

## ORIGINAL ARTICLE

# The collective voice of unions and workplace training in Italy: New insights from mixed methods

Fabio Berton<sup>1</sup>  | Anna Carreri<sup>2</sup> | Francesco Devicienti<sup>3</sup> | Andrea Ricci<sup>4</sup>

<sup>1</sup>University of Turin, CIRET, IZA and LABORatorio R. Revelli, Torino, Italy

<sup>2</sup>University of Verona and University of Hasselt, Verona, Italy

<sup>3</sup>University of Turin, Collegio Carlo Alberto, IZA and LABORatorio R. Revelli, Torino, Italy

<sup>4</sup>National Institute for Public Policy Analysis - INAPP, Roma, Italy

## Correspondence

Fabio Berton, University of Turin, IZA and LABORatorio R. Revelli, Lungo Dora Siena 100/A, 10153 Torino, Italy.  
Email: [fabio.berton@unito.it](mailto:fabio.berton@unito.it)

## Funding information

Compagnia di San Paolo: “MiSkill” and “PROWEDEC”

## Abstract

Using a three-phase approach that combines quantitative (pooled OLS, fixed effects and IV) with qualitative (semi-structured interviews) analyses, we find that in Italy, workplace unions are more likely to enhance training when they sign a firm-level agreement and when they can get access to external funds for financing. We also identify three channels: what we call a ‘maturation effect’, double-track communication and watch-dog function. We argue that these results are consistent with the idea that the impact of workplace unions on training depends on the empowerment of its collective voice within an institutional framework that does not fit either of the standard models provided by collective and liberal market economies.

## 1 | INTRODUCTION

Public intervention in the fields of workplace training and skills formation is recognized as necessary at least since the Copenhagen Declaration in 2002 (European Commission, 2002). Also, because continuing vocational training is generally less state-regulated (Heidemann, 1996), a key role is recognized to workplace social dialogue (Houten & Russo, 2020) and social partners (Winterton, 2007). Collective bargaining should thus emerge as a primary arena of training decisions

-----  
This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2023 The Authors. *British Journal of Industrial Relations* published by John Wiley & Sons Ltd.

(Eurofound, 2009), with a paramount role played by the collective voice that workers are able to exercise in the workplace (Lansbury, 2015). The issue of collective voice has continued to be at the centre of great interest among scholars from different disciplines and perspectives, even more recently (e.g. Kochan et al., 2019; O'Brady & Doellgast, 2021; Wilkinson et al., 2020). The voice can be defined as *'the ways and means through which employees attempt to have a say, formally and/or informally, collectively and/or individually, potentially to influence organizational affairs relating to issues that affect their work, their interests, and the interests of managers and owners'* (Wilkinson et al., 2020: 5). Within the industrial relations literature, voice is conceived more often as a collective, rather than individual, resource, exercised most effectively through representative forms and negotiated rules (Doellgast & Benassi, 2020; O'Brady & Doellgast, 2021). Unions are seen as a vehicle for employees' voice through participating in decision-making processes over a number of issues about work arrangements (Kochan & Osterman, 1994). However, much of the prevailing debate within industrial relations literature has focused on whether the presence of workplace unions has an impact on both individual and organizational outcomes, while we have very little knowledge on how union voice works in practice and is articulated through a variety of channels in decision-making regarding training and skills development.

The aim of this contribution is twofold. On the one hand, we want to ascertain separately whether and to what extent the mere existence of workplace unions and the signing of local collective agreements affect the provision of firm-provided training in a country that hardly fits into the usual categories of coordinated and liberal market economies (CMEs and LMEs), that is Italy; to this end, we will explore several measures of training provision and intensity, and also look at its funding source. On the other hand, we aim to explore the channels and processes through which unions intervene on workplace skill formation issues.

In doing so, we provide at least three contributions to the literature. First, in the spirit of opening the 'black box' (Beach, 2020) of firm-level union activity and in order to understand both whether and how the collective voice of union takes place, we combine quantitative evidence with a qualitative approach. Following Johnson et al. (2007: 123), *'mixed methods research is the type of research in which a researcher... combines elements of qualitative and quantitative research approaches... for the broad purpose of breadth and depth of understanding and corroboration'*. To the best of our knowledge, this is the first time that mixed methods are applied to the study of the mechanisms relating workplace unions and training beyond quantifying the effect under scrutiny.

Second, complementarily to most of the literature that focuses on liberal versus coordinated market economies models (Cooney & Stuart, 2012), which do not capture the existing variety (e.g. Allen, 2004), Italy will be our case study. This allows us to theoretically elaborate upon hybrid mechanisms through which union voice takes place. Contrary to the Anglo-Saxon world, where unionism primarily acts at the company level and the LME model prevails, the main bargaining level in Italy is the sectoral one, with company-level bargaining playing an integrative although increasing role. However, workers' representative bodies at the company level also deviate from archetype of CMEs provided by the German model of works councils, being less empowered and more directly under the control of national and local unions in the Italian case. These aspects are likely to have a significant bearing on skill formation. This notwithstanding, Italy is a largely under-investigated case-study.

Third, a distinctive strength of our approach is that we can make progress in disentangling the effects of the presence of workplace unions per se from those arising upon the signing of a formal firm-level agreement. Indeed, the survey data used for the econometric analyses allow us

to observe whether or not a union body with workers' representatives has been set up at the firm level, and whether or not a firm-level agreement is in place. Similarly, our qualitative analysis is aimed at spotting the channels linking workplace unionism and bargaining on the one hand, and skills formation on the other hand, filling a gap recognized in the literature (Stuart et al., 2015).

The remainder of the article proceeds as follows. Section 2 presents the conceptual framework. Section 3 places our case-study in a comparative framework, both in terms of the institutional background and of the empirical literature. In Section 4, we describe the data and our three-step empirical strategy. Section 5 comments the results of the quantitative analysis, while Section 6 focuses on the findings of qualitative analysis and goes back to quantitative evidence where possible. Section 7 pinpoints the major limitations of our study, while Section 8 offers a joint reading of our mixed-methods analysis and provides some concluding remarks.

## 2 | CONCEPTUAL FRAMEWORK

According to the paradigm of Varieties of Capitalism (VoC; Hall and Soskice, 2001), market economies need to solve a coordination problem among five operational scopes: industrial relations, vocational education and training, corporate governance, inter-firm relations and relations of firms with own employees. This problem envisages two solutions: in liberal market economies, industrial relations are market-based, and employers display a limited long-term commitment to their workers; on the contrary, in coordinated market economies, the social dialogue is based upon long-term agreements. The VoC approach emerges henceforth as a natural candidate to map the specific institutional set-ups governing the interaction between unions and workplace training.

However, what we should expect in a specific country depends also on its capacity to empower the collective voice of workers in the workplace. The concept of empowerment, as Ashcraft and Kedrowicz write, '*has come to connote flatter structures, participation programs and other techniques thought to enhance member competence and control through increased self-direction*' (2002: 88). Building on Lansbury (2015), workplace unions constitute the *formal* tool, in the sense that they are simply a precondition to sit at the negotiating table, present a union platform and bargain over it. But without enforceable rights, workplace unions risk to be void institutions (Streeck, 1997), as nothing grants that the *informal* processes of collaboration, participation and involvement – where the collective voice finds its space – will take place.<sup>1</sup>

The dichotomy between CMEs and LMEs does only partially capture this empowerment capacity and a wide degree of heterogeneity survives within each of the two categories. CMEs have a sound tradition of social dialogue, but also an inclination to manage industrial relations at the national (like in Scandinavian countries) or sectoral (e.g. Germany, Italy or Portugal) level. This has two potentially countervailing effects on collective voice. On the one hand, it may reduce the scope for action of workplace unions. On the other hand, collective bargaining at the aggregate level often brings the potential conflicts related to sensitive issues, such as wages, working time and safety outside of the workplace, thus freeing the collective voice power of the institutions acting locally (Kriechel et al., 2014). The outcome in terms of empowerment of workplace unions among CMEs is hence a priori undecided and depends on other (often country-level) specificities.

LMEs, on the contrary, have a weaker history of social dialogue, and industrial relations are mostly or exclusively managed at the workplace level. In LMEs, hence, the problem is not that of

bringing the voice institutions at the workplace level, but to empower them. Absent a national or sectoral framework, the capacity of workplace union representatives to affect training is likely to depend on the availability of external financing (Bridgeford, 2017) if not entirely devoted to the state (Cooney & Stuart, 2012) giving rise to a framework that Rainbird and Stuart (2011) define 'incorporation', where unions are unable to influence state policies and are reduced at the role of service providers.

The workplaces are, therefore, the scene of a variety of informal practices between unions, employers and employees, and formal ones, such as collective agreements, which crystallize historical processes and structures within particular national institutional environments. Each combination activates specific *channels* by means of which workplace industrial relations may manifest their collective voice on skills formation, pursue particular objectives and produce a positive impact on training programmes. Information channels at the firm level between management and workers representatives could play an important role since they can facilitate the recognition of skill deficits and favour the activation of training programmes (Acemoglu & Pischke, 1998; McGuinness & Ortiz, 2016). It is only the mutual recognition of roles that leads to the shared assessment of the skill gaps and ensures that workplace training is activated and willingly received. If skill gaps are only recognized by workers, for instance, no employer-provided training is likely to take place; conversely, if skill gaps are only recognized by the employer, workers may not be willing to participate in any training programme (McGuinness & Ortiz, 2016). More on the formal level, there is the channel of collective bargaining which sets the agreements emerging from the social dialogue. Through it, the partners can, for example, set up skill-mapping systems or the payment of wage bonuses related to training courses – typically regulated by firm-level agreements – which are devices to prevent unions' opportunistic behaviours and promote efficiency in the production process (Devicienti et al., 2017; Katz & Ziderman, 1990; Leuven, 2005). Also, when collective bargaining is defensive, the union may play a role in the processes of skill formation (Klindt, 2017; Pulignano & Stewart, 2013), for example through the promotion of employees' re-training programmes. In addition, unions may engage with training decisions becoming training providers and participating with other stakeholders in middle-level institutions in the design and implementation of training programmes for the local labour market (CNEL-Istat, 2015; Cooney & Stuart, 2012; Del Punta, 2003; Kristensen & Rocha, 2012; Trampusch & Eichenberger, 2012), possibly widening the audience of recipients towards the inclusion of low-skilled workers (Hoque & Bacon, 2008; Lindsay et al., 2012; Wiß, 2017). More indirectly, workplace unionization may be associated with longer tenure (Boockmann & Steffes, 2010; Busemayer & Trampusch, 2012; Estevez-Abe et al., 2001; Hirsch et al., 2010; Pfeifer, 2011) and bolster the integrity of internal labour markets (Harcourt & Wood, 2007), thus creating incentives for long-run human capital investments (Lazear, 2009). The activation of all these channels is likely to differ across institutional settings.

