# The 'strategic discrimination' of works councilors in Germany: new evidence of the demise of a model?

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## Abstract

This paper estimates the impact of works council membership on wages in Germany between 2001 and 2015. It falls within a stream of research on collective organisations which has moved the focus away from the perspective of covered firms and their average worker to concentrate on the actors leading the negotiations (Breda, 2014). To my knowledge this is the first analysis of non-unionized form of representation taking this orientation. In a generalized context of decentralization of collective bargaining, shop-floor delegates are gaining in power and therefore in strategic importance for both the employers and the employees. Their career evolution therefore has a revealing role of the 'black box' of, increasingly, the new core of collective bargaining. The case of Germany is chosen because both national and foreign economic actors have steadily been praising its traditional dual model of industrial relations for the cooperative feature it entails at the shop floor. Yet, as discussed in the paper, it has strongly changed since the German reunification and it is expected that the nature of employer-employee relations also evolved since then.

The main model of identification is an OLS with time and individual fixed effects led on a subsample of the German Socio-Economic Panel. I find that, for individuals switching status, being a works councilor increases the hourly gross wage by about 5% in the manufacturing sector while a penalty of 4% is evidenced in the private service sectors. Causality is ensured by verifying that wage pre-trends do not differ between the treated and the control groups. I finally bring elements suggesting that the (dis-)advantage of works councilors is mostly experienced by politically involved representatives in both sectors. Bringing back the context, I explain why this may evidence a strategic behavior of rational employers.

# Introduction

> "The main body of research on work councils has been conducted on a collective institutional level, neglecting work council members at an individual level. In times of changing industrial relations, the importance of work councils in management decision making has risen steadily and thus further research of its members is required." (Störmer, 2010, p. 244)

Depending on the national institutions, two types of elected actors can represent the labour force at the shop floor: union delegates and works councillors. The former take part in collective bargaining and act on behalf of a union which dimensions and preferences exceed the scope of the firm. The latter do not report their decisions before such a superseding organization, they can only sign firm-level agreements and their objectives are expectedly shaped according to the sole conditions applying within the company. Despite the large variety of their responsibilities according to the national institutional frameworks, a common trend with regards to their functions can be evidenced (Baccaro and Howell, 2011). In a generalized context of decentralization of collective bargaining, nearly everywhere, works councillors and union delegates have been gaining in powers. As a result, employers and shop-floor representatives are increasingly entitled to negotiate issues of strategic importance for the firm.

The economic literature has been prolix on the causes and effects of the existence of firm-level negotiating organisations from the perspective of covered firms and their average worker. Yet, very little is known on how the representatives themselves fare within the covered firms despite their increasing strategic importance for both employers and employees. In my knowledge there is only one stream of research dealing with the issue (Bourdieu and Breda, 2016; Breda, 2014). It focuses on union delegates in France and evidences that the position leads to an average wage penalty of about 10%. The authors suggest that the link is causal and could explain why few are the workers running for these positions. More generally, in a context of decentralization of the bargaining process, such pieces of work are likely to play a revealing role on the 'black box' of collective bargaining at the firm level.

It takes special importance to examine the influence of mandates on careers at the firm level in Germany. The traditional German model of industrial relations relies on two mainstays: collective bargaining at the branch-level between unions and employers' associations and plant-level codetermination involving managers and works councillors. It is renowned for the cooperative feature it entails at the shop floor and the strong propensity of both national and foreign economic actors to praise it has remained much steady over time. In particular, entitled with the strongest codetermination rights in the West, and released from negotiations over distributional topics by the branch-level bargaining institution, German works councils are often considered as the most promising collective organisation in terms of rent generation. Yet, while at first glance the structure of the German dual system of industrial relations has remained relatively stable over time, its content has in fact much evolved since the reunification. In particular, Kinderman (2005) has highlighted the "employers' [attempts] to subvert existing institutions from without (politically) and from within (in the industrial relations realm)". The extent to which the cooperative feature of the

traditional model and, at its core, the ability of works councils to generate rents still apply today is therefore not as straight-forward as usually assumed by many scholars and in the public discourse.

