli M. (a cura di) (2021), *Terziario, Lavoro e Organizzazione 4.0*, Working Papers Fondazione Giacomo Brodolini, available at: <u>https://www.fondazionebrodolini.it/pubblicazioni/working-papers/terziario-lav-oro-e-organizzazione-40</u>

Faioli M., Fantoni G., Mancini M. (a cura di) (2018), *Lavoro e organizzazione nella logistica 4.0*, Working Papers Fondazione Giacomo Brodolini, available at: <u>https://www.fondazionebrodolini.it/pubblicazioni/work-ing-papers/lavoro-e-organizzazione-della-logistica-40</u>

Huria A. (2019), Facilitating Trade and Logistics for E-Commerce: Building Blocks, Challenges and Ways Forward, World Bank, Washington, DC, available at: <u>https://openknowledge.worldbank.org/entities/publication/945fd5b2-24df54f7-b4d9-d2ba97b7537e</u>

Lone S., & Weltevreden J.W.J. (2022), 2022 European E-commerce Report, Amsterdam/Brussels: Amsterdam University of Applied Sciences & Ecommerce Europe, available at: <u>https://www.eurocommerce.eu/app/up-loads/2022/08/European-ECommerce-Report-2022-LIGHT-VERSION.pdf</u>

Lone S., Harboul, N. & Weltevreden, J.W.J. (2021), *2021 European E-commerce Report*, Amsterdam/Brussels: Amsterdam University of Applied Sciences & Ecommerce Europe, available at: <u>https://ecommerce-europe.eu/wp-content/uploads/2021/09/2021-European-E-commerce-Report-LIGHT-VERSION.pdf</u>

Mancini C. (a cura di) (2020), *Driver. Chi guida il futuro dei trasporti dopo il covid-19?*, Filt Cgil, 2020, available at: <u>https://www.filtcgil.it/documenti/ricerca-40.pdf</u>



team-hub-project.eu