Which hypothesis can be put forward about our case-study depends, therefore, in the first place on two dimensions: the existence and relevance of a national or sectoral bargaining level, and the presence of empowerment tools of workplace unionism. For the latter, if empowerment does not follow from enforceable rights stated by the law, keeping separate the mere presence of workplace representation, on the one hand, and the signing of a formal firm-level agreement, on the other hand, is, therefore, important for a fuller understanding of the various factors at play. Moreover, for a complete picture, we need to shed some light on the empowerment tools of workplace unionism, which allow the collective voice to enter into training and skill development decisions in Italy.

### 3 | ITALY ON THE MAP

#### 3.1 | Institutional background

Along the de/centralization dimension, single national set-ups move from countries where bargaining occurs at the workplace level only – a typical feature of Anglo-Saxon countries, but indeed involving two cases in three among OECD members – to the sectoral (continental Europe) or the national one (Scandinavian countries), with different degrees of coordination and of role played by the firm-level negotiations. The latter, as argued above, depends on the empowerment tools which workplace mediating institutions are provided with. As the OECD (2019) comments, some countries – Austria, Denmark, Finland, France, Germany, The Netherlands, Norway and Sweden among them – have institutionalized some form of workplace strategic participation by the workers, increasing the potential for cooperative behaviours. The power of voice can nonetheless emerge also in absence of – or complementary to – formalized processes, through direct interactions and negotiation with employers. Providing a comprehensive institutional account of each country is beyond the scope of the present section. Instead, joint with the empirical evidence in Sub-section 3.2, it aims at describing how the specific features of two epitomal cases – Germany and UK, beyond Italy – activate different channels of workplace training.

Among CMEs, Germany represents ‘an excellent example of multi-level union engagement’ (Lansbury, 2015, p. 14), where training policies are an issue of the social dialogue at both the sectoral and the workplace levels. Within this setting, collective agreements are seldom bargained at the firm level. Works councils represent the German analogue of workplace unions (Stegmaier, 2012). They were established in 1952 and can be elected, but are not mandatory, in firms with at least five employees for a period of 4 years. Their rights grow with firm size and include information, consultation, veto and codetermination powers, on top of paid hours off during the councils’ activities. A reform passed in 2001 strengthened the prerogatives of works councils on training matters; works councils are indeed now entitled to codetermine duration, timing and contents of training and can initiate checks for training needs; all these rights are independent of firm size. The German institutional framework emerges hence as a combination of collective bargaining at the aggregate level, and of empowerment of workplace unionism through codetermination rights stated by the law.

The UK, instead, represents the epitome, in Europe, of the LME model. Its ‘voluntarist tradition of industrial relations’ (Bridgford, 2017, p. 7) provides a limited space, at the national or sectoral levels, for collective bargaining in general. Nor statutory rights of codetermination or negotiation are recognized to workplace unions. However, policy developments occurred during the last decades have at least partially been able to institutionalize the process of vocational training. The current set-up dates to the late 90s, when the Labour government pushed for a deeper involvement of unions in the training system (Stuart et al., 2012). The new asset is based on two pillars. First, a Union Learning Fund was established, with the aim to finance capacity building and learning projects at the company level. Second, Union Learning Representatives (ULRs) – elected members of workplace unions recognized by the employer – have progressively been given the right to take paid hours off to undertake their duties, which include the identification of training needs, provide advice to the other employees, arranging training activity and consulting the employer about training matters. Although ULRs are not entitled of the formal right to negotiate, their presence likely raises the opportunities to sign learning agreements, which in turn may represent those workplace codification structures that allow collective voice to manifest and

ultimately affect training activities. The UK, therefore, combines a fully decentralized bargaining system with very limited legal provisions to empower the workplace unions. However, their voice capacity on training matters is supported in two ways: on the one hand, workplace unions have access to dedicated public funds; on the other hand, consultation rights may trigger a negotiation cumulative process at the local level.

Italy draws features of the two cases portrayed above. It is currently characterized by a two-tier bargaining system, with a dominant sectoral level and a supplementary decentralized one. The main objectives of the sectoral agreements are to protect real wages and to set common conditions for sectoral workers nationwide. At the decentralized level, it is possible to negotiate performance wage increases. In addition, the second-level bargaining may address a number of additional matters, such as working hours, employment, training, labour organization and union relations, in order to gain flexibility for organizational changes and competitiveness. According to Italian law, workplace representation can be set up in firms with more than 15 employees, at the discretionary initiative of workers. Hence, not all firms above 15 employees are unionized. Furthermore, the national bargaining system at the industry level can introduce workers' representation also in firms with less than 15 employees. The main workplace representation bodies are the so-called *Rappresentanza Sindacale Unitaria* (RSU) and *Rappresentanza Sindacale Aziendale* (RSA), which differs from RSUs in being elected by the members of a particular union. Over time, RSUs have tended to replace RSAs.<sup>2</sup> Members of these bodies are workers themselves, and not necessarily professionals of industrial relations or delegates of national-level unions, although strongly linked to the latter. Moreover, the non-workplace representatives often take part to the firm-level bargaining process. Worker representatives are able to negotiate at the plant level on issues delegated from the industry-wide level and have rights to information and consultation (D'Amuri & Giorgiantonio, 2015). Eventually, trade unions play a role in the bilateral funds (*Fondi Interprofessionali*) system for training financing, jointly managed with employers. The access to such funds to finance workplace training is conditional on that the company is enrolled into the fund itself. The use of bilateral funds is not formally subject to a workplace collective agreement but needs an approval by workplace unions.

At first glance, hence, Italy's industrial relations system is closer to CMEs' (see, e.g. Breda, 2015, for France): multi-tier bargaining; no US-style 'certification elections' required for union recognition; workers can be represented by more than a union at the workplace; unions are open-shop. Moreover, RSUs include features of works councils, for instance because worker representatives are elected by all employees. This notwithstanding, also differences emerge. First, union and employee representation are entrusted to a single body (single-channel representation), as opposed to a dual-channel system where union delegates operate alongside works councils. In this sense, the Italian workers' representative bodies at the company level are more directly under the control of national and local unions than in the case of the German works councils. Second, while works councils have codetermination rights on training issues, the Italian RSUs and RSAs have only information and consultation rights; the capacity to empower their collective voice on skills formation issues crucially depends on informal communication practices with employers and on their ability to negotiate and sign workplace agreements. This reminds more of the learning agreements in the UK setting, although while Italian workplace unions hold the right to negotiate with the employer, the ULRs do not. Third, and following the former, both in Italy and the UK, the actual bargaining power of workplace unions depends on the access to external funds; but while in Italy, these are directly managed by the social partners (the *Fondi Interprofessionali* mentioned above), in the UK, the Union Learning Fund is financed nationally by the government.

The Italian system of industrial relations, therefore, mixes features of countries which are usually presented as examples of the two opposite equilibria envisaged in the VoC literature. In an original way, it combines collective agreements at the aggregate level – what allows to drop the most sensitive bargaining issues from the workplace level and to give potential to the collective voice – with mostly informal tools of empowerment at the workplace level, namely information and negotiation (but not codetermination) rights, a tight (although informal) relationship between workplace representatives and national union officials, and control over a relevant source of training financing. Not surprisingly, many authors have argued that two varieties of capitalism do not capture the full existing heterogeneity of market economies (Allen, 2004; Amable, 2003; Crouch, 1993).

In the light of our conceptual framework, we can hence derive three arguments about Italy. First, the mere presence of workplace unions may have a limited effect on training; we expect the signal provided by FLA to be a stronger predictor of workplace training. Testing this hypothesis requires quantitative analysis of data that separate the observation of the presence of RSU/RSA from that of FLA, and this is a distinctive feature of our quantitative analysis. Second, lacking a strong empowerment of workplace unions, such as German codetermination rights, we expect a limited capability of both workplace unions and FLA to activate companies' own funds, and a stronger dependence on the *Fondi Interprofessionali*. Third, we argue that there are multiple channels through which employees collectively attempt to have a say, formally and/or informally, on skill formation issues. This is where the qualitative analysis most evidently steps in.

### 3.2 | Empirical literature

Consistently with the above, the empirical literature – both quantitative and qualitative – focuses on Germany and the UK. Results on Germany generally point to a positive effect of works councils on training matters or, at worst, to a non-significant impact. Among the latter, Backes-Gellner et al. (1997) and Görlitz and Stiebale (2011), while Zwick (2005) finds that works councils increase the incidence of training and Stegmaier (2012) that they raise both incidence and intensity. Similarly, Allaart et al. (2009) and Bellmann et al. (2018) show that firms with works councils display a higher participation rate in training courses, and Gerlach and Jirjahn (2001) and Kriechel et al. (2014) that such firms are more prone to finance training. Significantly, Kriechel et al. (2014) also find that the positive effects of works councils on training are stronger in firms covered by collective agreements, possibly due to a higher degree of empowerment *de facto*. Works councils, eventually, may also activate indirect channels of skills formation, by reducing turnover and increasing productivity (e.g. Addison et al., 2001).

Evidence on the UK is less clear-cut. One first stream of literature focuses on the effects of workplace unions. Booth et al. (2003) suggest a positive effect of individual membership on training probability and duration; Green et al. (1999) find consistent results using workplace data. On the contrary, Addison and Belfield (2007) find no significant effects on training incidence and intensity, while duration is indeed longer, and Hoque and Bacon (2008) suggest that the presence of trade unions has at most weak effects on participation to training. In Lindsay et al.'s (2012, p. 208) reading, '... earlier [...] evidence [suggests] a stronger union effect'. Given the UK institutional setting, a second stream of literature made an attempt to go beyond the mere presence or recognition of workplace unions, to study the impact of their actual involvement in training decisions, which does not mechanically follow from the former if a strong formal empowerment is missing. In this perspective, Bacon and Hoque (2009) and Saundry et al. (2011) find that ULRs are more likely to

affect training outcomes when they are actively involved in negotiations. Stuart et al. (2015, p. 7) conclude that ‘... three specific aspects of union presence – union recognition, union negotiation and consultation over training, and the existence of ULRs – are all associated with higher levels of training...’, and Stuart et al. (2012) argue that ‘to be effective [...], the discourse of learning needs to be “normalized.” Workplace structures, such as learning agreements and learning committees, offer one such way...’.

The case of Italy, to the best of our knowledge, is dramatically under-investigated, which further motivates our contribution.

