

**‘Smart’ Industrial Relations in the Making?
Insights from Analysis of Union Responses to Digitalization in Italy**

How do unions respond to the challenges of digitalization? What is shaping their strategies, and to what extent are these strategies adaptive, innovative, or experimental? Looking at the macro, meso, and micro levels of industrial relations in Italy, we find that unions have thus far dealt with digitalization’s disruptive effects mainly by attempting to extend established institutions where they enjoy greater power resources and favourable opportunity structures, i.e., sectoral collective bargaining. Unions have also promoted minor innovative and, sporadically, experimental initiatives to strengthen their framing capabilities and organizational outreach, but with hitherto limited impact. We contribute to the debate over unions in the digital age by underscoring how structural-institutional and agential features mediate union responses and, arguably, the prospects of ‘smart’ industrial relations.

Keywords: industrial relations institutions, trade union strategies, Industry 4.0, e-commerce, platforms.

Introduction

Digitalization has become in recent years a common ‘buzzword’ that captures all aspects of technological change associated with the increasing use of digital technology in organizational and productive processes, with multiform implications for employment relations. The implications have, thus far, mostly been disruptive, and, in terms of regulatory standards, negative. Indeed, digitalization is leading to standardization, work intensification, and monitoring and surveillance of workers in an increasing number of workplaces (Moore et al., 2017). The spread of ‘labour platforms’ is also leading to novel, arguably rather ‘despotic,’ transformations of the ‘standard’ type of employment contract (Wood, 2020). Furthermore, the labour-replacing effects of digitalization may be considerable, especially for low-skilled workers in low-pay sectors (McKinsey, 2017) and in countries with low levels of digital infrastructure and e-skills development (Degryse, 2016). These trends have engendered an emerging debate about the implications of digitalization for established unions and their role

in the governance of employment relations. Digitalization may accelerate the ongoing erosion of industrial relations (Baccaro and Howell, 2017), while presenting unions with further difficulties in representing new groups of ‘atypical’ workers, such as ‘gig’ workers (Vandaele, 2018; Aloisi and Gramano, 2019), and nationally and transnationally exacerbating the emergence of regulatory vacuums that neither the state nor industrial relations actors are adequately equipped to tackle (Joyce et al., 2019; Aloisi and De Stefano, 2020). At the same time, digitalization may represent an opportunity for unions to reverse a long-standing decline and broaden their constituencies and areas of jurisdiction (Frege and Kelly, 2004; Visser, 2019), possibly by pursuing ‘innovative’ (Bernaciak and Kahancová, 2017) or ‘experimental’ (Murray et al, 2020) practices.

To contribute to this emerging debate about the implications of digitalization for union roles and strategies, this article will address the following questions. To what extent are unions able to anticipate, manage, and accompany the digital transformation of production, work, and employment? What is shaping their capability to do so and their chosen strategies? To what extent are these strategies innovative or experimental, or to what extent do they belong to established repertoires of action? We use the formulation ‘smart industrial relations’—appending the term ‘smart,’ popularized as a synonym for tech-savvy, to the realm of industrial relations (Broughton and Manzoni, 2017; Armaroli et al., 2018)—for the precise purpose of describing this potential capability of unions to actively govern and respond to the challenges of digitalization in the regulation and reordering of work and employment. We hypothesize that union capability to intervene and respond effectively to digitalization is shaped by an interplay between structural and agential factors. On the one hand, effectiveness in responding to digitalization depends on the differential *opportunity structures* unions face at the three key levels of industrial relations (Kochan et al., 1986; Katz, Batt and Keefe, 2003), i.e., macro, meso, and micro. On the other, it depends on the differential *power resources* and *strategic capabilities* that unions have available (Levesque and Murray, 2010; McGuire, 2013).

Drawing on a review of the literature and interviews with union officials and industrial relations experts, we will explore how these structural and agential factors interact in shaping the potential development of ‘smart’ industrial relations in the case of Italy, which presents interesting features for theory building. First, Italy has a relatively high ‘problem load’ in terms of digitalization-related challenges—due to its chronically weak digital infrastructure and lack of skills (Cedefop, 2017). Second, it presents specific challenges relating to opportunity structures in the industrial relations context. Indeed, especially after the financial crisis of 2007-

2008, traditional features of Italian employment and work regulation have been brought into question. Tripartite concertation has declined, with unions placed in a rather marginal political position by Monti's government and then Renzi's (Pulignano et al., 2018). Collective bargaining, though resilient in terms of high coverage, has been under pressure (Leonardi et al., 2018; Regalia and Regini, 2018). Third, Italy presents a variegated landscape of ideologically diverse unions—some more oriented toward social partnership and others toward mobilization, while overall maintaining a good and stable density (Pedersini, 2020). This diversity will enable us to consider how agential factors shape union strategies and union responses to digitalization, and their effectiveness. For each level of industrial relations, we will focus on illustrative issue areas that encapsulate the main challenges and opportunities of digitalization. At the macro level, we will consider the union role in policy discussion about the technological restructuring that digitalization imposes across the economy; at the meso level, we will examine union efforts to bargain with disruptive players, such as e-commerce platforms; at the micro level, we will focus on union responses to the spread of 'platform work' as a novel model of work organization and contracting.