In this paper, I therefore turn the light towards the fate of works councilors in Germany. I use data from the German Socio-Economic Panel (GSOEP) to assess the impact of works council membership on earnings in the country between 2001 and 2015. Thereby, I fill a hole in the economic literature and I bring elements from the firm level on the demise of the cooperative model of industrial relations of reference (Hall and Soskice, 2001) in a global context of increasing strategic importance of shop-floor bargaining. The baseline regression is an OLS model with individual and time fixed effects which controls for union membership. It shows that, for individuals switching status, works council membership increases the hourly gross wage by about 5% in the manufacturing sector while a penalty of 4% is evidenced in the private service sectors. The causality of these results is tested by checking that trends in wage preceding elections do not differ between 'works councillors to be' and their colleagues. A series of robustness checks of these results is provided. Bringing back the context, I build on Breda (2014) and Bourdieu and Breda (2016) and suggest that the results may be explained by strategic behaviours of rational employers in both sectors. A last result showing that wage (dis-)advantage mostly affects politically involved works councillors brings final statistical elements in favour of this interpretation.

The text is organized as follows. I first review the economic literature on the impacts of collective organisations on covered firms and workers. Second, I describe the evolution of the German institutional context since reunification. After giving some details on the GSOEP database and providing some descriptive statistics, I then turn to regressions where I evidence a differentiated premium of works council membership according to the sector. I finish by bringing some elements of proof on the strategic discrimination that, I claim, is likely to be playing in both the private service sectors and the manufacturing sector.

# 1. The economic literature

## 1.1 A literature on collective organisations traditionally limited to the estimation of their impacts on covered firms and workers

Economic research on collective organisations has chiefly worked at disentangling their impact on employment, working conditions and performance in covered firms. Until the mid to late 1980s, it mostly dealt with unionized forms of representation. The traditional neoclassical models on the matter emerged in the lines of Dunlop's article (1944) which treats unions per the model of firm monopolies. In this view, unions would alter the optimal frictionless equilibrium by negotiating higher wage levels than the competitive one, thereby leading firms to respond with a drop in both employment and production. Departing from the sole rent-seeking feature of unions, a few streams of research emerged in the late 1970s. The first one builds on Freeman (1976) who applied Hirschman's exit-voice model (1970) – then completed by Bajoit (1988) – to the unionized world. It deals with asymmetry of information regarding the satisfaction of employees with their working

environment. According to this stream of research, an agent can react to dissatisfaction with her working conditions in four different ways: 'exit', 'apathy or neglect', 'loyalty' and 'voice'. In the first case, she decides to leave the firm. In the second, she remains in the firm but shirks. When loyal, the agent keeps on believing in the employer and keeps her dissatisfaction to herself. In the last case, she decides to discuss over the source of dissatisfaction with her employer. In this stream of research, management is willing to see workers remain in the firm and be involved in their job. Yet they are unable to precisely observe workers' 'mood' and productivity. The two first options are therefore clearly under-optimal for such employers. 'Loyalty' and 'voice' ensure satisfactory levels of cooperation. Yet, the former may not be a long-lasting equilibrium if the employer is not aware of the source of discontent while the latter eases his task of dealing with it. By easing 'voice' response to job dissatisfaction, the presence of union representatives therefore decreases asymmetries of information in the firm. Unions are then likely to limit turnover, thereby reducing hiring and training costs and increasing firm-specific investment from both sides. Another way for unions to benefit the firm could also stem from an increase in the completeness of contracts. In short, unions may have the ability to control that both employers and employees act for the best of the firm rather than their sole interests (see Pencavel, 1977, p. 139).