#### 4 | DATA AND EMPIRICAL STRATEGY

Our quantitative empirical analysis is based on the information provided by the *Rilevazione su Imprese e Lavoro* (RIL), a survey conducted by the Italian National Institute for Public Policy Analysis (INAPP) on a wide – 30,000 firms per wave – and nationally representative survey of partnerships and limited-liability companies operating in the non-agricultural private sector.<sup>3</sup> The RIL survey has a panel structure, with waves occurring every 4 or 5 years. For our present purposes, we use the three waves conducted in 2010, 2015 and 2018.

RIL collects a rich set of information about management and corporate governance, personnel organization, industrial relations and other workplace characteristics. Mostly relevant to our purposes, the survey provides data on whether workers have established any form of workers’ representation at the workplace that is legally entitled to participate in the firm-level bargaining process (*Union*, for short).<sup>4</sup> *Union* is a binary indicator, which can be time-varying for any given firm. The survey also allows us to identify whether or not the firm has signed a firm-level agreement (*FLA*) with internal workers’ representatives; *FLA* is a binary indicator, allowed to be time-varying at the level of the firm. Moreover, RIL includes extremely accurate measures of workplace training, ranging from the share of trainees on total employment to the cost of training and its funding source (whether internal to the firm or not). We also have information on other firm personnel policies (such as the use of fixed-term contracts, and the educational and age structure of the workforce), on the firm’s productive specialization and business strategies (e.g. innovation policies and export activities), as well as data about the education of the managers/entrepreneurs and the incidence of family ownership. These characteristics may play an important role in shaping both training policies and the nature of industrial relations at the workplace, thus reducing concerns related to omitted variable bias in our analysis.

We focus our attention on firms with 10 employees or more. Through this selection criterion, we seek to exclude self-employment (the rate of which in Italy is the highest in Europe) and firms whose employees are the owner’s household’s members. In addition, we expect this threshold to exclude firms with much unstructured recruitment and training policies. In order to drop outliers from the sample, we also exclude the top 0.5 per cent of firms in terms of per-employee training expenditure. The resulting sample size is composed of over 20,000 firms, observed at one, two or three survey rounds.

On such sample, we apply three distinct estimation strategies. The first one, that can be considered a baseline, is a standard pooled OLS specification of the following type:

$$Y_{jt} = \beta_0 + \beta_1 Union_{jt} + \beta_2 FLA_{jt} + \beta_3 X_{jt} + \varepsilon_{jt}, \quad (1)$$



where  $j$  is the firm,  $t = \{2010, 2015, 2018\}$  is the survey wave,  $Y$  stands for one of our five training measures: (i) whether or not the firm is undergoing any training initiative at time  $t$ ; (ii) the share of trainees on firm's total workforce; (iii) whether the cost of training is funded by the firm; (iv) (the log of) per-employee training cost; and (v) (the log of) per-trainee training cost.<sup>5</sup>  $X$  is a set of potentially time-varying controls, including workforce composition (share of women, of blue-collar workers, of temporary contracts, of young workers, of workers with a tertiary degree and of those with a secondary one), firm's characteristics (manager's or owner's educational attainment, whether the firm is a family-owned one, sales per capital, whether the firm sells at least part of its output abroad, net worker turnover, firm's age, size and sector of activity), regional and year fixed effects.<sup>6</sup>

The condition for the unbiased identification of the effects of interest ( $\beta_1$  and  $\beta_2$ ) is that the idiosyncratic component  $\varepsilon_{jt}$  is orthogonal to  $Union_{jt}$  and  $FLA_{jt}$ , conditional on  $X_{jt}$ . In order to make this identification condition less binding, we take advantage of the panel structure of the RIL data and also estimate a firm fixed-effect (FE) model of the following type:

$$Y_{jt} = \beta_0 + \beta_1 Union_{jt} + \beta_2 FLA_{jt} + \beta_3 X_{jt} + \mu_j + e_{jt}, \quad (2)$$

where  $\mu_j$  captures a firm's unobserved time-invariant characteristics (e.g. quality of the management and firm culture) that might correlate to both training activities and the propensity to set up a workplace union or sign a collective agreement. For example, were management quality positively correlated with both  $Union_{jt}$  and  $Y_{jt}$ , the parameters of interest  $\beta_1$  and  $\beta_2$  would be overestimated in model (1), but not in model (2). For estimating Equation (2), we use an unbalanced panel, comprising the subset of firms that are observed in at least 2 survey years.

To further reduce the endogeneity issues affecting the estimation of  $\beta_2$ , we also propose an IV approach, in which, following Devicienti et al. (2018), we instrument  $FLA_{jt = 2015, 2018}$  with the average incidence of second-level bargaining at the 2dgt-sector by macro-region (North-Western, -Eastern, Central and Southern Italy) observed in 2010. Though this strategy cannot also tackle any residual bias in the estimation of  $\beta_1$ , it may be valuable as our main focus is on the effect of firm-level agreements. Such a focus is justified by the theoretical arguments of Section 2 and by our findings in Section 5 that  $Union$  has a much smaller effect (and mostly not statistically significant) when compared to  $FLA$ . The price we pay for this IV strategy is a shortening of the series, as the first wave is lost to build the instrument. None of our empirical strategies is, therefore, ideal to assess with certainty the magnitude of the causal effects of  $Union$  and  $FLA$  on training measures. Neither this is our purpose, being primarily that of testing the hypothesis that within the Italian institutional framework, the degree of empowerment provided by firm-level agreements to workplace collective voice is larger than the one implied by the mere presence of workplace unions.

Table 1A provides some descriptive evidence. Workplace worker's representation is present in around 20 per cent of firms, while the share of firms with a decentralized agreement is at around 10 per cent. Both variables appear to be rather stable during the sample period. The share of firms undergoing any training initiative is 42 per cent in 2010, increasing to 58 per cent 8 years later. All the measures of training intensity exhibit an increasing path. Namely, per-employee expenditure from €85.9 to €108.6 (+26 per cent), per-trainee expenditure from €190.4 to €209.0 (+10 per cent) and the share of trainees from 22 per cent to 38 per cent. These temporal patterns seem to suggest that no relationship exists between training and decentralized bargaining. Our analyses, however, show that this is not the case.

TABLE 1A Descriptive statistics, Italy

	2010		2015		2018	
	# Obs.	Mean	# Obs.	Mean	# Obs.	Mean
Share with FLA	4302	0.10 (0.30)	6934	0.11 (0.31)	6407	0.11 (0.32)
Share with Unions	4302	0.20 (0.40)	6934	0.20 (0.40)	6407	0.21 (0.41)
Share with any training	4302	0.42 (0.49)	6934	0.52 (0.50)	6407	0.58 (0.49)
Share of trainees	4302	0.22 (0.34)	6934	0.33 (0.40)	6403	0.38 (0.42)
Per-employee cost	4302	85.9 (201.1)	6934	108.9 (215.0)	6407	108.6 (194.3)
Per-trainee cost	4252	190.4 (414.8)	6870	208.3 (396.6)	6354	209.0 (381.2)
Share using internal funds	4297	0.30 (0.46)	6934	0.34 (0.47)	6407	0.41 (0.49)
Share using bilateral funds	4293	0.04 (0.19)	6933	0.09 (0.29)	6407	0.13 (0.33)

Notes: Costs are at constant prices in Euros. Standard deviations in parenthesis.

Source: Own computations on RIL data.

TABLE 1B Descriptive statistics, Veneto

	2010		2015		2018	
	# Obs.	Mean	# Obs.	Mean	# Obs.	Mean
Share with FLA	551	0.09 (0.29)	746	0.08 (0.26)	675	0.13 (0.34)
Share with Unions	551	0.19 (0.40)	746	0.17 (0.37)	675	0.20 (0.40)
Share with any training	551	0.43 (0.50)	746	0.59 (0.49)	675	0.68 (0.47)
Share of trainees	551	0.26 (0.37)	746	0.35 (0.39)	675	0.41 (0.40)
Per-employee cost	551	88.8 (193.9)	746	130.6 (219.5)	675	136.3 (206.4)
Per-trainee cost	545	177.7 (415.7)	739	264.4 (461.8)	669	281.0 (400.7)
Share using internal funds	551	0.31 (0.46)	746	0.37 (0.48)	675	0.46 (0.50)
Share using bilateral funds	550	0.05 (0.22)	746	0.10 (0.31)	675	0.15 (0.36)

Notes: Costs are at constant prices in Euros. Standard deviations in parenthesis.

Source: Own computations on RIL data.

In spite of the quality of the survey data, and our ability to examine the separate role of union presence and firm-level collective bargaining, the resulting quantitative evidence has only a modest potential in terms of explanatory capacity. In other words, as anticipated, we would at best know whether there is a relationship between firm-level unionism and bargaining and workplace training activities, with very limited knowledge on the underlying processes. This is why we parallel the quantitative analysis with a mixed methods three-phase research design (Beach, 2020). Precisely, we run 25 semi-structured interviews with key informants from diverse institutions and whose professional positions give them extensive and detailed knowledge about the processes through which unions intervene on workplace skill formation issues. We used purposive sampling techniques to select participants, who were invited by email to participate in the study. We strove to ensure maximum heterogeneity. The list of interviewees includes: seven union representatives from the three largest trade unions in Italy actively involved in decentralized collective bargaining; two representatives of the Italian employers' federation, who are actively involved in firm-level bargaining; five human resource managers from companies with best practices in terms of training policy and industrial relations and where (i) there is decentralized collective bargaining, (ii) there is a well-defined personnel selection policy; five people in charge of agencies which provide firms with continuing vocational training, also through the access to

external resources via the bilateral funds; three experts on skill mismatch and training; one person in charge of a private employment agency; one person in charge of a public employment centre; one worker in charge of the training within his company. Key informants were hence chosen for holding an active role within the realm of information and bargaining, favouring apical positions and those most aware of the issues under scrutiny even outside of their specific experience, jointly with their full availability to be interviewed. At the time of the interviews in 2016, they all operated in the secondary and tertiary sectors of a large Italian region, namely Veneto. This is why, to increase the comparability between the quantitative and the qualitative analyses, we re-estimated all our econometric models on the sub-sample of firms located in the Veneto region.

Interviews were carried out starting from the following topic areas, the comprehensiveness of which was designed in order to leave the largest freedom of discussion to the respondents: interviewee's professional experience on skill mismatch, considering both the analysis of skills gaps and the organization of continuing vocational training (we asked questions such as: *Is skill formation a focus of attention in your profession? Are there discussion tables you take part in on this issue? Are skill gaps and training objects of discussion with the other social partners?*); firm-level collective bargaining and other channels through which trade union intervenes in workplace training (asking questions such as: *How does the union manage to intervene in the decision-making processes regarding workplace training? Does firm-level collective bargaining represent a channel to take action on skill development? How does it work in practice? In what other ways does the union play a role?*); the actual processes and constraints on the involvement of trade unions in skill formation issues (we asked for example: *In your opinion, what are the problems underlying the skill development at company level? What difficulties did you encounter in your experience? And how did you deal with them?*).

