



Migrant labour in the automotive industry: A literature review

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Abstract

The automotive industry has a significant role not only in global and national economies but also in the formation of a nation's labour force, by (re)training workers. While historically the automobile industry has attracted mostly low-skilled migrants for the assembly lines, in the present times, an additional need for highly skilled and often STEM-educated migrant workers has been noted. By performing a systematic literature review, the present study explored the relationships between migrant labour and the car industry sector outlined in the research literature. The study followed a thematic analysis and reached findings that were summarised in four themes. Firstly, two profiles of migrant workers were identified, corresponding to what is often discussed as low- and highly skilled workers. Secondly, the working conditions for the migrant labour force were prominent in the literature, while they varied based on the profile of the migrant worker. Thirdly, from a historical perspective, strikes were shown to affect migrants' working conditions and rights, while fourthly, the business practice of offshoring was shown to influence migrant workforce conditions and status. In conclusion, the complexity of the issue under research, the scarcity of the relevant literature, and the contextuality of the cases presented have acted as limitations of this literature review. Further research on the topic is needed since the car industry is a core player in national economies, and, hence, its influence on migration practices and policies should not be underestimated.

Keywords: automotive, automobile industry, labour force, migrant worker, vocational education and training



Introduction

Portrayed as the industry of industries (Drucker, 1992), the car industry has a significant role in global and national economies, not only because of its massive size but also because of its connections to other industries (Dicken, 2003), being a key player in the trade and economy of several countries around the world. Originating in France and Germany, its activity has reached the United States, Japan, and the Republic of Korea, while the more recent emergence of China, especially regarding electric vehicles, cannot be overlooked. Expanding in services more than vehicle production, the car automotive industry became synonymous with the industrial development of the 20th century (Papatheodouru & Harris, 2017). In terms of its contribution to global economic growth, the automotive industry's annual turnover is of equal value to the world's sixth-largest economy (Masoumi et al., 2019). The car industry is perceived as capital-intensive, but it drives research and innovation, also creating job positions and investment. The automotive industry plays a big role in meeting sector specific goals relating to sustainable development, for example, the introduction of electric vehicles aiming to reduce fossil fuel dependence; the adoption of circular economy principles (e.g., recycling and reusing materials); the development of renewable energy sources; or ensuring accurately tracked and reported sustainability metrics. Because of its size, the automotive industry has been perceived as a key actor also in achieving several other Sustainable Development Goals for 2030, including sustainable economic growth, decent work, quality education, and sustainable cities (Lenort et al., 2023).

Besides the economic and technological contribution, the automotive industry's role in education and training is indisputable. Automobile companies have been responsible for the vocational development of the workers, with (technical) training provided in-house, often in collaboration with vocational education and training institutions, and/or government agencies (Laseinde & Kanakana, 2017). As the sector is currently undergoing transformation, the car industry should revise practices of recruiting and (re)training workers, investing in the competence of a labour force that can use new technologies to improve productivity and sustainability, as according to the International Labour Organization (ILO) (2020) the capabilities of the workforce in the car industry are decisive for its future.

From a historical perspective, the automotive industry has been highly resilient, recovering from financial recessions and contributing to Gross Domestic Product (GDP) and global employment. Since the beginning of mass automobile production in the United States until today, the car industry has employed large numbers of migrants. From 2012 to 2017, the percentage of migrants as part of all automotive industry workers increased by around 8–10% in the United States (US). The automobile industry has historically attracted low-

skilled workers for the assembly lines, and fewer skilled workers for specialised tasks. Nevertheless, in the present times, there is a need for highly skilled and often science, technology, engineering, and mathematics (STEM)-educated migrant workers. Recruiting a (highly skilled) migrant workforce is beneficial to the car industry; yet it causes a permanent loss of the national workforce, often qualified nationals (ILO, 2020). On the other hand, migrant workers recruited for low-skilled jobs have raised concerns about their work conditions, which research literature has shown to be bad (e.g., Lau, 2012; Leach, 2008; Schmitz, 2019).

According to ILO (2020), migration policies are continuously evolving, due to a growing reliance on temporary labour migration programmes rather than permanent migration. More specifically, a tendency towards temporary foreign worker schemes has been identified, with these schemes requiring stricter conditions for the admission of less skilled workers compared to highly skilled workers. These trends create a rather demanding environment for migrant workers, putting an increasing emphasis on skills recognition and meaningful employment. In these terms, validation of prior experience and recognition of skills becomes an issue of transnational collaboration.

Summarising the car industry as a sector that is an important contributor to economic growth, a common provider of training, and an employer of a migrant workforce, researching further the relationships between this sector and migrant labour can illuminate the potential lying within it and the challenges ahead. Hence, the present study explores the relationships between migrant labour and the car industry sector as they are outlined in the research literature. Nevertheless, it is important to note that the literature considering both topics, meaning the car industry and migration (or migrant labour), is scarce.

For purposes of clarity, the following concepts are defined briefly. Firstly, *automotive* refers to all parts and accessories of a vehicle, *automobile* refers to the actual vehicle, while *car* is the commonly used word for a vehicle, usually for private use. Regarding *industry*, *automotive*, *automobile*, *car industry* the three terms are used interchangeably in the present study. Automotive/automobile/car industry refers to companies in all vehicle production areas. Secondly, *migrant* is an individual that moves from one place to another with the aim of improving their life (and working) conditions (Oxford Dictionary, 2023). In the present study, this term is used in reference to both international and national migration.