Digitalization and unions: many challenges, few opportunities?

Within the broad debate about the impact of digitalization on employment, labour markets, and workplace practices, we will focus here on sketching out the main challenges and opportunities that digitalization poses for unions, focusing in particular on the three main levels of industrial relations (Kochan et al., 1986; Katz et al., 2003).

At the macro level, the major threat of digitalization to industrial relations comes from potential job losses and restructuring processes. The available evidence is inconclusive and suggests that the labour-replacing effects of automation may be considerable (McKinsey, 2017), and only partly compensated by positive macroeconomic effects arising from more efficient use of technology and, as a consequence, from stronger demand for new products, services, and labour (Arntz et al., 2016). In this regard, the current most politically salient issue for unions revolves around the governance of processes encompassed under such umbrella terms as the 'fourth industrial revolution,' 'Industry 4.0,' 'the Internet of things,' or the 'smart factory,' which put the focus on automation of production processes and increasing human-machine integration. Whilst mainstream perspectives consider these processes to be benevolent expressions of the novel features of digitalization-driven transformations of work and production, critical observers stress instead how such terms are used discursively to impose

labour-management cooperation, ideally through ‘democratic and participatory forms of business governance,’ but more likely through ‘sketches of digital despotism,’ i.e., deregulation of work and discrediting of industrial relations (Pfeiffer, 2017: 31-35).

At the meso level, the main risks associated with digitalization come from amplification of existing trends that are shaping the labour market and industrial relations and jeopardizing union action (Baccaro and Howell, 2017). The same trends have gone hand-in-hand with the growth of atypical employment over the last twenty years, a consistent feature of industries deeply affected by digitalization (Gumbrell-McCormick, 2011). These challenges need, however, to be understood in light of the context within which unions operate. The literature on sectors highly exposed to technological change—such as telecommunications in the 1990s and early 2000s—is insightful, as it sheds light on the role of institutions in determining the potential and constraints of actors in industrial relations (Doellgast et al., 2009). The erosion of collective bargaining institutions, in particular, has challenged the capability of unions to ensure uniformity in working conditions across different segments of the economy because more and more workplaces, especially the new ones emerging from the digital economy, fall outside their area of activity (Visser, 2019). For unions, therefore, the most salient issue at stake is their ability to use existing collective bargaining structures to manage the transformations brought about by digitalization and deal with the effects of fragmentation of the employment model by preventing divergence in standards and working conditions and ensuring coverage and homogenous standards.

At the micro level of workplace action, the key digitalization-related challenges to industrial relations are twofold. The first is the emergence of new business models that operate through digitally-mediated ‘platforms’ and raise significant issues for working conditions, job quality, and the very definition of employment relations (Aloisi and De Stefano, 2020). In contexts where the existence of ‘conventional’ employment relations is denied, unions are confronted with a major challenge: how to develop appropriate channels to provide the ‘new’ workforce segments with a collective voice; how to represent them; and how to organize them (Aloisi and Gramano, 2020). A second, related challenge is the spread, both in ‘gig’ work and in ‘traditional’ sectors, of novel management and work-organization processes—so-called ‘algorithmic management’ methods—which lead to more standardization of work practices, less worker autonomy and control, more work intensification, and invasive monitoring of targets and productivity (Moore et al., 2017). It is challenging for unions to respond effectively to these forms of ‘digital despotism’ (Wood, 2020), because unions need to develop specific

technological know-how to open up the ‘black box’ of otherwise opaque proprietary algorithms, while also reclaiming spaces of intervention in work organization processes often left to managerial prerogatives.

By conceptualizing the impact of digitalization on industrial relations at these three levels, we can focus on the potential challenges and opportunities that unions face in each of their spheres of operation. The current debate we reviewed above mostly emphasizes risks and threats, with a common underlying assumption that digitalization has shifted the balance of structural factors adversely for unions. This standpoint, however, overlooks the fact that specific outcomes depend also on how the key actors interact with and make use of technology and existing institutional and political arrangements, which may lead them to adapt their practices or create new ones.

Understanding union strategies for ‘smart’ industrial relations

To operationalize our concept of ‘smart’ industrial relations, we draw on the concepts of ‘innovation’ and ‘experimentation’ in union practices. Bernaciak and Kahancová (2017: 12-13), inspired by Schumpeter, conceptualize ‘an innovative union practice as a course of action differing from the one pursued in the past, staged by a union to address a newly emerging challenge or tackle an existing problem more effectively.’ Such an innovation can involve three dimensions of union action (organizational structure, choice of strategies, and target group). Murray et al. (2020: 7-9), following the American pragmatist tradition of social change, instead conceive of experimentation in a broader, more systemic sense—as a concept emphasizing ‘tentative moves towards new forms of knowledge and practice, of tentative solutions to practical problems,’ potentially acting as a framework to advance our understanding of actor agency in the re-regulation of work and employment. In our analysis, we apply these concepts loosely, to detect whether and how union responses to the novel challenges of digitalization deviate from or re-propose past courses of action. To advance a balanced understanding of the factors shaping union intervention strategies and capability to innovate, we propose an analytical framework that considers both ‘structural’ and ‘agential’ factors: on the one hand, the political opportunity structures unions face; and, on the other, the interplay between their power resources and strategic capabilities.