The resulting interviews, which lasted from 1 to 2 hours, were audio recorded, fully transcribed and analysed with the software for textual analysis Atlas.ti. A thematic qualitative analysis (Nowell et al., 2017), fit for the purpose of integrating quantitative results (Boyatzis, 1998) and identifying the existing patterns, was conducted. Precisely, in a first stage, we used the interview questions to guide our analysis and outline a list of themes that made the analysis more targeted. However, since by using a pre-determined thematic framework, one loses in flexibility of analysis, and this can bias and limit the interpretation of the results, the list of themes of our qualitative analysis has been partly and inductively integrated in order to return the wealth of data and answer our research questions more in depth. Preserving flexibility is indeed necessary when – as in our case – the issues under scrutiny are ill-known (the 'black box') and research looks for their key dimensions and possibly for some interpretation hypotheses. In this phase of open coding, eventually moving to axial coding, new themes, such as trade unions' role in the bilateral funds system, were analysed in their relation to the other categories. To ensure the reliability and consistency of the interpretative analytic work, the coded themes and their inter-relations were discussed among the authors, and a continuous conversation between the emerging categories and theoretical interpretations was maintained. Moreover, we relied on the prolonged engagement (Lincoln & Guba, 1985) – from 2016 to 2018 – of one of the authors of the present contribution in the activity of post-monitoring of workplace training courses financed by bilateral funds within a parallel research project. The prolonged engagement made it possible to further explore the theme of the trade unions' role in the bilateral funds system that had emerged inductively from the analysis of the interviews. Specifically, it allowed us to understand the empowerment mechanisms, even the informal ones, which put the union in the condition of being able to play an important role in accessing external financing and in monitoring training programmes.

## 5 | EMPIRICAL RESULTS: QUANTITATIVE ANALYSIS

Table 2-Panel A displays the estimation results from the OLS models in (1). They suggest two main conclusions. First, we find that the presence of workplace unionism is associated with a higher probability – from 2.0 (share of trained workers) to 4.5 (probability of supplying training) percentage points – that workers undergo workplace training (columns 1 and 2). This also mirrors into higher measures of training quality, as the average training expenditure is also higher, both if computed as per-employee (+20 per cent) and per-trainee (+23.8 per cent) cost (columns 3 and 4). Second, the effect of firm-level bargaining, as predicted above, is always higher than the mere presence of workplace unionism, with an estimated coefficient of *FLA* that is around twice as large as the corresponding coefficient for *Union*.<sup>7</sup> This finding is in line with the discussion in Section 2: when unions actually engage in firm-level contracting, the positive effects associated with its ‘collective voice’ are more likely to emerge.

Table 3-Panel A displays the results of analogous models estimated via the FE equation in (2). FE models allow us to control for firm unobserved heterogeneity. However, these models only rely on within-firm variation and are likely to exacerbate the attenuation bias arising from any measurement error in yearly classification of firms by *FLA* and *Union* status. As such, we treat the FE models as complementary, but not necessarily to be preferred, to the OLS evidence presented above, also in the view of the large number of controls included in our specifications. By and large, the main findings are confirmed. Firm-level contracting has a positive impact on the quantity and quality of firm-level training. As expected, the estimated coefficients in columns 1–4 remain positive, but in most cases are smaller than in Table 2: for example, the point estimate of *FLA* on the probability to supply training (share of trained workers) decreases from +7.4 (+5.3) p.p. to +6.6 (2.9) p.p., while that on per-worker (per-trainee) cost of training from +52.1 per cent (56.1 per cent) to +28.7 per cent (37.9 per cent). Crucially to our predictions, these effects remain larger than those estimated for the presence of workplace union representatives, now not significantly different from zero. Smaller coefficient magnitude may derive from a combination of attenuation bias and from the effect of firm unobserved heterogeneity, like innovative managerial practices and firm productivity, which are expected to be positively associated with workplace union and bargaining activities, on the one hand, and to a company’s propensity to train, on the other hand. This view finds support also in the qualitative results.

Columns 5 and 6 explore our second expectation, namely the issue of whether the training activity is ultimately financed out of a firm’s private funds, or rather by resorting to the external financial resources offered by the *fondi interprofessionali*. As predicted, it emerges that firm-level bargaining does not have any positive impact on the training initiatives funded by a firm’s own funds (column 5 in Tables 2 and 3). However, the formal consultation activities leading to the signing of a firm-level contract exert a positive impact on a firm’s ability to attract external resources via the *fondi interprofessionali* (the probability is raised by 9.4 p.p. in pooled OLS and by 5.0 p.p. in FE: column 6 in Tables 2 and 3). One may, therefore, argue that the prevalence of collaborative and participative industrial relations, conducive to firm-level agreements, also represents a kind of environmental pre-condition for the decision to apply to, and to successfully obtain, external funds for a firm’s training needs. If so, not only does the existence of a firm-level collective agreement eases the access to external funds for training; it also allows the firms to keep internal funds untouched in spite of the higher amount of training provided.

In the view that *FLA* is found to be the primary driver, with respect to unionism per se, of firm-provided training, in Table 4, we try to further reduce the residual room for its endogeneity

TABLE 2 Estimation results. Pooled OLS estimates

	Training (0/1)	% worker on training	Cost training per worker	Cost training per trainee	Firm's funded training (0/1)	Use of bilateral funds (0/1)
<b>A. Italy</b>						
FLA	0.074*** [0.009]	0.053*** [0.009]	0.521*** [0.055]	0.561*** [0.063]	-0.021* [0.011]	0.094*** [0.009]
Union	0.045*** [0.009]	0.020** [0.008]	0.200*** [0.048]	0.238*** [0.055]	-0.012 [0.009]	0.035*** [0.007]
N. of Obs.	20,257	20,250	17,644	17,510	20,250	20,240
Adj. R <sup>2</sup>	0.154	0.111	0.181	0.175	0.038	0.173
<b>B. Veneto</b>						
FLA	0.096*** [0.026]	0.018 [0.024]	0.515*** [0.160]	0.632*** [0.183]	-0.015 [0.030]	0.091*** [0.027]
Union	-0.014 [0.025]	0.002 [0.021]	-0.070 [0.143]	-0.112 [0.168]	-0.058** [0.027]	0.010 [0.021]
N of Obs	2236	2235	1972	1956	2236	2235
Adj. R <sup>2</sup>	0.167	0.115	0.180	0.176	0.038	0.174
Management char.	Yes	Yes	Yes	Yes	Yes	Yes
Workforce char.	Yes	Yes	Yes	Yes	Yes	Yes
Firm char.	Yes	Yes	Yes	Yes	Yes	Yes

Notes: \*\*\*= 1% significant; \*\*= 5% significant; \* = 10% significant. Robust standard errors in second lines. Management characteristics include employers' education and age, family ownership, external management; workforce characteristics include educational, age and professional composition of the employees, share of female, share of fixed-term contracts, share of immigrants, hirings; firms characteristics control for product innovation, process innovation, age (in years), foreign trade and international markets, (log of) sales per employee, number of employees (in classes), 2-digit sectors, nuts-2 regions.

Source: Own computations on RIL data.

TABLE 3 Estimation results. Fixed-effect estimates

	Training (0/1)	% worker on training	Cost training per worker	Cost training per trainee	Firm's funded training (0/1)	Use of bilateral funds (0/1)
<b>A. Italy</b>						
FLA	0.066*** [0.016]	0.029** [0.015]	0.287*** [0.102]	0.379*** [0.121]	0.005 [0.018]	0.050*** [0.015]
Union	0.019 [0.016]	0.007 [0.014]	0.085 [0.091]	0.149 [0.105]	0.011 [0.017]	-0.006 [0.013]
N. of Obs.	20,257	20,250	17,644	17,510	20,250	20,240
Adj. R <sup>2</sup>	0.046	0.061	0.050	0.041	0.015	0.045
<b>B. Veneto</b>						
FLA	0.086* [0.045]	0.017 [0.044]	0.400(*) [0.282]	0.579* [0.329]	0.045 [0.049]	0.034 [0.044]
Union	0.038 [0.043]	0.043 [0.038]	0.384 [0.259]	0.462 [0.303]	0.038 [0.048]	-0.036 [0.035]
N. of Obs.	2236	2235	1976	1956	2236	2235
Adj. R <sup>2</sup>	0.109	0.096	0.113	0.089	0.028	0.080
Management char.	Yes	Yes	Yes	Yes	Yes	Yes
Workforce char.	Yes	Yes	Yes	Yes	Yes	Yes
Firm char.	Yes	Yes	Yes	Yes	Yes	Yes

Notes: \*\*\*= 1% significant; \*\*= 5% significant; \* = 10% significant. (\*) 12% significant. Robust standard errors in second lines. Management characteristics include employers' education and age, family ownership, external management; workforce characteristics include educational, age and professional composition of the employees, share of female, share of fixed-term contracts, share of immigrants, hirings; firms characteristics control for product innovation, process innovation, age (in years), foreign trade and international markets, (log of) sales per employee, number of employees (in classes), 2-digit sectors, nuts-2 regions;

Source: Own computations on RIL data.

TABLE 4 Estimation results. IV estimates

	Training (0/1)	% worker on training	Cost training per worker	Cost training per trainee	Firm's funded training (0/1)	Use of bilateral funds (0/1)
<b>A. Including variable Union</b>						
FLA	0.033 [0.075]	0.261*** [0.096]	0.964* [0.578]	0.655 [0.648]	-0.198** [0.094]	0.218*** [0.084]
Union	0.048** [0.020]	-0.030 [0.024]	0.080 [0.143]	0.176 [0.161]	0.014 [0.024]	0.017 [0.021]
N. of Obs.	15,765	15,844	13,483	13,392	15,765	15,761
Adj. R <sup>2</sup>	0.129	0.049	0.161	0.161	0.029	0.157
First-stage coeff.	0.365*** [0.030]	0.399*** [0.039]	0.392*** [0.041]	0.391*** [0.042]	0.365*** [0.030]	0.365*** [0.030]
F-test of excl. instr.	150.04	105.18	89.86	88.68	150.04	150.04
<b>B. Excluding variable Union</b>						
FLA	0.061 [0.065]	0.241*** [0.082]	1.016* [0.493]	0.767 [0.553]	-0.190** [0.081]	0.228*** [0.073]
N. of Obs.	15,765	15,844	13,483	13,392	15,765	15,761
Adj. R <sup>2</sup>	0.129	0.054	0.160	0.160	0.030	0.155
First-stage coeff.	0.420*** [0.031]	0.467*** [0.041]	0.460*** [0.043]	0.458*** [0.044]	0.420*** [0.031]	0.420*** [0.031]
F-test of excl. instr.	186.22	130.64	111.86	110.08	186.22	186.25
Management char.	Yes	Yes	Yes	Yes	Yes	Yes
Workforce char.	Yes	Yes	Yes	Yes	Yes	Yes
Firm char.	Yes	Yes	Yes	Yes	Yes	Yes

Notes: \*\*\*= 1% significant; \*\*= 5% significant; \* = 10% significant. Robust standard errors in second lines. Management characteristics include employers' education and age, family ownership, external management; workforce characteristics include educational, age and professional composition of the employees, share of female, share of fixed-term contracts, share of immigrants, hirings; firms characteristics control for product innovation, process innovation, age (in years), foreign trade and international markets, (log of) sales per employee, number of employees (in classes), 2-digit sectors, nuts-2 regions.