Structural changes in the production processes of the automotive industry

The car industry has been undergoing a constant change, driven both by its success and the transnational nature it has developed over time. With a vision that high volumes of standardised parts would reduce product costs and create

jobs, in the United States Ford's mass production system introduced interchangeable standardised parts, as well as the moving assembly line in the 1920s (Womack et al., 1990). At the same time, a process of vertical integration (Womack et al., 1990) would complete the idea of mass production by introducing single-function machines that workers were trained to use. The core idea of these processes was the simplification of production and workflow without interruptions. Since tasks in the process were allocated to different workers, faults were to be identified at the end of the assembly. Efficiency in smaller tasks was increased but the workers were de-skilled (Piore & Sabel, 1984).

Mass production factories generate thousands of jobs. The influx of workers seeking employment in urban centres contributed to the rapid pace of urbanisation. People started connecting their own well-being with the economic flourishing of the nation, which was heavily dependent on the development of these mass production factories (Reich, 1992). However, in the 1910s working conditions were tough leading to the rise of trade unions and strikes as a means of worker protection (Anstey, 2006). With time and around 1940s, strikes were replaced by collective bargaining, which introduced a set of rules to regulate conflicts – a process that disrupted production less than strikes (Anstey, 2006).

The way that production was organised has varied around the world and at different times. In Germany, companies in the automobile industry, like Bavarian Motor Works (BMW) and Daimler Benz, took off in the 1990s. German workers enjoyed better access to information and a higher influence on company matters compared to their US counterparts. The emergence of the Japanese car industry became an additional threat to the dominance of American companies in car production and trade (Anstey, 2006). Toyota introduced a lean production process, aiming at zero defects in production. Together with quality and quality control, Toyota developed a humanisation element in their vision, which was translated into an effort to increase workers' motivation and morale, including by supporting their creativity (Monden, 1983). The Japanese approach was based on a lifetime employment perspective, where the employee is re-trained constantly and remains committed to the company (Japan Institute for Labour Policy and Training, 2004). Finally, the Swedish car industry, including Saab and Volvo, focused on multi-skilled employees who participated in production. Other elements included horizontal labour division, coherent instead of fragmented tasks, stationary instead of moving assembly lines, and flat hierarchies. While this approach increased work efficiency, a return to traditional production modes soon occurred (Berggren, 1993).

The trends that followed were the result of the mutation of these national automotive vehicle production units into transnational corporations. These reached new markets and often bought off their competitors. With the saturation of markets in developed economies, the car manufacturers turned their attention

to developing ones, for example, Brazil, Mexico, India, and China. By 2000 the car industry had moved up to 60% of its production abroad (Dicken, 2003) due to the possibility of thereby earning higher profits. In this intense migration of services, the United Nations and ILO have tried to secure the working rights of the workers in the car industry (Anstey, 2006). While it is interesting to consider how the development of Eastern automobile companies has affected the respective countries' labour, it is equally interesting to examine what this migration of services has meant for the Western labour force and the coexistence of the two.

Methodology

The selection of literature for the review in the present study has not been systematic, as the scarcity of sources and the multiple issues of homonymy did not allow it. The review is rather narrative. The initial search for literature was conducted in the EBSCOhost database¹, which was considered relevant for the topic and broad, since the topic can spread across different disciplines. The keywords searched for included:

- car industry or automobile industry or automotive industry
- migration or immigration or emigration or refugee

At this initial stage, issues of homonymy became relevant. *Migration* is used to describe the movement of individuals or groups, but also (*automated*) *migration* refers to the process of data movement between information repositories. The second meaning of migration is often encountered in relation to the automobile industry. To deal with this particularity, the next search included instead the keywords:

- car industry or automobile industry or automotive industry
- migrants or immigrants

Other criteria for the search included a time limit between 2000 and 2023 and the inclusion of peer-reviewed literature. As the literature suggests, by 2000 the car industry had moved up to 60% of its production abroad (Dicken, 2003), leading to a migration of services that has possibly affected the type of migration movement and relationships between countries. In order to ensure that these relationships will be included and for reasons of feasibility the time period of 2000–2023 was selected. Peer-reviewed research was selected to ensure credibility and exclude texts with specific political directions. As regards language, there was no limitation at this stage.

This search resulted in 46 texts that were evaluated by abstract relevance. Out of these, 36 were considered for full-text reading. All 36 texts were journal articles. The 36 texts were reduced to 13 based on text relevance. In both cases,

judging abstract and text relevance, texts that did not refer both to migration (e.g., migration policies, integration strategies, immigrant workers or employees) and the automotive industry (referred to as automotive industry or referred to specific companies) were discarded (see Figure 1). Nevertheless, as several of these texts referred to one of the two topics, citation tracking was performed, without any additional results. The final body of literature used for this study includes 13 texts in English, Spanish, and French, which the researchers could read, hence language was not used as an inclusion criterion. These texts represent research from and about Canada, China, El Salvador, France, Germany, Mexico, Sweden, Turkey, and the US. The studies included represent historical research, focusing mostly on strikes, but also empirical studies focusing on different aspects of migrant workers' lives.