The *political opportunity structures* within which unions operate are the opportunities for and obstacles to strategic action and intervention that they face. We conceptualize them as

being shaped primarily by institutional factors at each of the three levels. At the macro level, the factors include the presence and institutionalization of tripartite social dialogue and the relative consolidation of the institutional prerogatives of unions and their interventions in regulatory, welfare, or skills training institutions. In this arena, ‘shaped by economic, political and legal conditions,’ unions—typically national confederations—act as political actors by using channels of influence, such as their relations to political parties or their presence in parastatal public organisms (Streeck and Hassel, 2003). In a discussion of different configurations in ten Western European countries, Hyman and Gumbrell-McCormick (2010: 328) report the ‘diminishing returns’ of practices of partnership, social dialogue, and political exchange and suggest unions should explore new political avenues by ‘seeking complementarities with radical social movements’ and reconnecting with ‘progressive national and international’ politics.

At the meso level, the political opportunity structure is largely based on the coordination and coverage of collective bargaining, arguably the institutional cornerstone of industrial relations because of its ‘superiority as method of governance’ (Hayter, 2011: 9). Here, we normally find industrial union federations, whose priority is to negotiate terms and conditions of employment across a sector, thereby preventing the processes of business fragmentation and organizational disintegration that erode the regulatory capability of collective agreements. The main concern for unions is the extent to which the existing contractual arrangements and their renewal mechanisms lead to segmentation between relatively protected ‘insiders,’ the main union constituency, and a rising number of unprotected ‘outsiders.’ The alternative to such dualization is to make collective bargaining ‘inclusive,’ i.e., to expand its scope and depth beyond its traditional realm (Gumbrell-McCormick and Hyman, 2013; Visser, 2019).

At the micro level, the institutional factors that shape the political opportunity structure are the presence or absence of established channels of ‘voice’ and action within workplaces, as well as the relative hostility or openness of employers to union action. A common assumption is that unions will direct their strategic focus to the sphere of action that offers the most conducive or promising ‘institutional opportunity’ structure (Frege and Kelly, 2004). Hence, unions are expected, for example, to pursue rank-and-file activism in relatively labour-hostile contexts and collective bargaining or partnership where industrial relations institutions prove resilient. However, other options have also proved viable, such as social movement unionism, in circumstances where it is the only viable resistance to extreme forms of market regulation, or counterintuitive strategies, where unions try to address their weaknesses (Gasparri et al.,

2019). Hence, we consider the political opportunity structure at each level of industrial relations to be a factor that *influences* but does not necessarily *determine* the practices that unions pursue to tackle emerging challenges.

In addition, we contend that union responses to emerging challenges are shaped by agential factors. We focus here on two key organizational features that might shape the strategic agency of unions: the *power resources* and *strategic capabilities* that they have available and can mobilize at the various levels. In particular, following Lévesque and Murray (2010), we consider a union's capability to *activate* and use effectively its power resources—internal solidarity, network embeddedness, narrative resources, infrastructural resources—by examining four key capabilities: framing, learning, intermediation, and articulation. We expect that different compositions of power resources and capabilities will impact a union's capability to intervene at the three levels and affect the focus of its strategic action, but not in a deterministic way. Rather, we expect its responses to be shaped both by its existing power resources and capabilities and by its intention to compensate for 'weaknesses' and acquire *new* power resources and competences. We do not relate *ex ante* any specific power resource or strategic capability to a particular level of action, as each response is likely to be context-dependent and contingent. Here, we simply delineate how we expect each strategic capability will matter in response to some specific challenges associated with digitalization.

As a union response to digitalization, *framing* is likely to be essential. Indeed, the digitally-driven disruptions of existing work and employment regulation are forcing unions to re-engage in a 'battle of ideas' (Gumbrell-McCormick and Hyman, 2013) over the nature and trajectory of technological development and leading them to articulate inclusive demands that can harmonize the increasingly differentiated interests of the working class (Hauptmeier and Heery, 2014). *Learning* as a strategic capability is also acquiring importance, as the very nature of the issues at hand—complex questions about technological development, which push the boundaries of the possible and imaginable—require more adaptability and deliberate effort to comprehend appropriate progressive responses before formulating them. McGuire (2013) also noted the importance of specialist knowledge and expertise as a crucial organizational capability that unions need for effective intervention on certain policy issues. Finally, *intermediation* and *articulation* are both relevant for dealing with complex issues of digitalization that cut across different levels of industrial relations at once, seemingly in ambiguous or contradictory ways (Heery, 2002).