Source: Own computations on RIL data.

by applying the IV procedure described in the previous section. Panel A still includes *Union* (not instrumented) in the specification, while Panel B does not. Irrespective of this, the estimated second-stage coefficients support the story told above, while first-stage results confirm that the instrument is relevant. Differences in the magnitude of the detected effects may suggest both the existence of residual endogeneity in OLS and FE results, and the presence of specific sub-groups of compliers driving IV estimates.

To conclude this section, we point out two remarks. First, although a causal interpretation of our estimates is unwarranted, our results support the predictions that in Italy workplace agreements play a larger role than the mere presence of workplace union, and that the access to external funds to finance training is crucial.<sup>8</sup> Second, the survey data used in the quantitative analysis offer little useful information to further dig into the many channels and processes at play.

As discussed earlier, this is why we complement the quantitative analysis presented above with a qualitative interview-based study. As the interviews were held in the Veneto region, we re-estimated all our OLS and FE econometric models – given the nature of the instrument, IV is not feasible – on the sub-sample of firms located in Veneto, as reported in Panel B of Tables 2 and 3 (descriptive statistics for Veneto are instead found in Table 1B). Inspection of Panels A and B of these tables reveals that the pattern of results discussed with reference to the whole country is broadly confirmed when restricting attention to the Veneto region. Comforted by this, we believe the qualitative analysis offered in the next section has the potential to offer in-depth insights to our quantitative findings, and to partly respond to the caveats expressed above.

## 6 | EMPIRICAL RESULTS: QUALITATIVE ANALYSIS AND THIRD-PHASE QUANTITATIVE RESULTS

The qualitative analysis focuses on the processes through which union intervenes on workplace skill formation issues. It brings to light three different channels through which union voice is articulated: (1) the *maturation effect* in decentralized collective bargaining; (2) double-track communication (intra-organization and inter-organizations); and (3) what we called the *watch-dog function*. We found that through these channels trade unions may play a crucial role in training decisions and overcome some constraints on their involvement, namely the employers' taken-for-granted idea that skill formation is a unilateral competence (e.g. FitzRoy & Kraft, 1985; 1987), the shared understanding of training as a non-priority in the bargaining space of workers' representatives and employers (Hyman, 2001), and the cultural resistance of the union representation target – blue-collar workers – to training, unlike white-collar and high-skill workers (McGuinness & Ortiz, 2016). According to our analysis, through these channels, trade unions are empowered to pursue multiple goals (Table 5), some of which find support in the literature and in some further quantitative results we describe below. Moreover, our analysis calls for an extension of the interpretative hypotheses about union voice.<sup>9</sup>

### 6.1 | Unpacking processes: Decentralized collective bargaining and the 'maturation effect'

Although training is not the priority to bargain over, nor it is the driving force to initiate a workplace agreement, we found that firm-level bargaining creates the chance to tackle skill formation issues by providing a *frame* for a wider dialogue. In this collaborative context, the issue of



TABLE 5 Channels through which unions intervene on skill formation issues

<b>Channels</b>	<b>Goals</b>
FLA ('maturation effect')	<ul style="list-style-type: none"> <li>– Rent-sharing</li> <li>– Claim of greater workers' participation</li> <li>– Internal labour market (not discussed here)</li> <li>– Employment protection</li> </ul>
Double-track communication	<ul style="list-style-type: none"> <li>– Recognition of skill gaps and mismatches</li> <li>– Access to financing by bilateral funds</li> <li>– New deciding role within the multi-stakeholder system of bilateral funds</li> </ul>
Watch-dog function	<ul style="list-style-type: none"> <li>– Post-training function of monitoring</li> <li>– Employability culture</li> <li>– Inclusive logic</li> </ul>

workplace training can more likely arise as a matter of concern between managers and worker representatives. According to our interviewees, firm-level bargaining favours the development of a constant dialogue between managers and workers' representatives within which even the themes of skill formation, although not primary, can be shared. The mechanism is the following: at the beginning, there are complex claims with various themes and very long discussions with the consequence that the top issues (wages and working hours) are the most debated and other topics, including training, are overlooked. This is especially true if it is the first agreement between the partners involved. If the agreement is renewed, then it may be that, in addition to wages and work organization, the agreement tackles the theme of workplace training as if it were a kind of 'maturation effect' of collective bargaining: *'It is the willingness to bargain over a comprehensive agreement that brings the discussion on training'* (take-outs 1 and 2, TO-# in the remainder of the article). Importantly, according to the data, the process of formal workplace bargaining is not only the result of iterative informal processes of collaboration and involvement (Findlay et al., 2009), but also the condition that facilitates the construction of an ongoing social dialogue on multiple organizational issues, including skill formation. Therefore, the 'maturation effect' of collective bargaining makes it possible to overcome one of the constraints for union involvement found in the analysis, namely the shared understanding of training as a non-priority in the bargaining space of workers' representatives and employers (Hyman, 2001).

In the third phase of our research, we checked the existence of this 'maturation effect' of local-level bargaining rounds by going back to our quantitative data. By sub-sampling the set of firms observed at least twice in our series and shrinking the observation period to the last survey wave, we can substitute the dummy for the presence of an FLA used in Tables 2–4 with the number of FLAs counted until 2018. The intuition is that the propensity to invest in training grows with the number of FLAs. Table A1 (online Appendix A) supports this view, both in Pooled OLS (Panel A) and in IV (Panel B), where the instrument is again the average incidence of second-level bargaining at the 2dgt-sector by macroregion observed in 2010.

Our qualitative analysis shows that the respondents understand collective bargaining as a process of negotiation, which involves trade-offs for both sides. When the chance to include training issues in the firm-level agreement is created, the union's main goal is twofold: to negotiate *ex-ante* a fair distribution between workers and the company of the returns obtained from investment in training on the one side, and to demand greater participation in firm's decision-making processes regarding skill formation on the other side. Therefore, when the agreement is renewed, and the platform includes other topics beyond the priority ones, the stakes for the unions are some

economic components of rent-sharing to secure workers' active consent, such as salary increases and bonuses, and a greater union involvement in decision-making processes, for example in the form of periodic meetings and information exchanges through which '*share the path*' (TO-3).

The economic components of rent-sharing which our respondents refer to are the payment of wage bonuses related to training courses and are regulated by firm-level agreements. Sometimes, the agreements may also contain wage claims that refrain from opportunistic behaviours (the hold-up problem: Card et al., 2014; Devicienti et al., 2017; Green and Heywood, 2011). According to our data (TO-4; TO-5), bargaining can, for instance, set up skill-mapping systems and parameters for the recognition of greater remuneration for the attained professionalism (Adapt, 2015; CNEL-Istat, 2015; CISL, 2015).

When the conditions for advanced bargaining are present, trade union can obtain different degrees of participation in all phases of skill formation in the company (TO-5; TO-6) and, more generally, in firm's decision-making processes in order to sustain the union's authority (Bryson, 2018). Depending on the concrete development of negotiation at the company level and the ability of workers' representatives to enforce their demands, union's participation can range from the introduction of information and consultation procedures, to the setting up of a system for monitoring training courses, and the creation of bilateral bodies with specific functions in the field of professional development (Adapt, 2015; CISL, 2015; CNEL-Istat, 2015).

Finally, our analysis highlights the pivotal role played by the union in the processes of skill formation when bargaining is defensive, that is after a firm's closing or a corporate restructuring (Klindt, 2017; Pulignano & Stewart, 2013). According to our data, especially in the last years after the economic recession, trade unions – by relying on their knowledge of the local labour market and their bargaining capacity – have pursued the goal of employment protection through the promotion of employees' training (TO-7). Specifically, unions – which according to interview data became in this case much more involved in human capital issues – can provide an internal intervention, that is re-training for some employees in case of company restructuring, and an external one, that is outplacement agreements for redundant workers who undertake training courses (TO-8). In case of defensive agreements, unions always promote the re-training of those employees who may lack sufficient skills, to protect their employment. In case of outplacements, unions negotiate a financing by the company to retrain the dismissed workers. In the last case, the role of active labour policies and regional funds is fundamental.

The analysis shows that in order for employees to express their collective voice and influence organizational training decisions, it is essential that joint governance processes are taking place and bargaining at company level is carried out on a regular basis, in addition to the mere presence of workplace union. This 'maturation effect' of bargaining process, as we call it, empowers the unions, and by doing so, the collective voice of workers on the issue of skill development. In short, the data show that through advanced collective bargaining, by virtue of the 'maturation effect', the trade union pursues (at least) three goals (Table 5): to negotiate *ex-ante* rent-sharing, to demand greater workers' involvement on skill formation and to protect the employment.

## 6.2 | Unpacking processes: Double-track communication

Interview data show that industrial relations are constantly exercised, inside and outside the company, on a number of issues that exceed the contents written on advanced and defensive collective agreements (TO-9). Unions' collective voice function indeed can be performed both intra-organization and inter-organizations that is through both the daily relations between

managers and workers' representatives within the firm, and the setting up of a regional information system regarding skills needs and the necessary training interventions, which involves different stakeholders (Trampusch & Eichenberger, 2012).

Our analysis reveals that having repeated meetings and opportunities for sitting at a negotiating table can set in motion a series of conditions – such as information exchanges, collaborative company climate, dialogue between the social partners inside and outside the company and long-term commitment – which favour the investment in human capital. Data show that the double-track communication (intra-organization and inter-organizations) empowers the union voice and, more specifically, facilitates the recognition of skill gaps and mismatches by workplace unions, the firm's access to external financial resources (see also the quantitative results) and potentially increases union's power to contribute to the definition of training contents within the call system of bilateral funds (Table 5). The combination of the 'maturation effect' and the double-track communication is stronger when respondents talk about large companies, where human resources management practices are more developed, industrial relations more advanced and best practices in terms of training policy are carried out (TO-10; TO-11; TO-12).