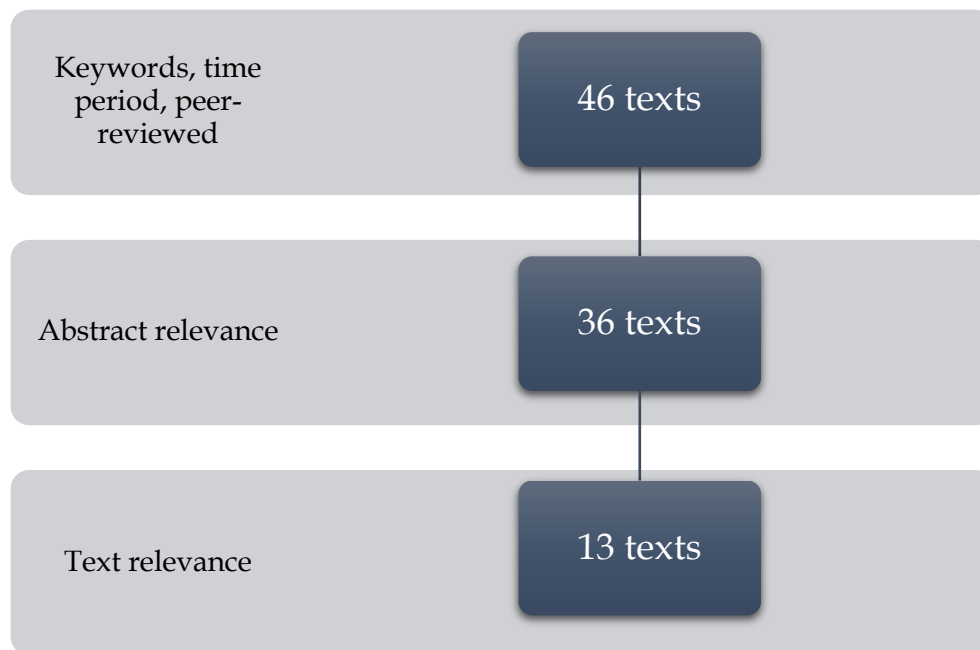


Figure 1. Inclusion criteria in different search phases.

Summarising the inclusion criteria for this search after the selection of keywords, these included the period between 2000 and 2023, peer-reviewed scientific articles, abstract relevance and text relevance.

Analysis

The first reading of the texts was performed on a country basis to allow a better understanding of the various contexts present. The second reading that led to the

main analysis focused on themes. The analysis followed the steps for thematic analysis as described by Braun and Clarke (2021).

Firstly, the researchers familiarised themselves with the material. Secondly, they created initial codes followed by a first round of coding. To ensure consistency in coding (Saldaña, 2009), there was a second coding round, resulting in revising the initial codes. Fourthly, themes were created based on codes, and fifthly, themes were modified based on the research aim. Finally, the themes were investigated with reference to their relations.

Limitations

The main limitation of the study lies in the issue of homonymy of the term *migrant* and *migration*. As mentioned above, migration refers to both the movement of individuals and groups as well as the transfer of information in a computerised fashion (automated migration). Moreover, *migrant* can refer to an individual changing their country of residence, but in the literature selected for this study, it also refers to an individual moving from their broader areas of residence to a new place. That broader area refers to provinces (e.g., the cases of China or Mexico). This limitation combined with the scarcity of research on the topic has rendered a systematic approach difficult since the coherence of the systematic method would be hard to evaluate.

Findings

This section presents the findings of the literature review, summarised under the following themes: the profile of the migrant worker (Profiles 1 and 2), working conditions, strikes, and finally offshoring and transnational migration (see Figure 2).

As Figure 2 indicates, the themes cover the micro (individuals and workplaces), the meso (national), and the macro level (international). More specifically, several of the research studies selected for this review focused on the characteristics of migrant workers and their interaction with the workplaces, often addressing questions of integration in the workplaces. On the meso level, the literature addressed company actions and regulations with reference to migrant workers and migration in general, often in relationship to national legislation. On the macro level, the literature discussed the phenomena of offshoring and transnational migration, both as international overarching phenomena, but also in relation to individual workers and companies. As Figure 2 shows, while each study of the literature selected would focus on one of the levels, the influence between them was also acknowledged.