Case selection and methodology

This paper is a single case study. It focuses on the illustrative case of Italy, using an exploratory and inductive approach for investigation. Italy is an empirically salient case for analyzing union responses to digitalization because it presents evident challenges in several areas: its digital infrastructure gap; its considerable regional and sectoral heterogeneity in technological innovation and competitive strategies; and its relatively high exposure to the threat of automation (Cedefop, 2017). Hence, Italian unions face a high ‘problem load’ with regard to digitalization-related challenges. The features of its industrial relations also make it theoretically well-suited for examination of how unions are being impacted in their capability to respond innovatively to digitalization by the varying opportunity structures and the composition of their power resources and capabilities.

Industrial relations institutions and union power resources in Italy are regarded as comparatively resilient but subject to increasing pressures (Regalia and Regini, 2018). In terms of union characteristics, density is medium-high, at 31.6%, and Italian unions have enjoyed historically high institutional power resources in both sectoral collective bargaining and channels of action in the political sphere (Pedersini, 2020). However, they have faced challenges in extending their membership to ‘atypical’ segments of the workforce and in their declining legitimacy in public opinion. Italy is also a case of union pluralism, with multiple confederations historically differentiated along ideological lines. The largest one, the CGIL, belongs to the communist-socialist tradition of unionism and is inspired by an egalitarian, working-class ideology, whereas the CISL is inspired by Catholic social doctrine, and the smaller UIL has a secular, moderate socialist-republican orientation (Hyman, 2001: 144-145). Their monopoly over the labour movement has since the 1990s been challenged—albeit only in a few industries and professions—by the growth of grassroots unions such as the COBAS and the USB, which are oriented toward workplace organizing and more confrontational strategies.

The resilience and transformations of industrial relations institutions varies by level of intervention. At the macro level, in the sphere of national policy-making, channels for tripartite intermediation have become marginalized, especially since the onset of the 2007-2008 financial crisis and the decrease in the institutional power resources and political visibility of unions (Pulignano et al., 2018). At the meso level, sectoral collective bargaining is coordinated at multiple levels (industry level and firm level). Whilst industry-level agreements have historically been predominant, reforms implemented during the last crisis have led to a greater

role for company-level agreements. Inequalities across and within sectors have also grown due to proliferation of ‘spurious’ collective agreements (Leonardi et al., 2018). At the micro level, union bargaining power in the workplace is strictly related to the capability to recruit and mobilize members. This level has a higher degree of union heterogeneity and considerable differences in union capability for intervention between sectors and between large and small firms (Pedersini, 2020).

The following analysis is based on a comprehensive and semi-systematic review of the available literature and primary and secondary documentary evidence. Over 150 texts from the conventional academic literature and from the grey literature (i.e., non-academic and policy-related reports and publications) were collected through systematic keyword searches, reviewed by the authors, and analyzed thematically through a comparative matrix, to classify the main challenges arising from digitalization at each level of industrial relations, and according to the corresponding union responses. The insights from this literature review were supplemented with information from eighteen qualitative semi-structured interviews with key union members and with experts. The interviews were conducted between February 2017 and June 2020.¹

Union responses to digitalization in Italy: an exploratory mapping

a) The macro level: the digital infrastructure and Industry 4.0

The macro level of intervention has emerged as a significant area of union action, partly reflecting the fact that the Italian government in recent years has launched many high-level policy initiatives on digitalization. The first of these initiatives (*Agenda Digitale Italia*) was launched in 2012 with explicit reference to the broader EU initiative, being mostly financial incentives for digital skill learning and for upskilling programs. Then, in September 2016, the government set up a plan (*Piano Nazionale Industria 4.0 2017-2020*, ‘Industry 4.0’), with more specific targets—innovative investments, upskilling, enabling infrastructures—and strengthened financial support. All of these initiatives were set up unilaterally by the government, and the three main union confederations (CGIL, CISL, UIL) joined the National Steering Committee, which supervised implementation and monitoring of the 2016 plan. To compensate for this limited involvement in policy-making, Italy’s confederal unions have

¹ We rely on insights from eighteen interviews with local and national union officials from CGIL (3), CISL (3), UIL, FILCAMS-CGIL (2), FISCASCAT-CISL (2), UILTUCS-UIL, FIOM-CGIL, FILT-CGIL, NIDIL-CGIL, and SI-COBAS, and with two representatives of the ‘self-organized’ union of gig workers (‘Riders Union’) in Bologna.

developed their capabilities for framing and learning and for intermediation and articulation. To this end, they have invested considerable resources in production of knowledge that can be used to influence public debate (Lévesque and Murray, 2010: 341–345).

In terms of framing and learning, the unions promoted their common vision of Industry 4.0 in March 2017. Soon after, each of them separately promoted its specific plan. For instance, the CGIL launched ‘*Piano Lavoro 4.0*’ alongside a knowledge exchange platform ‘*Idea diffusa*,’ to build knowledge, expertise, and policy proposals on Industry 4.0, whilst the metalworkers federation of the CISL researched the industrial relations implications of Industry 4.0, highlighting critical factors, such as applied research networks, individualized training programs, and apprenticeships, and concluding with a list of proposals for unions willing to meet these challenges and become ‘smart unions’ (Armaroli et al., 2018). There are some differences in approach between the two union confederations. The CISL, for the most part, interprets technology and digitalization as an opportunity to modernize work and employment relations (favouring, amongst other things, a shift toward more ‘dynamic’ and individualized forms of security, such as human capital development). The CGIL maintains a more cautious attitude toward the emancipatory potential of technology, seeking to give workers a voice in company decisions about technological upgrades, calling for action to stop potential abuses and inequalities arising from digitalization-related developments and for action to ensure universality of protections for workers most affected by these processes.

