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Policy brief

ALGORITHMIC MANAGEMENT AND DEMOCRACY AT WORK IN GERMANY

Philip Wotschack
Florian Butollo
Leon Hellbach

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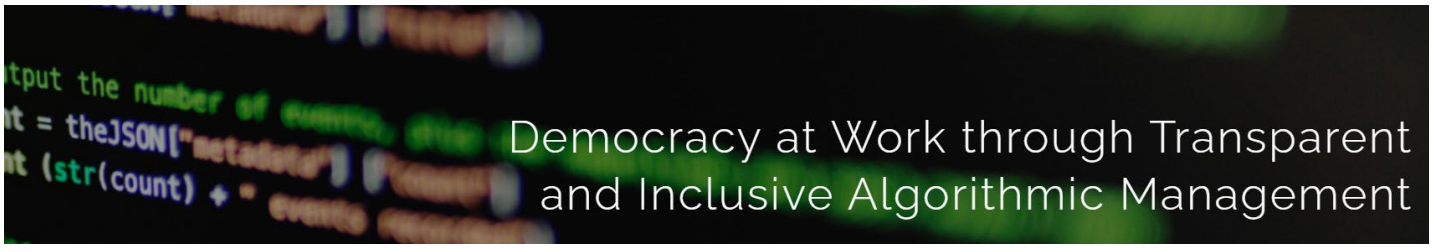

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Authors	Institution
Philip Wotschack Florian Butollo Leon Hellbach	Wissenschaftszentrum Berlin für Sozialforschung gGmbH [WZB Berlin Social Science Center]

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Introduction

The use and regulation of AI and AM in Germany is not subject of specific legal regulations with a direct focus on AI or AM but a relatively large number of established legal regulations, sectoral and company agreements, and union and works council activities that are (indirectly) governing the field of AI and AM application by addressing issues of data protection, platform work, co-determination, or discrimination. In addition to the General Data Protection Regulation (DGSVO), the German Works Constitution Act ('Betriebsverfassungs-gesetz') plays a major role in the regulation of AM and AI in Germany. It provides extensive information and advisory rights as well as effective co-determination rights to works councils that also apply to the use of AI systems and algorithms.

Recently, new regulations like the Works Councils Modernization Act ('Betriebsrätemodernisierungsgesetz') (6/2021) came into effect giving particular importance to procedural co-determination rights (Albrecht & Görlitz 2021) and stronger involvement of works councils in AI usage. At the level of collective agreements, so called future-oriented forms of collective agreements ('Zukunftstarifverträge') have been introduced in the German metal and electrical industry sector (in North Rhine-Westphalia). Though this new type of collective agreement is not focused on AI or AM issues, it might provide some guidance also for these areas.

The ad hoc working group "Algorithmic Management" established by the German Federal Ministry of Labour and Social Affairs (BMAS) and the metal workers' union (IG Metall) has recently emphasized the need for further regulation, law enforcement, and actions of the social partners to provide transparency, explicability and traceability in the use of AI and AM (Arbeitsgruppe „Algorithmisches Management" 2023). Four key areas of action are identified, like (1) integrated planning of AM systems including participation of workers and their representatives, (2) transparency about used data and functioning of AM systems provided by developers and companies, (3) building know-how for assessing the effects on work processes and conditions during use, and (4) a systematic and knowledge-based change management, for example through strategic goal setting, evaluation and feedback systems (Arbeitsgruppe „Algorithmisches Management" 2023). How works councils and managers cope with these new demands has not yet been explored.

Not surprisingly, the demands and debates on regulation AI and AM are shaped by sectoral differences and skill levels. This becomes evident when we compare contrasting areas of the German economy like the industrial core sector and more peripheral parts of the service economy like food delivery. Industrial manufacturing and food delivery services represent two contrasting fields regarding skill levels, power relations, management strategies, employee representation, and needs and pathways of AI regulation.

In this context, the INCODING project has researched the implications of AI-based systems at work and its collective governance in the manufacturing and the food-delivery sectors, focusing on digitalized companies where algorithmic management are relevant and workers representation is present through Work Councils. Particularly, the study has analysed two cases at company level.

First, a medium-sized mechanical engineering company. And second a large food-delivery company, employer of more than 10.000 couriers. The study emphasizes the importance of negotiations, collective action, and regulation at the company level. The methodology employed required desk research and interviews with key informants, representatives, and workers.

Synthesis of major findings and highlights

The case studies tackle companies with different characteristics with regard to work content and products, the composition and skills of the workforce, and the traditions of and possibilities for co-determination. The medium-size industrial company comprises of a stable workforce of mostly German, middle-aged employees of an intermediate skill level in a rural region. The delivery service mainly covers large urban regions and has a precarious, low-skilled, mainly migrant workforce with very high levels of labour turnover. Moreover, the German metal industry is a stronghold of co-determination, whereas trade unions and co-determination are still young and contested at the delivery service.