Training financed under bilateral funds is not part of firm-level bargaining but can flourish more smoothly in organizations where there are constant trade union relations. As a matter of fact, despite interview data suggest that RSU/RSA generally become aware of the training courses only at the last moment, leaving little room for discussion and negotiation, a collaborative climate between the managers and workers' representatives within the firm allows for timeliness, a crucial quality to take part into competitive calls that bilateral funds open with tight deadlines on a variety of issues, such as competitiveness, technological innovation of product and/or process, and internationalization. Furthermore, whereas the RSU/RSA have a limited control over how bilateral funds work, they keep in touch with external union representatives who are part of the regional information system of continuing vocational training. Union officials play indeed an important role upstream in the decision process together with other stakeholders, including employers' representatives: taking advantage of the meetings related to the call system that bilateral funds use for training financing, they potentially accrue some power to contribute to the definition of training and calls' contents (TO-13). Lacking full co-determination rights, workplace unions hardly have a say in matters such as the duration and contents of training so that in this context, the access to external financing emerges a primary empowerment tool for them. Despite data suggest that this path is only at the beginning, a new role here may propel unions to coordinate within multi-stakeholder networks crucial activities aimed at the skill development for the local labour market (Del Punta, 2003; Kristensen & Rocha, 2012).

Therefore, the difficulty for union's involvement given by the employers' taken-for-granted idea that skill formation is a unilateral competence, a prerogative of employers (e.g. FitzRoy & Kraft, 1985; 1987) and consequently should not be part of negotiations, can be addressed through the construction of the mutual recognition of the social partners as both legitimate and competent stakeholders on skill formation issues. This transformation may occur over time if the social dialogue takes place on a double-track: at the intra-organization level and, in parallel, at the inter-organization level. This channel, therefore, differs from the first one as it puts into relation daily intra-organization communications between shop stewards and workers (e.g. on the issues of skill gaps) and the inter-organization flow of communication between shop stewards and external union officials who work in bilateral bodies. The condition of a 'mature' local bargaining process seems to facilitate but not be sufficient for there to be a double-track communication.

According to our data, this process of double-track communication is more likely to unfold in the manufacturing sector, where firm-specific skills are prevalent and skill gaps are typically filled

through the internal channel, meaning the development of human capital within the company through training (TO-14). In the tertiary sector, there is instead little skill development within the company. Generally, in case of skill gaps, they prefer to use the external channel of personnel recruitment to search very high-profile skills (typically in the advanced tertiary sector), to recruit unskilled workforce or for generational replacement of sales workers. In the tertiary sector, it is generally individual workers who make requests and access bilateral funds to attend training courses. Moreover, the organizational units, such as the shops, are often too small, with the result of having to resort to regional bargaining or directly to the national one when decentralized collective bargaining is not carried out. In this context, the union mainly carries out a consultancy function for individual workers. Dedicated econometric analyses reported in Table A2 confirm that firm-level bargaining exerts a stronger effect on a firm's ability to attract external funds for its training activities in the manufacturing sector than in the service sector.

### 6.3 | Unpacking processes: Watchdog function

Bilateral funds also provide the unions with the possibility to exercise new roles, which we enclose in the term *watchdog*. The watchdog function includes trade union's monitoring activities on the training programmes carried out in a company and financed by bilateral funds, the sowing of the employability culture and the promotion of wider workers' inclusion (Table 5). The way this channel is enforced places again Italy halfway between two extremes: learning agreements signed under a bilateral fund often envisage the right (when not the obligation) for workplace unions to monitor the implementation of training courses; however, this does not imply the right to co-determine training contents.

Specifically, in providing the post-training function of monitoring, unions check that courses have been actually delivered, attendees are satisfied and to which extent they have understood the relevance of continuing vocational training for their employability. In other words, unions try, not without difficulties, to tackle the blue-collar workers' cultural resistance, and to promote instead an employability culture (TO-15; TO-16). Unlike white-collar and high-skill workers who occupy positions closer to the management and can better share their perception of skill gaps with those who are in charge of the company, they indeed usually do not understand the usefulness of training, nor they do recognize their skill gaps (McGuinness & Ortiz, 2016). Training is strictly related to the issue of employability, which is seen as crucial as never before both by the entrepreneurs – because it contributes to organizational flexibility (TO-17) – and by the unions, as according to them a more trained and functionally flexible worker is easier to employ and then to protect.

Moreover, trade unions care about the inclusion of some segments of the workforce – especially those with low qualifications – and about the introduction of training topics beyond those required by the law. In cases where smooth trade union relations create a collaborative company climate and training plans are shared with workers' representatives, meaning in cases where the 'maturation effect' has fully developed, RSU/RSA can take the chance to widen the audience of recipients towards the inclusion of blue-collar workers and low-skilled workers (Hoque & Bacon, 2008; Lindsay et al., 2012; Wiß, 2017; TO-18; TO-19). During the periodic meetings between the RSU/RSA and company's human resource managers, union representatives perform the function of *watchdog* to the extent that they claim for an inclusive logic.

Through these three channels, unions can gain greater involvement and authority in decision-making processes related to skills formation. The analysis shows how union empowerment develops from formal tools but also via workplace processes that are by nature dynamic,

interactional and contextual. However, this research does not allow us to see whether the empowerment of unions is reflected into a strengthening of workers' position, or the objectives pursued through the three channels (Table 5) produce some inconsistencies and 'paradoxical' effects, in terms, for example of workloads, work intensification and legitimization of the management's viewpoint, as suggested by critical studies on employee empowerment (Hales, 2000; Ivanova & von Scheve, 2020).

## 7 | BOUNDARY CONDITIONS, LIMITATIONS AND FUTURE RESEARCH

Although ours does not aim to be a fully fledged comparative contribution, the issue of the external validity of the findings concerning Italy cannot be overlooked. A first dimension of analysis is the production fabrics. Italy is characterized by larger-than-average shares of SMEs and of firms operating in the manufacturing sector. SMEs face specific problems both in recruiting the needed skills from the external channel – as they can offer lower wages and poorer career opportunities – and in internal skill formation, as fixed costs are shared on a smaller number of employees, thus reducing the economies of scale in skill formation (Benassi et al., 2022); the mediating role of workplace unions may hence emerge merely because there is more to facilitate, in particular, where skills are created within the workplace rather than searched for in the market, that is exactly in the manufacturing sector. This argument crucially involves the degree of command over dedicated financial resources. Their presence empowers workplace unions as long as their administration is upon firm-level parties, and not if workplace unions simply carry out the government's policies.

The existence of funds brings our reasoning to the second dimension of analysis, that is the activated channels. The 'maturation effect' contributes to build trust and mutual recognition of roles and creating a collaborative climate between employers and workers' representatives. A similar cumulative mechanism in the negotiation or consultation processes may take place in countries where workplace unions do not have co-determination rights on training issues and much depends on their ability to build a good firm-level dialogue between social partners to gain empowerment space. Data suggest that empowerment, in addition to being a managerial discourse (Hales, 2000; Ivanova & von Scheve, 2020), is a union discourse as well, through which workers' representatives strive to maximize the gains from workplace training. The 'maturation effect' hence does not run the risk of reducing the scope for union's action as in the CMEs model because it depends on the concrete development of negotiation and on its emergent union/management strategy; on the other side, the 'maturation effect' resolves the potential conflicts at the company level because it leads to the maximization and distribution of the benefits of training at the shopfloor.

The relevance of defensive bargaining, then, may be higher in Italy following the practices – in particular through short-time work – of 'evergreening' firms beyond their technological decline. In these circumstances, re-training workers may become part of an overall strategy to postpone mass layoffs. Where such practices are prevented, workplace union's impact on training through defensive bargaining may be minor. Further, in Italy, what we called the 'double-track communication' is probably facilitated by the dual nature of workplace representative bodies, in most cases elected among all workers – irrespective of the affiliation to any larger union, in this reproducing the features of works councils – but also strictly in touch with national or regional union representatives. With respect to countries (Germany) where the two roles are more clearly

separated, in Italy, workplace unions can rely more on their 'double nature' to improve training. Last, Eurofound (2009) identifies the *ex-post* monitoring activity (a crucial element of the watchdog function) of workplace unions on training activities the most widespread empowering channel at the European level. In this respect, hence, Italy should not differ from the majority of countries.

Beyond external validity, our analysis faces at least three major limitations, which implicitly identify also the space for future research. First, we did not explicitly deal with the issue of managerial characteristics and corporate governance in shaping the relationship between union voice and investment in skill formation. This issue appears relevant in countries like Italy, where the prevalence of small- and medium-sized enterprises, the concentration of ownership in families and dynastic management, creates *de facto* a close link between the characteristics of the entrepreneurs and the human resource strategies within firms (Parker, 2018; Bloom & Van Reenen, 2010). In such an environment, the individual profile of managers and owners – often the same person – in terms of education, experience, preferences and the like, influences corporate culture, implicit social norms and the agents' behaviours (Bandiera, 2018; Falk et al., 2016; Fehr et al., 1996); similarly, these factors are expected to affect the nature of labour relations and the bargaining process between union and firms over different outcomes (Kandel & Lazear, 1992; Mueller & Philippon, 2011).

Second, training investment may be interpreted as an 'intermediate' outcome for the union, in view of 'final' ones, such as the protection against unemployment risk, the wage growth or the strengthening of their bargaining power. On the other hand, firms are interested in training to increase labour productivity and competitiveness (Brunello & Wruuck, 2020; Konings & Stijn, 2015). To infer the implications of investment in training on these 'final' outcomes, we need detailed information on the skill content of training and on the jobs and tasks where trained workers are employed: for example general versus specific skills or analytical/cognitive tasks versus routine/manual ones (OECD, 2021). Although RIL provides rich information on both the source and amount of training, we have no detailed data on the type of skills and tasks associated. Future research may fill this gap and investigate whether and how union voice affects the content of workplace training in order to increase wages and productivity and/or to limit the risk of unemployment of the less educated/skilled workers.

Third, our analysis could be enriched by examining explicitly the side of the employees, both in their role of union members or in their ability to influence the nature of decentralized contracts and the skills contents of training. On the other hand, the preferences and the characteristics of the employees are recognized as key factors behind the bargaining outputs at firm level – also in the case, they were not unionized (Kirmanoğlu & Başlevent, 2012; Schnabel, 2020). An interesting extension of our research would be to use an employer–employee data and/or interviewing the workers to investigate more in-depth to what extent the attitudes and characteristics of the workforce shapes the relationship between industrial relations and training at workplace and, through this channel, the final outcomes like productivity, wage, working conditions and employment.