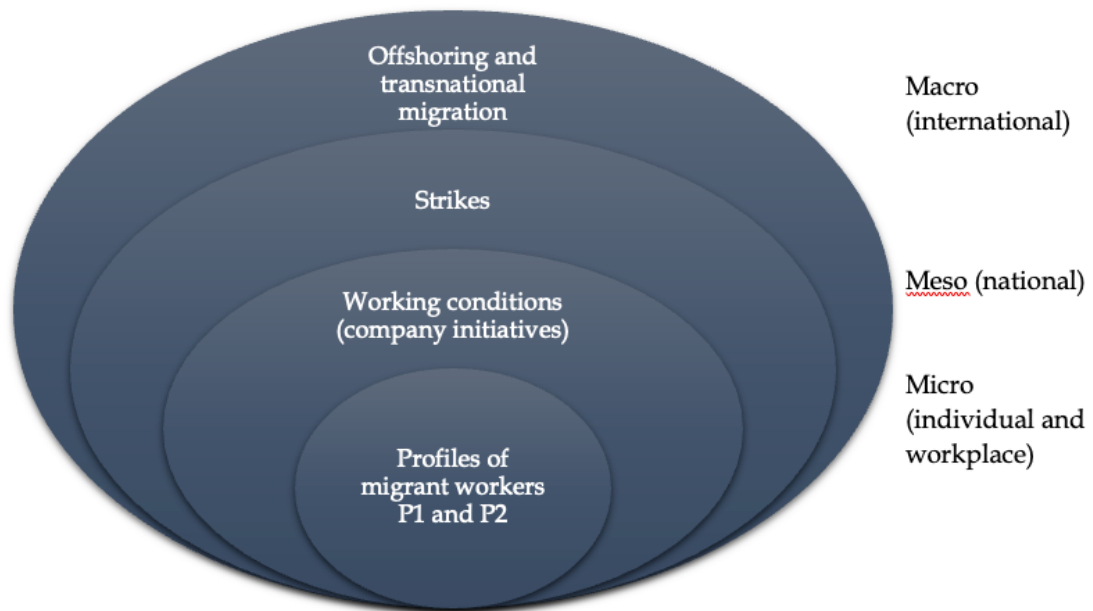


Figure 2. Themes and their relationships.

The profile of the migrant worker

The profile of the migrant worker in the car industry emerges as a theme in the material, although it is rarely the main focus of the studies. There are two profiles identified, namely the low-skilled and the highly skilled worker. However, throughout the material there are several sub-profiles as well. The factors that affect their outline are summarised as skills/qualifications, level of company position, country of origin (and movement to a new country/province), cultural and language capital, and residency status (e.g., refugees). Many of these factors are interrelated, while they also interact before, during and after the appointment of the individual in a job position.

Profile 1

Beginning with low-skilled migrant workers and employees, it can be argued that individuals and groups under this profile are in a precarious state (Akhtar, 2015) and have a lower status than their co-workers in the workplace. According to Leach (2008), these employees take up multiple tasks and exhibit high determination as well as high performance. They often work overtime to build up the image of a 'hard' worker. This image is expected to secure future employment for themselves and for others with similar profiles, usually other migrants, friends and/or family members. These individuals often have low

language skills in the dominant language of their host country, especially in comparison to employees of local origin (native speakers).

In the French context, around 1983–1984, the migrant employees of Profile 1 were described as low paid and as the least qualified fraction of the workforce, while their participation in the automotive industry at that time reached 52.3% of the workforce. Their profile was characterised as poorly qualified, mostly males, and in need of further training due to low language skills in French. Around 73% of them had more than 10 years of seniority. During the strikes of 1983, this group was presented in the public discourse as ageing and unable to adapt to new job demands, although on average their age was less than 50 years old. Following the layoffs of 1983, this group of migrant employees demanded aid for relocation back to their countries, making their voices heard and asking for further rights (Gay, 2014).

Profile 2

Profile 2 describes the highly skilled and often qualified migrant employee who holds a position of medium or higher level in a company. A characteristic example of such migrants is Mexican engineer graduates who are recruited in the United States. According to Crossa Niell and Delgado Wise (2021), Mexican graduates holding bachelor's and master's degrees in engineering, often also with experience working in the *maquiladoras*², are recruited by head-hunters to work in the car industry in Detroit. This group comprises up to 71% men and specialises in STEM or engineering. The recruitment processes these candidates undergo are strict since they are recruited for knowledge-intensive roles. Crossa Niell and Delgado Wise (2021) argued that the innovation that takes place in the United States and the Western world should also be attributed to the workforce of migrant origin, like the highly skilled Mexican engineers mentioned in this study.

Within Profile 2 there is a special sub-category of highly skilled migrant employees that are labelled as re-migrants. Re-migrants are individuals who have lived abroad for some years, studying and/or working, and who return to their country of origin. While there can be re-migrants fitting Profile 1, in the material selected for this study, re-migrants are medium- or highly skilled. More specifically, in the case of Turkey–Germany, there are a number of re-migrants of Turkish origin who are recruited from the German labour market with the aim of being appointed to a captive supplier unit owned by a German car company but located in Istanbul. These individuals were described as having qualifications and working experience from the German labour market, as well as speaking both German and Turkish. Re-migrants in this case were perceived as agents of embeddedness. Acting as boundary spanners, re-migrants were first expected to mitigate resistance both from the local employees and from the German and

international clients. Re-migrants' capacity in both German and Turkish and their understanding of the Turkish, the German, and the company cultures, allowed them to create trusting relationships with several actors (e.g., clients and other employees). Secondly, re-migrants were expected to disembed and reembed organisational knowledge assisting the overall development of the captive supplier unit, a task that would be more difficult for an expatriate employee (Müller & Franz, 2019).

In the case of Turkey–Germany, the importance of integration of all employees was not just highlighted but became a driving force behind major decisions on an organisational level. The availability of re-migrants of Turkish origin (with skills in German) affected the selection of Turkey as the new location of the captive supplier unit. This indicates that the profile of all available human resources can potentially affect industry trends and directions.