Comparing the cases of AM application in different contexts, we resulted in several important research outcomes and lessons for the relevant stakeholders:

- ☑ First, AM systems are primarily introduced to coordinate and synchronize complex processes, not in order to control work performance. In the case of the industrial company, the AM system does not affect the intensity of work, but merely rearranges the sequence of orders, which enhances productivity and the reliability of on-time delivery. At the delivery service, the function of the app is similar as it matches orders and the supply of drivers and therefore generates productivity gains from the overall coordination of processes. Work intensity, however, is affected through algorithmic coordination, as its goal is to organize the work process efficiently. While management strongly objects to the suspicion of using data transparency for disciplining workers, the works council claims that this is being done informally.

- ☑ Second, in both cases the works council does not possess the ability to analyse and shape technologies at work. At both companies, the interviewed works council members emphasized the difficulties to understand the operations of algorithmic systems and expressed an inability to monitor and shape the use of technology, yet for different reasons. At the delivery service, the problem of the technological opacity of the software is complicated by a problem of „social opacity": In the works councils' view, management is not willing to share information on the app in a meaningful way. At the industrial company, the works council is less inclined to engage in negotiations about the algorithmic system, which is perceived as of minor importance in comparison to other issues like work density, pay, or the economic situation of the company. In negotiations, the works council merely addresses standard issues of

employee data protection without demanding further insights in technology development, which is perceived to lie without its field of competence.

☑ Third, regarding the role of the unions, both cases demonstrate strong engagement and cooperation with the works councils. There is frequent exchange, advise and support regarding legal issues or questions related to technology. Both works council have access to external experts in the field of AM. In the food-delivery sector the works council used the option provided by the new Works Councils Modernization Act ('Betriebsräte-modernisierungsgesetz') to consult an external AI expert. In the manufacturing sector the trade union's technology consulting office (TBS) offers training and advise to works councils also regarding AI related issues. The office also provides help and guidance when works councils are striving for formalized company agreements on these issues. The union in both sectors – food delivery and manufacturing – underline the importance and need for more formal regulation of AI and AM systems. In their view the risk of monitoring of employees and misuse of data remains high and is often overseen or underestimated by works councils. Union representatives in the food-delivery sector (NGG) express a stronger interest to define detailed and binding requirements regarding AI and AM usage at the sectoral level since they often lack the power and works councils to regulate these issues at the company level. The metal workers' union (IG Metall), in contrast, puts more emphasize on regulations of AI and AM at the company level.

Policy recommendations

Some policy recommendations can be formulated in relation to collective bargaining and Artificial Intelligence technologies at work based on the results of the project:

➔ Need of regulation

Regarding the role of collective bargaining, our study underlines the need for more formal regulation of AI and AM systems to counter the risk of monitoring of employees and misuse of data. Union representatives in the food-delivery sector (NGG) emphasize the need for regulations at the sectoral level, since they often lack influence and representation at the company level. The metal workers' union (IG Metall), on the contrary, stresses binding regulations at the company level. Close cooperation between works councils, unions, the unions' technology consulting office (TBS) and (if necessary) external experts have proven to be very productive in this respect. So-called future-oriented collective agreements ('Zukunftstarifverträge') in the metal industry are not widespread so far. However, when they are used they seem to have positive effects also with regard to negotiation of AM and AI issues.

➔ Regulation of AM-based systems

When trying to tackle issues of AM, works councils often face difficulties to obtain the necessary information on the parameters feeding into the AM system, to understand their functioning and interaction, and to evaluate the effects of possible changes and alternative usages – despite rather rich co-determination rights and recent reforms in the German context. This calls for strengthening the works councils' capacity to access and interpret information on AM-based systems and the introduction of what is called 'procedural co-determination' rights. Procedural co-determination allows for continuously negotiating the use of algorithmic systems even when the apps are constantly updated and modified. A complementary approach to co-determination might be to put more emphasis on regulating the effects of AM-based systems in order to prevent negative outcomes regarding staffing, work hours, workload, or safety. Such an approach would rely on classical fields and instruments of employee representation, such as sectoral and company agreements.

➔ Use of data protection regulations

Our study shows that given regulations that tackle issues of data protection and technology can provide powerful instruments for works councils to achieve goals also in other areas of action. In the platform economy, both efficient day-to-day business and quick innovation depend greatly on the collection and processing of data as well as on the fast and continuous development of (globally used) software. This can be used as a leverage by works councils and unions to pursue their demands. For instance, they can apply data protection regulation to scrutinize the companies' practices of collecting or processing data in order to put pressure on management to cooperate in bargaining processes.

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