## 8 | CONCLUDING REMARKS

In this article, we explored whether and how unions intervene on workplace training in Italy. To tackle this issue, we began by using econometric evidence drawn from a representative firm-level survey. Our quantitative analysis provides robust evidence that an association between workplace training and union activity at the firm level actually exists and that its sign is positive. This is

especially true when union activity at the workplace is channelled through the processes leading to decentralized bargaining and resulting in the signing-up of a formal firm-level agreement, and when an external source of financing is available. The positive effects are found when either measures of training quantity and training quality are used, and when the estimation methods account for firm unobserved heterogeneity via FE models or IV.

We also argued that the quantitative analysis alone is not sufficient to make any further progress in disentangling among the various channels and processes at play. Using a mixed-method approach appears as a more promising avenue of investigation. Hence, we proceeded with a series of semi-structured interviews to the key informants that are regularly engaged in firms' training initiatives and industrial relations. The qualitative analysis – where possible supported by a third-phase return to quantitative data – highlights three main channels of empowerment of workplace unionism on training. First, respondents indicated that in successive rounds of collective bargaining, it is likely that training enters the 'bargaining space', a cumulative process akin to a 'maturation effect' of collective bargaining, hitherto understated by the literature. Successive rounds of collective bargaining contribute to creating the type of collaborative corporate environment that makes the trade union an authoritative subject on training matters in the eyes of the management and resolves the potential conflicts with employees by distributing the benefits of training at the shopfloor. This channel is likely to reveal of main importance in countries where workplace unions are not entitled with co-determination rights on training matters. Second, a double-track communication (intra-organization and inter-organizations) is conducive to the successful attraction of external financial resources from specialized bilateral funds, which represents a primary empowerment tool for unions. Third, respondents called attention to the watchdog function of workplace unions, not only in terms of an effective monitoring of the training plans, but also with reference to a broader inclusiveness of the various segments of a firm's workforce and to the creation of a working culture of continuous learning.

All of this calls for proper policy actions. These policies should not just aim at promoting more decentralization of collective bargaining; it is just as important that they promote the actual practice of collective voice in the workplace. Even if training will not be initially part of the bargaining platform, more training will follow over time with the growing of the bargaining space and the accumulation of bargaining skills and information. In this view, tax breaks for wage premiums bargained at the territorial or firm-level – the real triggers of firm-level bargaining – should be extended, made less dependent to the contingent fiscal budget constraints, less vulnerable to political uncertainties, and more specifically linked to the successfully monitored training initiatives. Higher quality decentralization, in addition, should also come in the form of 'organized decentralization', that is a process where sectoral (first-level) and decentralized (second-level) bargaining coexist, with specialized functions at the distinct levels.

Finally, our study contributes to the ongoing debate about the need of a new European economic governance aimed at encouraging a closer link between inclusive human resource management, higher wages and firm performance (Degryse, 2012; OECD, 2018). In particular, providing evidence that workers' representative bodies and decentralized agreement enhance skills formation, we make it clear that cooperative governance and unions' voice could play an important role for firms' competitiveness and inclusive labour markets.

## ACKNOWLEDGEMENTS

We thank Mirella Damiani and Christine Trampusch and the participants to the workshop on '*Skill mismatch: measurement issues and consequences for innovative and inclusive societies*' (University of Torino), to the conference on '*Reassessment and Perspectives of Labor Policies*'

(University of Roma ‘Roma Tre’), the SISEC Conference (Catholic University of Milan and University of Brescia), the Conference in Memory of Marco Biagi (University of Modena and Reggio Emilia), the Workshop on Labor Economics (University of Trier), the SASE Conference (Doshisha University, Kyoto) and to the seminars held at LISER (Esch-sur-Alzette) and at the Department of Economics and Statistics of the University of Torino for helpful comments and suggestions. The University of Torino and Compagnia di San Paolo Bank Foundation with projects ‘*Skill mismatch: measurement issues and consequences for innovative and inclusive societies*’ and ‘*Productivity, welfare and decentralization*’ are kindly acknowledged for financial support. We also thank the National Institute for Public Policy Analysis INAPP for data support. The opinions expressed here reflect only the authors’ views and not their institutions’. The INAPP is not responsible for any use that can be made of the present results. The article results from an equal effort by all its authors, to whom it should be attributed evenly. The other usual disclaimers apply.

### DATA AVAILABILITY STATEMENT

RIL (Rilevazione Imprese-Lavoro): The data that support the findings of this study are available upon filing a request to the Institute for Public Policy Analysis (INAPP) at [https://inapp.org/it/dati/accesso\\_micro\\_file](https://inapp.org/it/dati/accesso_micro_file). Interviews: The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

### ORCID

Fabio Berton  <https://orcid.org/0000-0002-2894-1297>

### ENDNOTES

<sup>1</sup>On such background, the capability to sign a legal contract, our focus here, emerges as a *formal* signal that such a successful *informal* process took place. As Lansbury (2015, p. 13) puts it, ‘One means of providing for greater employee voice and engagement in skills development is the creation of formal and informal partnerships between unions and employers in relation to training activities. These are more likely to be effective in CMEs where the mechanisms for social partnership are already established. [...] However, it is also possible to forge more informal agreements in LMEs at the local or enterprise level between employees and their representatives with management on training arrangements’.

<sup>2</sup>RSAs are now found in smaller companies and in certain sectors like banking.

<sup>3</sup>For details on RIL sample design, methodological issues and data access, see: <http://www.inapp.org/it/ril>.

<sup>4</sup>In accordance with the institutional framework presented in Section 3, we take as an indicator of unionization the presence of either RSUs or RSAs at the workplace.

<sup>5</sup>Non-training firms are assigned a 1-Euro expenditure on training and are thus kept in the estimation sample.

<sup>6</sup>Online Appendix C provides the details of the variables’ definitions.

<sup>7</sup>These remarkably high effects should not be surprising, given the low average starting values (Table 1A).

<sup>8</sup>In Anglo-Saxon settings, the literature has usefully exploited the kind of ‘natural experiments’ offered by close representation elections (DiNardo & Lee, 2004). In this case, firms where the election to establish a union was lost by a few votes may represent a credible counterfactual scenario for the firms that could establish a union because the election was won by a small margin. Certification elections, and other natural experiments alike, are unavailable in the institutional settings characterizing most EU countries. Lacking any fully credible exogenous source of variation, our estimates should be most safely interpreted as indicating correlations – although quite strong – among the variables of interest.

<sup>9</sup>Illustrative take-outs from interviews are reported in online Appendix B.



## REFERENCES

- Acemoglu, D. & Pischke, J.-S. (1998) Why do firms train? Theory and evidence. *Quarterly Journal of Economics*, 113(1), 79–119.
- Adapt. (2015) *La contrattazione collettiva in Italia 2012–2014*. Modena: Adapt University Press.
- Addison, J.T. & Belfield, C.R. (2007) Union, training and firm performance. *Journal of Labor Market Research*, 40(4), 361–381.
- Addison, J., Schnabel, C. & Wagner, J. (2001) Works councils in Germany: their effects on establishment performance. *Oxford Economic Papers*, 53, 659–694.
- Allaart, P., Bellmann, L. & Leber, U. (2009) Company-provided further training in Germany and the Netherlands. *Empirical Research in Vocational Education and Training*, 1(2), 103–121.
- Allen, M. (2004) The varieties of capitalism paradigm: not enough variety? *Socio-Economic Review*, 2, 87–108.
- Amable, B. (2003) *The diversity of modern capitalism*. Oxford: Oxford University Press.
- Ashcraft, K.L. & Kedrowicz, A. (2002) Self-direction or social support? Nonprofit empowerment and the tacit employment contract of organisational communication studies. *Communication Monographs*, 69(1), 88–110.
- Backes-Gellner U., Frick B. & Sadowski D. (1997) Codetermination and personnel policies of German firms: the influence of works councils on turnover and further training. *International Journal of Human Resource Management* 8(3), 328–347.
- Bacon, N. & Hoque, K. (2009) The impact of the ULR: a survey of ULRs and their employers. Unionlearn Research Paper.
- Bandiera, O. (2018) Social incentives in organizations. *Annual Review of Economics*, 10, 439–463.
- Beach, D. (2020) Multi-method research in the social sciences: a review of recent frameworks and a way forward. *Government and Opposition*, 55(1), 163–182.
- Bellmann, L., Gerner, H.-D. & Upward, R. (2018) Job and worker turnover in German establishments. *Manchester School*, 86(4), 417–445.
- Benassi, C., Durazzi, N. & Fortwengel, J. (2022) Comparative institutional disadvantage: small firms and vocational training in the British manufacturing sector in comparative perspective. *British Journal of Industrial Relations*, 60, 371–390.
- Bloom, N. & Van Reenen, J. (2010) Why do management practices differ across firms and countries? *Journal of Economic Perspectives*, 24(1), 203–224.
- Boockmann, B. & Steffes, S. (2010) Workers, firms or institutions: what determines job duration for male employees in Germany? *Industrial and Labor Relations Review*, 64(1), 109–127.
- Booth, A., Francesconi, M. & Zoega, G. (2003) Unions, work-related training and wages: evidence for British men. *Industrial and Labor Relations Review*, 57(1), 68–91.
- Boyatzis, R. (1998) *Transforming qualitative information: thematic analysis and code development*. Thousand Oaks, CA: Sage.
- Breda, T. (2015) Firms' rents, workers' bargaining power and the union wage premia in France. *Economic Journal*, 125, 1616–1652.
- Bridgford, J. (2017) *Trade union involvement in skills development: an international review*. Geneva: ILO.
- Brunello, G. & Wruuck, P. (2020) Employer-provided training in Europe: determinants and obstacles. IZA Discussion Paper no. 12981.
- Bryson, A.J. (2018) Mutual gains? The role for employee engagement in the modern workplace. In Bosio, G., Minola, T., Origo, F. & Tomalleri, S. (Eds.). *Rethinking entrepreneurial human capital*, pp. 43–62. Berlin: Springer.
- Busemayer, M. & Trampusch, C. (2012) *The political economy of collective skill formation*. Oxford: Oxford University Press.
- Card, D., Devecienti, F. and Maida, A. (2014) Rent sharing, hold-up and wages: evidence from matched panel data. *Review of Economic Studies*, 81(1), 84–111.
- CISL. (2015) *Rapporto OCSEL sulla contrattazione decentrata di secondo livello negli anni 2013–2014*. Rome: CISL.
- CNEL-ISTAT. (2015) Produttività, struttura e performance delle imprese esportatrici, mercato del lavoro e contrattazione integrativa. Available at: [https://www.istat.it/it/files/2016/03/Report\\_Cnel\\_Istat1.pdf](https://www.istat.it/it/files/2016/03/Report_Cnel_Istat1.pdf)
- Cooney, R. & Stuart, M. (2012) *Trade unions and workplace training: issues and international perspectives*. New York: Routledge.
- Crouch, C. (1993) *Industrial relations and European state traditions*. Oxford: Clarendon Press.