Working conditions

Working conditions were not the main topic for the majority of the texts reviewed and therefore, the information about working conditions is unequally distributed between different texts. The context of the study affects to a high extent the working conditions described. Hence, a short description of the context is presented in the following paragraphs. Finally, the working conditions presented in this section refer only to migrant employees of Profile 1.

In several studies, migrant workers were described as receiving lower salaries compared to local workers, taking lower-level positions and working longer hours (Lau, 2012; Leach, 2008; Schmitz, 2019). Often, migrants choose to work longer hours in order to complement their income and/or to build the profile of a hard-working person. In the case of Salvadorian migrant employees in Canada, the intention of these employees to work additional hours created conditions that affected other employees and the employers' behaviour. According to Leach (2008), the eagerness of migrant employees to work additional hours might make employers extend the working hours for all employees or might let flexibility and temporary work go unchallenged. This result could cause a reaction of non-migrant employees against their migrant co-workers.

Moreover, Leach (2008) reported that in a working environment of migrant and non-migrant workers, individuals with the same language were positioned physically closer to each other by the management. The workers themselves, though, also tended to distinguish themselves and their colleagues in groups based on the country of origin. Discrimination at work between migrants and non-migrants is noted by the first ones, who claimed that Canadian workers would cover the mistakes of other Canadians in the work, leading to migrants and non-migrants having different workloads despite holding the same positions. As Fernando claimed (Leach, 2008, p. 45), 'The supervisors allowed

him; everybody is watching to see why the Canadian is allowed, while the others have to run the machines.' This type of discriminating action was reported also by Bhalla (2008).

Besides the actual origin of the employees in Profile 1, some studies showed that they can be grouped under the same ethnic label. For instance, Salvadorian workers were labelled as Mexicans because the majority of the employees for the same task originated from Mexico. Leach (2008) discussed in detail how behaviours like the one mentioned above create racialised identities rather than professional identities in the workplace and in society. Replacing the professional identity of the migrant employee with another of their characteristics was also evident in the strikes in the French automobile industry. The Muslim identity replaced the professional and social identity of the strikers with reference to the public discourse (Gay, 2015). In both cases, the respective authors pointed out the importance of colonial history in the definition of the relationship between the migrant group and the non-migrant ones. Furthermore, Leach (2008) argued that researching migrant workers should always be considered in relation to non-migrant workers, in order to highlight implicit elements of their relationship that occur in the workplace but are shaped by broader social factors and historical developments.

Furthermore, unequal treatment between migrant and non-migrant groups was reflected in the case of French strikes (Gay, 2014), where inequalities between local and migrant workers were noticed with Muslim workers demanding freedom of religion, respect, and dignity during the strike. Although a part of the public discourse ascribed this demand to religious reasons, the workers claimed their working rights and the practice of religion as part of their everyday work routines.

Finally, the only working conditions related to the employees of Profile 2 concern the role of Turkish re-migrants as boundary spanners. Compared to their German expatriates the re-migrants seemed to have a core role in the liaison processes, as they are the contact points with clients and other workers. German expatriates on the contrary were limited to back-office roles (Müller & Franz, 2019). From this short but concise information, it can be hypothesised that migrants with highly valued skills have better working conditions.

In summary, histories connected to the country of origin of the migrants seem to be highly important in the way they are treated in their workplaces. As Leach (2008, p. 46) mentioned, 'although these groups appear to encounter each other for the first time side by side on an assembly line or work cell, their histories have been entwined through decades of transnational capitalist expansion and contraction'. Reflecting national histories and international relations, national policies determine who may be a migrant and on what terms, also indicating the expected potential contribution of this person to the local economy.

Companies' initiatives for migrants' integration: The role of training

This section aims to highlight a sub-theme connected primarily with the role that the car industry has in training (potential) migrant workers under different circumstances. The cases of Germany and Sweden are presented.

Aiming to integrate refugees into the labour market, the local administration of the city of Stuttgart in Germany and the private sector developed a relevant initiative engaging public and private actors. In their study, Torfa and colleagues (2022) reported that the main actions taken to assist refugee integration were training provision, providing employment opportunities, funding of initiatives via donations and advocacy on refugees' rights. Small and medium companies were very engaged in the process, due to their need for skilled workers. Although they offered apprenticeships and internships, they also acted as employers, offering jobs to refugees after training. Small and medium companies faced difficulties with bureaucracy issues. However, they supported refugees with reference to their rights to stay in Germany and find employment. On the other hand, bigger enterprises (car and tech industry) acted mainly as trainers and rarely as potential employers, although they also supported the initiative financially.

The second example comes from Sweden (Broberg & Moreno Herrera, 2023). The study focused on historical developments and structural changes with reference to education, migration, and the labour market in the context of Sweden. Viewing recent migrants as an important recruitment base (Volvo Cars, 2002), Volvo Cars developed a pilot training programme for car assembly workers that is a joint collaboration between Volvo Cars Torslanda, an upper secondary school (Göteborgsregionens Tekniska Gymnasium), an adult education organisation (ABF), a trade union (Metall), and the City of Gothenburg. The training is provided by the upper secondary school, owned by the Volvo Car Corporation, AB Volvo and the City of Gothenburg.