In terms of *intermediation* and *articulation*, the confederal unions have worked with employer organizations that enjoy greater structural and instrumental power vis-à-vis the government, thereby achieving two notable results in 2018. First, both unions and employers were critical of the government’s policy vision on the Digital Agenda and Industry 4.0, saying it excessively emphasized technological upgrading while devoting only limited attention to enabling factors, such as HR and industrial relations institutions (Prodi et al., 2017). Pressed by social partners, the Italian government augmented Industry 4.0. It renamed the plan ‘Enterprise 4.0’ and reached out to other employer organizations in addition to Confindustria—the organization representing employer federations in manufacturing. In addition, the government endorsed the creation of ‘competence centres’ with a view to establishing a nationwide support network for technology transfers by Italian firms.

Second, the CGIL, the CISL, and the UIL agreed with Confindustria on a comprehensive reform of Italian industrial relations (Pedersini, 2020). The agreement, tellingly named the ‘*Patto della Fabbrica*’ (‘Factory Pact’), was signed in late February 2018, just days before the

Italian general election. Sending a clear message to the incoming government, the social partners stressed the relevance of collective bargaining—particularly, the two-tier system with the national sector level at its core—for ensuring a smooth digital transformation in manufacturing and related services (Pedersini, 2020); in the wording of the agreement, the transformation was to be both ‘effective’ and ‘participative.’ A critical aspect of this ‘Factory Deal,’ however, was its implementation, which needed to fit the peculiarities of different sectors, regions, and companies. Arguably thus far, the most advanced example of such implementation has been the agreement signed in October 2019 by the three union confederations and the leading employer organization in manufacturing (Assolombarda). It is valid for the technologically-advanced Milan region. The agreement, known as ‘*Accordo sulla Partecipazione*’ (‘Participation Deal’), affirms the principles underlying the Factory Deal and identifies a set of concrete practices to fulfil them, such as joint workshops and training activities, including engagement with experts and academics to identify positive cases and best practices for implementation of digital and technological innovation. Interestingly, the CGIL stressed that the deal gave workers a stronger voice in strategic business decisions and is, therefore, an expression of industrial democracy, whereas the CISL emphasized the consensual basis and win-win prospect that the deal envisions, thus orienting the employment relationship toward partnership.

b) The meso level: collective bargaining in the e-commerce sector

The meso level of union intervention is, in our research, the sphere of collective bargaining, specifically in the e-commerce sector. In this context, the opportunity structure facing unions is not clear-cut. On the one hand, the emergence of larger semi-monopolistic players in e-commerce (of which Amazon is the prime example) may provide unions with new opportunities to intervene in the sector. On the other, e-commerce models of production and supply-chain organization—extensive use of subcontracting, temporary agency work, and digital surveillance—are driving fragmentation and posing challenges to unionization and collective bargaining in the sector (Pulignano et al., 2020). In Italy, for instance, Amazon is split into eleven different legal entities, each of which carries out one of three national sector agreements (distribution, logistics, telecommunication) and which together operate, in one union official’s words, as ‘a matrix.’ Italian unions, with their basic floor of rights set in a voluntarist framework and serving as an incentive to renew their strategies, are reasonably equipped to face these challenges and rely, at this level, especially on two types of power

resources: internal solidarity, in particular ‘deliberative vitality,’ and infrastructure resources, beginning with organizational practices, procedures, policies, and programs (Lévesque and Murray, 2010: 338, 340). Empirical developments in collective bargaining reflect this ambivalent interplay between a challenging opportunity structure and fairly well-developed power resources and capabilities.

The example of Amazon is illustrative in this respect. We will begin with the workers directly hired by Amazon. For example, 1500 are currently employed at its warehouse near the northern city of Piacenza, and for them a company agreement, which improves on the national sector agreement, was signed in May 2018. This agreement has been deemed ‘historic’ by unions in Italy and by EU and global labour organizations² because it breaks with the company’s tradition of unilateral industrial relations. The agreement, which is valid for only one year but has since been promptly renewed once and largely approved by workers in a referendum, improved, amongst other things, the organization of working time, thus benefitting workers more than the national sector agreement. It was the outcome of a long process of organizing by the local union sections, beginning when the warehouse opened in 2012—in particular, by the CGIL at first and subsequently by the CISL—and leading over time to a critical mass of members, estimated now at 25% of permanent staff. Meanwhile, episodes of mobilization have also increased in frequency and attendance, likewise thanks to parallel organizing activities by the rank-and-file SI-COBAS unions. In late 2017, mobilizations coinciding with Black Friday and the Christmas peak season achieved outstanding media visibility, which Amazon itself boosted through its counteraction. In fact, as is common in complex industrial disputes, the prefect (the local representative of the Home Office) invited the parties to a consultation, but Amazon did not turn up and instead closed its gates to union officials who were supposed to convene an authorized workers’ assembly. In addition to the public outcry, the national government claimed that the company’s initiatives were ‘unacceptable’ and a ‘big mistake’; it urged Amazon to attend a meeting in Rome, thus putting pressure on Amazon to enter into local negotiations. However, as union officials acknowledge, the agreement was an imperfect achievement in two ways. First, it cannot be considered a full-fledged comprehensive agreement because it mostly covers matters of work organization and leaves economic matters underdeveloped; in particular, the linking of pay packages to agreed