- D'Amuri, F. & Giorgiantonio, C. (2015) Stato dell'arte e prospettive della contrattazione aziendale in Italia. *Diritto delle Relazioni Industriali*, 25(2), 297–341.
- Degryse, C. (2012) The new European economic governance. European Trade Union Institute Working Paper No. 2012.14.
- Del Punta, R. (2003) Enti bilaterali e modelli di regolazione sindacale. *Lavoro e diritto*, 2, 219–222.
- Devicienti, F., Manello, A. & Vannoni, D. (2017) Technical efficiency, unions and decentralized labor contracts. *European Journal of Operational Research*, 260(3), 1129–1141.
- Devicienti, F., Naricchioni, P. & Ricci, A. (2018) Temporary employment, demand volatility, and unions: firm-level evidence. *Industrial and Labor Relations Review*, 71(1), 174–207.
- DiNardo, J. & Lee, D.S. (2004) Economic impacts of new unionization on private sector employers: 1984–2001. *Quarterly Journal of Economics*, 119(4), 1383–1441.
- Doellgast V. & Benassi C. (2020) Collective bargaining. In Wilkinson, A., Donaghey, J., Dundon, T. & Freeman, R. B. (Eds.). *Handbook of research on employee voice*. Edward Elgar Publishing, pp. 239–258.
- Estevez-Abe, M., Iversen, T. & Soskice, P. (2001) Social protection and the formation of skills: a reinterpretation of the welfare state. In Hall, P. & Soskice, P. (Eds.). *Varieties of capitalisms. The institutional foundations of comparative advantage*, pp. 145–183. Oxford: Oxford University Press.
- Eurofound. (2009) Contribution of collective bargaining to continuing vocational training. Available at: <https://www.eurofound.europa.eu/publications/report/2009/industrial-relations/contribution-of-collective-bargaining-to-continuing-vocational-training>
- European Commission. (2002) Declaration of the European Ministers of Vocational Education and Training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training. Brussels: European Commission.
- Falk, A., Becker, A., Dohmen, T., Huffman, D. & Sunde, U. (2016) The preference survey module: a validated instrument for measuring risk, time, and social preferences. IZA Discussion Paper No. 9674.
- Fehr, E., Gächter, S. & Kirchsteiger, G. (1996) Reciprocal fairness and noncompensating wage differentials. *Journal of Institutional and Theoretical Economics*, 152, 608–640.
- Findlay, P., McKinlay, A., Marks, A. & Thompson, P. (2009) Collective bargaining and new work regimes: 'too important to be left to bosses'. *Industrial Relations Journal*, 40(3), 235–251.
- FitzRoy, F.R. & Kraft, K. (1985) Unionization, wages and efficiency. *Kyklos*, 38, 537–554.
- FitzRoy, F.R. & Kraft, K. (1987) Efficiency and internal organization: works councils in West German firms. *Economica*, 54, 493–504.
- Gerlach, K. & Jirjahn, U. (2001) Employer provided further training: evidence from German establishment data. *Journal of Applied Social Science Studies*, 121(2), 139–164.
- Görlitz, K. & Stiebale, J. (2011) The impact of product market competition on employers' training investments. Evidence from German establishment panel data. *De Economist*, 159(1), 1–23.
- Green, C.P. & Heywood, J.S. (2011) Flexible contracts and subjective well-being. *Economic Inquiry*, 49(3), 716–729.
- Green, F., Machin, S. & Wilkinson, D. (1999) Trade unions and training. Practices in British workplaces. *Industrial and Labor Relations Review*, 52, 179–195.
- Hales, C. (2000) Management and empowerment programmes. *Work, Employment and Society*, 14(3), 501–519.
- Hall, P. & Soskice, D. (2001) *Varieties of capitalism: the institutional foundation of comparative advantage*. New York: Oxford University Press.
- Harcourt, M. & Wood, G. (2007) The importance of employment protection for skill development in coordinated market economies. *European Journal of Industrial Relations*, 13(2), 141–159.
- Heidemann, W. (1996) *A European comparison of financing arrangements for vocational training*. Brussels: ETUI.
- Hirsch, B., Schnabel, T. & Schnabel, C. (2010) Works councils and separations: voice, monopoly and insurance effects. *Industrial Relations*, 49(4), 566–592.
- Hoque, K. & Bacon, N. (2008) Trade unions, union learning representatives and employer-provided training in Britain. *British Journal of Industrial Relations*, 46(4), 702–731.
- Houten, G.V. & Russo, G. (2020) *European Company Survey 2019: workplace practices unlocking employee potential*. Dublin: Eurofound.
- Hyman, R. (2001) *Understanding European trade unionism: between market, class & society*. London: Sage.
- Ivanova, M. & von Scheve, C. (2020) Power through empowerment? The managerial discourse on employee empowerment. *Organization*, 27(6), 777–796.

- Johnson, R.B., Onwuegbuzie, A.J. & Turner, L.A. (2007) Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112–133.
- Kandel, E. & Lazear, E.P. (1992) Peer pressure and partnership. *Journal of Political Economy*, 100, 801–817.
- Katz, E. & Ziderman, A. (1990) Investment in general training: the role of information and labor mobility. *Economic Journal*, 100(403), 1147–1158.
- Kirmanoglu, H. & Başlevent, C. (2012) Using basic personal values to test theories of union membership. *Socio-Economic Review*, 10(4), 683–703.
- Klindt, M.P. (2017) Trade union renewal through local partnerships for skill formation. *Transfer*, 23(4), 441–455.
- Kochan, T.A., Yang, D., Kimball, W.T. & Kelly, E.L. (2019) Worker voice in America: is there a gap between what workers expect and what that experience? *ILR Review*, 72(1), 3–38.
- Kochan, T.A. & Osterman, P. (1994) *The mutual gains enterprise: forging a winning partnership among labor, management, and government*. Cambridge, UK: Harvard Business Press.
- Konings, J. & Stijn, V. (2015) The impact of training on productivity and wages: firm-level evidence. *Review of Economics and Statistics*, 97(2), 485–497.
- Kriechel, B., Muehlemann, S., Pfeifer, H. & Schütte, M. (2014) Works councils, collective bargaining, and apprenticeship training – evidence from German firms. *Industrial Relations*, 53(2), 199–222.
- Kristensen, P.H. & Rocha, R.S. (2012) New roles for the trade unions: five lines of action for carving out a new governance regime. *Politics & Society*, 40(3), 453–479.
- Lansbury, R.D. (2015) Trade unions, vocational education and workplace training: international trends. *E-Journal of International and Comparative Labour Studies*, 4(2), 1–25.
- Lazear, E.P. (2009) Firm-specific human capital: a skill-weight approach. *Journal of Political Economy*, 117(5), 914–940.
- Leuven, E. (2005) The economics of private sector training: a survey of the literature. *Journal of Economic Surveys*, 19, 91–111.
- Lincoln, Y. & Guba, E.G. (1985) *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Lindsay, C., Canduela, J. & Raeside, R. (2012) Polarization in access to work-related training in Great Britain. *Economic and Industrial Democracy*, 34(2), 2015–225.
- McGuinness, S. & Ortiz, L. (2016) Skill gaps in the workplace: measurement, determinants and impacts. *Industrial Relations Journal*, 47(3), 253–278.
- Mueller, H.M. & Philippon, T. (2011) Family firms and labor relations. *American Economic Journal: Macroeconomics*, 3(2), 218–245.
- Nowell, L.S., Norris, J.M., White, D.E. & Moules, N.J. (2017) Thematic analysis: striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16, 1–13.
- O’Brady, S. & Doellgast, V. (2021) Collective voice and worker well-being: union influence on performance monitoring and emotional exhaustion in call centers. *Industrial Relations*, 60(3), 307–337.
- OECD. (2018) *Employment Outlook*. Paris: OECD.
- OECD. (2019) *Negotiating our way up: collective bargaining in a changing world of work*. Paris: OECD.
- OECD. (2021) *Skills outlook*. Paris: OECD.
- Parker, S.C. (2018) *The economics of entrepreneurship*. Cambridge: Cambridge University Press.
- Pfeifer, C. (2011) Works councils, union bargaining and quits in German firms. *Economic and Industrial Democracy*, 32(2), 243–260.
- Pulignano, V. & Stewart, P. (2013) Firm-level restructuring and unions strategies in Europe: local union responses in Ireland, Italy and the Netherlands. *Work, Employment and Society*, 27(5), 842–859.
- Rainbird, H. & Stuart, M. (2011) The state and the union learning agenda in Britain. *Work, Employment and Society*, 25(2), 202–217.
- Saundry, R., Hollinrake, A. & Antcliff, V. (2011) Union learning representatives – activity, impact and organisation. Unionlearn Working Paper.
- Schnabel, C. (2020) Union membership and collective bargaining: Trends and determinants. In Zimmermann, K.F. (Ed.). *Handbook of labor, human resources and population economics*, pp. 1–37. Springer.
- Stegmaier, J. (2012) Effects of works councils on firm-provided further training in Germany. *British Journal of Industrial Relations*, 50(4), 667–689.

- Streeck, W. (1997) Beneficial constraints: on the economic limits of rational voluntarism. In Hollingsworth, J.R. & Boyer, R. (Eds.). *Contemporary capitalism: the embeddedness of institutions*, pp. 197–219. Cambridge: Cambridge University Press.
- Stuart, M., Cutter, J., Cook, H. & Winterton, J. (2012) Who stands to gain from union-led learning in Britain? Evidence from surveys of learners, union officers and employers. *Economic and Industrial Democracy*, 34(2), 227–246.
- Stuart, M., Valizade, D. & Bessa, I. (2015) Skills and training: the union advantage. CERIC Research Paper.
- Trampusch, C. & Eichenberger, P. (2012) Skills and industrial relations in coordinated market economies – continuing vocational training in Denmark, the Netherlands, Austria and Switzerland. *British Journal of Industrial Relations*, 50(4), 644–666.
- Wilkinson, A., Donaghey, J., Dundon, T. & Freeman, R.B. (2020) *Handbook of research on employee voice*. Edward Elgar Publishing.
- Winterton, J. (2007) Building social dialogue over training and learning: European and national developments. *European Journal of Industrial Relations*, 13(3), 281–300.
- Wiß, T. (2017) Employee representatives' influence on continuing vocational training: the impact of institutional context. *European Journal of Industrial Relations*, 23(2), 169–185.
- Zwick, T. (2005) Continuing vocational training forms and establishment productivity in Germany. *German Economic Review*, 6(2), 155–184.

## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Berton, F., Carreri, A., Devicienti, F. & Ricci, F. (2023) The collective voice of unions and workplace training in Italy: New insights from mixed methods. *British Journal of Industrial Relations*, 61, 595–622.  
<https://doi.org/10.1111/bjir.12745>