According to Broberg and Moreno Herrera (2023), this initiative aims at preparing the students with technical skills, as well as with knowledge and understanding of Swedish society. The programme duration varies from two to four years, depending on the previous experience and competence of the participants. The programme includes practical experience of car assembly and related theory, but also study of the Swedish and English languages, civics, and mathematics at upper secondary level. Students are assigned a mentor, often from the same country of origin. Upon completion of studies, there is a certificate for car assembly workers (including an upper secondary qualification in the core subjects). Having achieved familiarity with Volvo's quality objectives, the graduates are offered employment for a trial period.

Strikes

Connected to the car industry and workers' rights, strikes hold a distinct position in the related literature. Nevertheless, the role of migrant employees is often indirectly explored in the literature. The cases of France and China are briefly presented in this section.

The presence of a Muslim workforce in France has been part of the public discourse related both to the state and companies. Although the Muslim identity of migrants received attention before the strikes (De Barros, 2005), workers from Maghreb or sub-Saharan Africa were considered a workforce whose religious characteristics were not really in question. However, with the major strikes in the automobile sector (mostly Citroen and Talbot) at the beginning of the 1980s, the 'Muslim problem' arose with a focus on the involvement of migrant workers in social conflicts. Such involvement was perceived as a change in their behaviour. The study of Gay (2015) highlighted the inequalities and domination in the world of work, through the differentiated treatment of Muslims by French institutions or their representatives.

In addition, Gay (2015) highlighted how a religious identity was transformed through discursive practices into a racial identity (a theme present also in Leach, 2008, with professional identity replaced by racial identity). Religion became a major element in explaining the conflicts, hiding the social roots of the issues, the organisation of work, and the working conditions. Migrants were perceived as Muslims, and the problem was also labelled as such. The actual questions of work and domination motivating the strikes were sidelined and the religious characteristics of strikers were considered to overshadow their professional and social identities.

The second example from France (Gay, 2014) described how at the end of the 1970s and the beginning of the 1980s the automobile industry experienced a restructuring period resulting in a massive reduction in low-skilled jobs. As a reaction to the layoffs at the Talbot factory in Poissy in 1983, a strike started. Under this strike, some of the specialised migrant workers, the first to be concerned by layoffs, demanded assistance to return to their countries of origin. The trade unions, uncomfortable with this demand, distanced themselves from the fight for employment, although they ended up accepting the demand. The government, on the other hand, saw an opportunity for a new system that supported the return of migrant workers' repatriation. In the study of Gay (2014), migrant workers were given a voice as migrants and not as workers, as they based their claims on their contribution to France and not to the car industry.

While the French case is an interesting source of information about migration, literature from China makes it hard to reach conclusions about migrant workers as they are only viewed as part of the larger working population and are not considered separately. In 2010, there were big strikes by Honda workers in China,

leading to changes in the working rights of car industry employees but also in changes in the way unions were formed and operated (Chan & Hui, 2014; Lau, 2012). Regarding migrants' role in the strikes, migrant workers were considered part of the broader worker population, and they were not discussed as a separate group (Chan & Hui, 2014). In general, in literature related to China, migrant workers have been discussed with reference to their motivation to move and work in urban areas, but also their tendency to remain there and continue working (Franceschini et al., 2016).

Offshoring and transnational migration

This theme addresses relationships and conditions within the activity of service offshoring. Offshore insourcing describes a wholly owned (production) unit, also called a captive supplier, that is located in a foreign country. The captive supplier unit is contracted to provide business functions otherwise performed by the parent company or in-house. Offshoring is discussed in the context of Mexico–United States and Turkey–Germany, with the United States and Germany owning the parent production units.

In the Mexico–United States context, Peña (2000) investigated the working conditions in the *maquiladoras*, the captive supplier units owned by USA companies, but located in Mexico. *Maquiladoras* offered employment to local Mexican workers from both urban and rural areas, who are often low-skilled. According to Peña (2000), the turnover rates among *maquiladora* workers are quite high, with an average tenure of 10 months before resignation. Nevertheless, the car industry *maquiladoras* have the most stable working environment as the workers tend to stay an average of two years.

With reference to the relationship between Mexico and the United States, the theme of transnational migration is also discussed by Crossa Niell and Delgado Wise (2021), but with an emphasis on the intellectual and scientific contribution of the global South to the global North via the migration of a trained and highly skilled workforce. More specifically, the study focused on Mexican engineers employed in the car industries in Detroit. The authors highlighted Mexico's asymmetrical and subordinate role to the USA, with limited or no influence in the field of innovation, although with a contribution via the Mexican workforce. As a result of this asymmetrical and dependent relationship, Mexico has become an exporter of a qualified, trained, and prepared labour force, for whom there is no place in the narrow Mexican labour market. This workforce is massively attracted to the most dynamic technological development of the US economy.

Moreover, the case of Turkey–Germany provides the present study with more details on offshore outsourcing and the role of migrant employees in it. According to Norlander (2014), the role of labour migration has been ignored in the service offshoring literature, with only a few exceptions (Anderson, 2015;

Duvivier & Peeters, 2011). Offshore outsourcing studies have been performed mostly in countries where English is spoken, like India and the Philippines (Müller & Franz, 2019). Offshore outsourcing in business practice relates not only to service provision but also to knowledge transfer between the various cultural and institutional contexts connected to both onshore and offshore locations. With knowledge transfer being a crucial precondition for offshoring (Chen et al., 2013), (re)migrants' role as boundary spanners becomes vital (Müller & Franz, 2019).