² <https://www.uni-europa.org/2018/05/historic-agreement-between-amazon-and-sector-unions/>
<https://www.uniglobalunion.org/news/first-ever-agreement-between-amazon-and-unions-halts-inhumane-work-hours-italy>

performance targets. Second, despite the amelioration, more needs to be done to compensate for the huge physical and mental effort that jobs at Amazon require.

We will now look at the bottom-end of the e-commerce chain, which typically involves outsourced workers in charge of delivering parcels. When these workers are in relatively structured companies, as in the Piacenza fulfilment centre, unions tend to follow a ‘representation cycle’ (Heery, 2002) and deploy a set of strategies that starts with organizing, continues through mobilization, and eventually leads to bargaining. Though complicated by the fragmentation of the delivery sector, this approach proved its effectiveness in the case of drivers working (indirectly) for Amazon in Lombardy. The drivers, led by the transport federation of the CGIL (FILT) along with counterparts for the CISL (FIT) and the UIL (UILT), promoted successful strikes in September 2018 and February 2019 to oppose a workload that was heavier than that of drivers for other companies. The protests convinced the twelve companies that provided Amazon in Lombardy with delivery services to enter, through two employer organizations, into negotiations with the unions and then sign one agreement in October 2018 (on the principles orienting their industrial relations strategy) and another in May 2019 (on the implementation of that strategy). The final agreement improved the drivers’ terms and conditions—in particular, defining a performance management system and criteria to transform temporary contracts into permanent ones—and was the first remarkable effort to unite a fragmented sector through the instruments of collective bargaining. To date, however, the arrangement is limited to drivers who work indirectly for Amazon in a single region, Lombardy, which is the country’s most economically developed region and the location of Amazon’s headquarters.

The story is completely different for delivery workers hired by work cooperatives, a type of organization that treats workers not as employees but as associate partners. In theory, these associates receive a share of the organization’s revenue and a say in its decision-making. In practice, however, many of these organizations are bogus cooperatives that act as private companies and adopt the cooperative model purely to circumvent established labour regulations (such as minimum wages, employment conditions, and social security contributions), whilst their workers have no influence over company decisions (Sacchetto and Semenzin, 2015). In this extremely hostile context, only a few autonomous rank-and-file organizations (e.g., USB, COBAS) have been able to gain sizeable membership and force companies, often after turbulent picket lines with accidents and violent repression by the police, to negotiate better terms for contracting-out practices. This trend points to a potential

divergence in practices between different segments of the e-commerce sector and to the potential limits of existing collective bargaining institutions in their efforts to cope with the increasing differentiation and fragmentation that is emerging along value chains and which is being amplified by digitalization.

c) The micro level: workplace representation in the platform economy

The micro level, in our conceptualization, is the workplace level of union operation. We focus here on a union's capability to intervene in the platform or 'gig economy,' specifically in the food delivery segment where services such as Foodora and Deliveroo have been hotspots for labour mobilization around 'digital work' in recent years (Tassinari and Maccarrone, 2020). The main challenge for unions is twofold: intervene effectively on issues of workplace-level conflict and working conditions arising from digitalization; and provide adequate channels for collective representation of workers in the 'new' platform economy. In Italy, platforms still fall within a 'grey area' of labour law regulation. Among individuals who work through platforms (be they crowd-work platforms or gig-work platforms), the vast majority are classified as self-employed or independent contractors, a type of employment not covered by labour law or collective bargaining agreements, especially collective agreements on wages. Opportunities for union intervention at the micro level are further limited because most firms in the platform economy are not members of employer organizations, do not have established channels for speaking collectively, and often display a strong anti-union attitude.

Debates about regulation of platform work in Italy were initially triggered by the protests of riders working for the food delivery platform Foodora in Turin, in October 2016. The protests then spread to Bologna, Milan, Florence, and Naples as other platforms became involved. Riders were protesting their contractual classification as independent contractors, the piecework payment system, the unilateral control of working time, and, increasingly, issues of health and safety (Tassinari and Maccarrone, 2017). Their demands to be reclassified as dependent employees and covered by a sectoral collective bargaining agreement were picked up by political parties and in September 2019, after much negotiation and consultation with mainstream and grassroots unions and employers, a decree-law (101/2019) was passed to bring some marginal improvements to protections for food delivery platform workers. This law, however, neither classified them as dependent contractors nor banned piecework payment, thus testifying to the continuing predominance of employers in the power to set the terms of legislative debate.