Briefly, Müller and Franz's (2019) study referred to the case of a German original equipment manufacturer, operating as a lead firm in automotive production. In 2013, the enterprise resource planning software services were offshored from Germany to a captive offshore service centre located in Turkey. Hence, the company hired an intercultural group of employees, meaning highly skilled (re-)migrants of Turkish origin. More specifically, highly skilled refers to holding a tertiary degree. Re-migrants of Turkish origin are Turks who lived in Germany for at least 12 months before moving (back) to Turkey. Also, individuals of Turkish origin born and raised in Germany were included.

According to Müller and Franz (2019), offshore outsourcing creates a double mobility of both capital and knowledge transfer via the skilled workforce. The process also requires double embeddedness. For the re-migrants that meant that they were embedded both in the Turkish culture and context, as well as in the company's working culture and norms, connected with German culture and language. Competences required by the re-migrants included technical skills, and German and Turkish language skills, while familiarity with both German and Turkish contexts was implied. Acting as boundary spanners, re-migrants were expected to mitigate resistance from the local employees and from the clients, by creating trusting relationships with both actors. Furthermore, re-migrants were expected to disembed and re-embed organisational knowledge facilitating the development of the captive supplier unit.

Both Mexican and Turkish workers in the above-mentioned cases were perceived as resources in the production process and they were heavily relied upon for their competence and labour. Nevertheless, in the case of re-migrants, their origin, heritage and culture were perceived as advantages and were also utilised together with their labour and competence. On the other hand, cultural background was not of direct use in the case of Mexican employees, either in *maquiladoras* located in Mexico or in the parent production units in Detroit. In addition, in all cases in this scenario, the overall control over the captive supplier unit was held by an expatriate, a national from Germany or the USA, rather than a Mexican or Turkish origin employee. This is indicative of the power relations not only between the parent and child unit but also between the countries involved.

Discussion

By identifying the relationships between the migrant workforce and the car industry as they are reflected in the international literature, this study has reached the following results. Firstly, there are mainly two profiles of migrant workers in the literature, while working conditions are included in the majority of the studies reviewed for this literature review. Secondly, the business practice of offshoring seems to affect the migrant workforce in a way that reflects many aspects of their work life and most importantly their status. Thirdly, from a historical perspective, strikes have affected migrants' working conditions and rights. And finally, issues of definition of the migrant worker have not been resolved at an international level, creating confusion and hindering further research.

Reflecting on the identified themes and with reference to migrant workers' profiles, the types of skills that they bring to the car industry seem to be of primary importance. Highly skilled migrants seem to enjoy higher status and to be assigned further responsibilities, as the case of Turkish re-migrants shows. Another interesting element is the use and, thus, the value attributed to the cultural capital that re-migrants bring. Cultural capital can be viewed as the social position that a person has and how it affects their actions. In analogy with economic capital, cultural capital is a resource, for example knowledge, to be invested and/or converted into other forms. In this study, Turkish re-migrants' cultural capital is their competence in Turkish and German, along with their knowledge of the Turkish labour market and society. Moreover, the cultural capital of Mexicans and Salvadorians comprises the Spanish language and possibly their knowledge about *maquiladoras*. While cultural capital does not seem to be of importance in the case of Mexican engineers in the United States (Cossa Niell & Delgado Wise, 2021) or of Salvadorian migrants in Canada (Leach, 2008), Turkish re-migrants' cultural capital is decisive for organisational decisions (the selection of location for the captive supplier unit) and for the recruitment of re-migrants themselves.

The cultural capital and the language skills of re-migrants renders them suitable to be boundary spanners mediating between the car company and the German-related culture that might inform its working culture, the Turkish employees (employed in Turkey) and the clients that might raise concerns about the new captive supplier unit. This case frames re-migrants as individuals with added value and stands against the deficit approach that is often encountered with reference to other migrant workers, portraying them as lacking the needed skills or failing to integrate into the new environment (e.g., Leach, 2008). Setting the focus on assigning the right task to the right person, this case is indicative of the unexploited potential of migrant workers. Moreover, it shows how managing human resources can potentially empower workers. High-skilled migrant

workers' impact on broader industry innovation are also reported in the study by Fassio and colleagues (2019).

On the opposite side of the deficit approach lies the provision of promising practices that focus on the exploration of what are considered successful integration strategies. Such initiatives are presented in the studies of Torfa and colleagues (2022) and Broberg and Moreno Herrera (2023). In both cases, the importance of training is highlighted not only with reference to technical skills but also in relation to the new context, which includes the host country but also the new workplace. The case of Sweden provides an additional strategy rooted in the idea of using the cultural capital of migrant workers, by assigning them the role of a mentor to new migrant workers. As in the case of re-migrants, migrants in the Swedish example become boundary spanners for a potential incoming workforce.

Last but not least, the issue of power relations between different countries cannot be overlooked. This issue runs through all the material presented and it is often stated and discussed directly by authors. The power relations between countries, which are often the result of past histories and/or present economic dependencies, are reflected highly in individuals and groups of migrant workers and how they are perceived by others. These relations become the roots of inequality and discrimination. As the Canadian case demonstrated (Leach, 2008), the presence and activity of migrants might create new conditions and, thus, put at risk the control that white male workers, often skilled, assert over their own labour (Camacho, 1999), provoking the reaction of the first, the dominant group. This brings the two groups into some opposition, creating a division between the dominant group and the 'others'.

With reference to the relationships between migrant and non-migrant groups, the literature connected to the car industry clearly indicates the tendency of dominant groups to replace migrants' professional or social identities with racial identities. In the case of the workplace, as described in Leach (2008), this can be explained as the result of division between 'us' and the 'others'. In the case of strikes in France (Gay, 2014, 2015) the replacement of migrants' professional or social identities with racial identities may also be motivated by a need to downgrade the validity of the demands made by the migrant group of strikers. Besides migrant workers' self-identifications, usually based on their class, imposed categorisations deriving from characteristics such as ethnicity and/or race still constitute parts of their social life (Koskela, 2019). Classifications imposed by others can conflict with self-identification (Jenkins, 2004), and it has been previously shown that migrants might struggle to maintain a social identity based on class, rather than race and ethnicity (Eliasson, 2024).

From a research perspective, the current study points out the scarce research about migrant workers in the car industry. The identified and presented

literature originates from various disciplines, such as economic geography, migration, history, labour studies, anthropology, and business. While this diversity offers a variety of perspectives, the particular focus on the relationships between migrant workforces or migration and the car industry is not represented wholly in any of them. In addition, with different disciplines focusing on different aspects, the cases presented in the literature are not easy to compare, providing a fragmented picture of the question under investigation. Similarly, it can be noted that the research reviewed for the current study was often framed within the general migration framework of different countries. Combined with the lack of studies representing companies' actions and initiatives on integrating migrants (except for Torfa et al., 2022), the conclusions drawn by the present study can only act as indications and hypotheses.

Moreover, this study highlights issues of definitions and clarity in research communication. Starting with the literature referring to China (Franceschini et al., 2016; King-Chan & Hui, 2014; Lau, 2012; Schmitz, 2019), but also present in a study about Mexico (Peña, 2000), the issue of terminology becomes prominent. In the above-mentioned studies related to China, migration refers to individuals moving between rural and urban provinces, in contrast to the definition of migrants as individuals moving between different countries. With China being a large country, moving between provinces might have characteristics similar to transnational migration. Using the same concept of migrant for two quite distinct movements can create confusion and misunderstandings and, hence, may hinder further research. This clarification, besides serving as a limitation for the present study, raises the issue of definitions shared in the broader research community and the importance of their clarity.

Concluding remarks

In conclusion, the present study contributes by providing an overview of the literature and highlighting research gaps. Conclusions related to practical implementations are hard to reach due to the limited information available and the contextuality of each case presented in the literature.

Identifying two profiles of migrant workers shows diversity regarding the reason of recruiting migrants, meaning specific technical skills/knowledge or unskilled work force. In this case, different types of training or upskilling are required, as well as different approaches to integration or inclusion in the workplace. The literature referring to strikes on the other hand, draws attention to migrant workers' limited working rights, discussed as a result of the power relations between countries, power relations that derive from past histories and/or economic dependencies. Hence, thoughts are raised about the impact of past histories and dependencies in current approaches in in-company training

and education. Training and education cannot be expected to be purely focused on skills; but reflecting or distinctively including cultural elements or efforts of integration. Therefore, in-company training and other re- and up-skilling processes in VET entail social and political parameters influencing the migrant workers' lives and identities. That, in turn, indicates the necessity for research and reflection on how these cultural elements are infused in 'technical training' and how they can be offered in a way that does not only serve the receiving country's interest, but also the migrant worker's identity transformation.

In terms of research, the gap in the literature addressing the relationships between the automotive industry and migrant labour has been highlighted, rendering the need for further research urgent, especially considering the rapid growth of the car industry and of the migration movements. This research should take into consideration the confusion around key concepts, like migration, and provide clarifications that could assist in understanding the context and the phenomenon under discussion.

In accordance with Leach (2008), it is also important to compare migrant and non-migrant groups, with aim of detecting not only potential inequalities, but also power relations between the two that affect the working life of both groups. Finally, moving away from a deficit approach, research might contribute by investigating promising practices when the knowledge and skills of migrant employees, as well as their cultural capital have been used to improve production or the working life.

Endnotes

¹ The EBSCOhost database includes the following databases: Academic Search Premier, OpenDissertations, ATLA Religion Database, Business Source Premier, CINAHL, Communication & Mass Media Complete, Communication Abstracts, Criminal Justice Abstracts, eBook Collection (EBSCOhost), EconLit, ERIC, Fuente Académica Premier, GreenFILE, Library, Information Science & Technology Abstracts, MathSciNet via EBSCOhost, MEDLINE, Philosopher's Index, Regional Business News, RILM Abstracts of Music Literature, Sociology Source Ultimate, MLA Directory of Periodicals, MLA International Bibliography.

² A factory in Mexico that is run by a foreign company and exports its products to the company's country of origin.

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* The asterisk (*) indicates the studies that have been part of the literature review body for this study.