The micro level of rider mobilization was key to politicizing the regulation of platform work in Italy, and it remains central, given the limited effectiveness of interventions via the legislative sphere. However, working conditions have been improved mostly by making demands *outside* established channels, through wildcat strikes and protests and through self-organized autonomous political collectives or proto-unions (Tassinari and Maccarrone, 2017). To the extent that confederal unions (CGIL, CISL, and UIL) have been involved, their involvement has been mainly through national negotiations over redesign of labour legislation for the platform economy. In that arena, they have used their institutional recognition and channels of access to policy-makers to amplify the demands of self-organized riders for rights akin to those of subordinate employees and to apply sectoral collective bargaining agreements. It has been difficult for them to get directly involved at the workplace level of representation, a reflection of a longstanding challenge for Italian unions to develop adequate representative structures for ‘new’ workforce segments. When the ‘first wave’ of various forms of atypical employment came to Italy in the late 1990s, confederal unions invested considerable resources in efforts to include atypical workers in their constituencies and representative structures, notably experimenting with the creation of branches for atypical work (NIDIL-CGIL, ALAI-CIL, CPO-UIL) (Fullin, 2002). Similarly, to unionize online freelancers, the UIL in 2015 set up the new online branch *Sindacato Networkers* and the CISL the platform *vIVAce*, whereas the CGIL launched a large-scale survey of the working conditions of digital workers. However, their reach among platform workers remains fragmented and limited.

The confederal unions have more recently pursued strategies to compensate for these difficulties, especially those arising from a hitherto limited arsenal of narrative resources and network embeddedness, both of which provide the means to be credible and effective when reaching out to these constituencies of the workforce. Hence, especially the CGIL and the UIL, they have invested resources in framing and articulation. On the one hand, they have visibly taken up the issues raised by the self-organized riders’ group, using their own channels to intervene in public debate, and vis-à-vis the government to amplify their demands and agendas. The CGIL, for example, has repeatedly spoken about the urgency of ‘negotiating the algorithm,’ and the various unions have visibly promoted the couriers’ campaign ‘#RiderXiDiritti,’ demanding that collective bargaining be extended to the logistics sector to level wages and working conditions upward. On the other hand, they have pursued, more or less explicitly, a tactic of intermediation and alliance building with other organizations, first and foremost the riders’ self-organized groups—by supporting them in their campaigns and

initiatives through rather experimental pragmatic collaborations without, however, seeking to be a ‘substitute’ for them. These initiatives have been most effective in such cities as Milan, Bologna, Florence, and Naples, where local chapters of the CGIL or the UIL have been instrumental in supporting the riders’ organizing efforts and extracting concessions from local platforms and local authorities, as well as in advancing demands to extend collective bargaining nationally.

Discussion

The above sections have mapped the initiatives and interventions that Italian unions have initiated to address the challenges of digitalization at the macro, meso, and micro levels of industrial relations. In general, we find that union strategies and their effectiveness have been significantly shaped by the interplay between the political opportunity structures unions face at different levels and the power resources and capabilities they can mobilize. Below we will systematically analyze developments level-by-level and elaborate on the implications of our findings (Table 1 for a summary).

Table 1. Union Responses to Digitalization in Italy

Level	Main Issues	Union Interventions
Macro	<i>Policy-making on digital infrastructure and Industry 4.0</i>	Marginal involvement in government-led initiatives. Autonomous policy proposals and innovative agreements with employers (Factory Deal; Participation Deal in Milan)
Meso	<i>Collective bargaining in the e-commerce sector</i>	Progressive extension (two key agreements at Amazon, valid for one warehouse and for outsourced drivers in one region) amid persistent risks of segmentation
Micro	<i>Workplace representation in the platform economy</i>	Little representative capacity and minimal role in mobilization. Policy proposals, knowledge gathering, new structures, and pragmatic collaborations with self-organized groups

At the macro level, where the political opportunity structure facing Italian unions has been adverse over the last decade and where governments have often attempted to reduce the influence of unions over the policy-making process, the depth of union involvement in national policy initiatives has remained limited, akin to ‘cosmetic’ consultation rather than substantive negotiation. Unions have thus sought to make use of their resilient power resources—especially network embeddedness and narrative resources—to develop their framing and learning capability. They have invested considerable resources both in their production of knowledge

to influence public debate about digitalization and in their capability for intermediation and articulation (Lévesque and Murray, 2010: 341-345), while collaborating with employer organizations to extract concessions from the government on issues such as skill development. It is, however, interesting to note that the most innovative initiatives thus far—the so-called ‘Factory Deal’ and ‘Participation Deal’ for the Milan area—entail shifting the level of action to the sphere of autonomous collective bargaining, in order to bypass the potentially adverse interventions of governmental actors.

At the meso level, although collective bargaining institutions have to date displayed some resilience (Leonardi et al., 2018), the opportunity structure facing unions in digitalization is nonetheless difficult because industrial relations are so unilateral in many emerging sectors (such as e-commerce) and because the employment contract model is increasingly differentiated along the supply chains (Pulignano et al., 2020). To address these issues, Italian unions have relied on internal solidarity, in particular their ‘deliberative vitality,’ and on infrastructure resources, especially organizational practices at the local level (Lévesque and Murray, 2010: 338, 340). The results are mixed. On the one hand, unions have reached two major agreements (one covering a warehouse and the other outsourced drivers in a single region) to regulate work and employment at Amazon, thus demonstrating their power to deploy all of their strategic capabilities: balanced use of a mixed repertoire of action, from organizing to partnership (intermediation); forward-looking agenda that gained a high media profile during episodes of mobilization (framing); effective organizational support, thanks to strong links between local and national unions (articulation); and discussion and dissemination of good practices within unions (learning). On the other hand, by focusing on collective bargaining as their primary channel of action, unions might create fragmentation between sectors or between segments within sectors, i.e., between those who are covered by protective institutions and those who are not.

At the micro level of intervention, the political opportunity structure for Italian unions has also been challenging because gig-work platforms fall outside the purview of existing workplace representation and collective bargaining institutions. Established unions are thus limited in the channels of action available to them. Consequently, they have not yet managed to intervene effectively in the emerging platform economy through grassroots unionization. Instead, they have focused on strengthening their framing and intermediation capabilities by amplifying the demands of self-organized riders and by pursuing novel collaborations and

strategic alliances with the riders' organizations. In this regard, they have shown themselves able to adapt their repertoires of action to compensate for their weaknesses.

Overall, our findings show that digitalization does indeed present not only challenges but also opportunities to bring union strategies and issues of jurisdiction into line with current reality (Pulignano et al., 2020). By seizing such opportunities, unions demonstrate they can innovate and, to a lesser extent, experiment (Bernaciak and Kahancová, 2017; Murray et al., 2020). Our findings reveal that union strategies are shaped in significant ways both by their current power resources and capabilities (Lévesque and Murray, 2010; McGuire, 2013) and by the opportunity structures they face (Frege and Kelly, 2004; Gumbrell-McCormick and Hyman, 2013; Visser, 2019). These ways are not, however, solely determined by institutions.

Conclusion

This article shows that when responding to the challenges of digitalization, unions undertake adaptive, innovative, and, sporadically, experimental practices primarily to *compensate* for their weak power resources and adverse opportunity structures in specific issue areas. Most notable in this respect are the efforts by Italian unions to develop their learning and framing capabilities on issues surrounding technological change and the platform economy, so as to strengthen their narrative resources and network embeddedness at both the macro and micro levels. In addition, they have developed their capability for intermediation and articulation by building alliances with other industrial relations actors to pursue their goals in contexts characterized by adverse opportunity structures; for example, by pursuing innovative and occasionally experimental forms of collaboration with employer organizations at the macro level and with self-organized groups of riders at the micro level. These findings also confirm that unions in adverse circumstances can benefit by renewing their practices in areas *outside* their traditional repertoires of action and institutionally-set pathways, specifically to compensate for their weaknesses (Heery, 2002; Gasparri et al., 2019).

At the same time, our findings demonstrate that the most *effective* union responses to digitalization have been concentrated where the opportunity structure is already more conducive and union power resources more concentrated and developed, i.e., in the sphere of collective bargaining (Leonardi et al., 2018; Regalia and Regini, 2018). Our findings further demonstrate that unions have been able, by investing considerable resources and by using their varied capabilities, to 'force' even e-commerce giants to abandon a unilateral attitude toward

industrial relations. The labour movement can thus effectively respond to and manage digitalization by extending and adapting already established institutions and practices. Interestingly, in the two areas where Italian unions face the most adversity in opportunity structures, i.e., at the macro level (national policy-making) (Pulignano et al., 2018) and at the micro level (regulating platform work), notwithstanding the innovations undertaken (Aloisi and Gramano, 2019), the ultimate union strategies have been to strengthen and enlarge the scope of *collective bargaining*. The CGIL's slogan of 'contractualize the algorithm' is, in this regard, illustrative of the direction of union strategy: pursuing limited innovation while aiming to strengthen established institutional forms of governance. Whilst the desirability of strengthening collective bargaining is manifest (Hayter, 2011), collective bargaining institutions must be extended and adapted much further—into areas with weaker labour markets and more hostility to organized labour, with a view to covering the whole supply chain (Degryse, 2016; Moore et al., 2017; Wood, 2020).

These nuanced findings contribute to the debate about unions in the digital age by underscoring how their responses to common, disruptive challenges are not homogenous but rather significantly mediated by contextual features (Broughton and Manzoni, 2017; Joyce et al., 2019; Aloisi and De Stefano, 2020). These features are not only institutional but also embedded in the local/sub-national context, in the power resources of unions, and in their ideological orientation (Hauptmeier and Heery, 2014). At the same time, it seems to be exclusively at the organizational level that we find, at least at this stage, the few cases in which such union responses exhibit innovation (Bernaciak and Kahancová, 2017) and experimentation (Murray et al., 2020). Digitalization thus seems to have a heterogeneous impact on the regulation of work and employment across local, sectoral, and national contexts. If smart industrial relations are to become a reality, as this research illustrates, that goal will be achieved in ways that are far from straightforward.

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