The rising theoretical recognition of unions' capacity to generate rents opened the way for two vivid streams of research. First, a vast amount of empirical papers has tried to disentangle which of the rent-seeking or rent-generating sides of unions dominates in covered firms by estimating unions' impact on wages, employment or working conditions[1]. Second, it renewed scholars' interest in works councils. Once again, two main features differentiate works councils from plant-level unions. First, whereas shop-floor unions' preferences are somehow shaped in relation with greater-scale organisations (think of union federations or confederations), works councils' objectives are solely turned towards the plant. Second, their entitlements differ. As stated by Freeman and Lazear (1995, p. 29), "in contrast to plant-level unions, councils cannot call strikes nor negotiate wages […]. Their function, often specified in legislation, is to foster labor and management cooperation with the goal of increasing the size of the enterprise 'pie'". It is this latter feature which raised scholars' attention. Works councils can sign plant-level agreements – which pertain to the sphere of co-determination – and have no say over collective bargaining agreements (CBAs) in which strategic distributional topics such as wages are dealt. Unions at the plant, industrial or multi-industrial/national levels represent the labour force on these matters. In all institutional frameworks, even though works councils still have some capacity to bargain over distributional topics (see part 2), they therefore have much weaker leeway to do so than unions. In other words, their ability to seek rents is limited while legislations provide them with tools to achieve their specific goal of generating rents. At a time of deunionisation and in a context of absence of consensus regarding the economic benefits of unions, works councils therefore appeared as a possible source of welfare gains. It opened the way for empirical research on the matter.

Since FitzRoy and Kraft's seminal series of papers (1990, 1987; 1985), the empirical research on works councils' impact on firm performance has mostly focused on Germany. Indeed, in the traditional German model of industrial relations, CBAs on most strategic issues (including wages) are relegated to the branch level hence, expectedly, limiting conflict at the shop floor (see part 2 and box 1). Moreover, German works councils benefit from the largest 'co-determination rights' in the

[1] Detailing these results is out of the paper scope. For a review, see for instance Benett and Kaufman (2007).

Western world. For these two reasons, it is expected that the welfare gains induced by works councils will be maximized in this country. In what follows, I provide more details on the impact of works councils on different outcomes in Germany according to the literature.

As for the impact of works councils on firm performance, Addison et al (2004) exhibit a range of three groups of papers in their metadata analysis. The first one includes studies with representative databases of specific sectors in the early 1990s or before. The second one builds on representative surveys of the whole private sector in the 1990s. The third one is more recent and based on administrative data. They show that the estimation of works council impact on firm performance varies according to the type of studies: respectively mostly negative, positive and ambiguous (though positive if anything). The explanation would stem from differences in sample size, underlying populations and in the coverage of CBA. In their words, "the jury is still out today" (ibid:236). Note that the third type of studies has expanded since then; the impact in the 2000s seems unambiguously positive (Addison et al., 2006; Brändle, 2017; Jirjahn and Mueller, 2012; Wagner, 2008).

Works council coverage is then associated with larger wages (about +20%, Addison et al., 2001; Ellguth et al., 2014). Yet the causal impact is not clear-cut. Addison et al (2001) and Kraft and Lang (Kraft and Lang, 2008) find no effect, whereas Addison et al (2010) and Brandle (2017) observe a positive impact of about 6 to 8%. Broadly, two methods are privileged in the literature: bivariate probits and difference-in-difference methods. These methods are limited: it is known that bivariate probits are very unstable if the binormality of residuals is not respected – which is very rarely tested – and difference-in-difference methods do not take into account spatial correlation. More generally, treating the endogeneity of firms setting up a works council proves particularly difficult, especially since the selection into collective bargaining coverage should also be addressed at the same time given that some interaction effects between the two institutions may be playing.

Thus, Freeman and Lazear (1995) first stated that works councils were more likely to work with management to increase the joint-surplus when sharing rules have been decided upon by collective actors (i.e. when firms are covered by CBAs). For Hübler and Jirjahn (2003, p. 474), CBAs do not actually give rules for "dividing firm surplus". In their opinion, the key element in industry-level bargaining is rather the possibility for firms to refer to business associations' experts when needed, and, in particular, in the case of lawsuits. As such, "the opportunities for a council to obtain employer concessions on wages by withholding cooperation in areas where it has codetermination rights are more restricted in covered establishments" (ibid). Empirically, Hübler and Jirjahn observe positive impacts of works councils on wages and productivity, but the former is stronger in uncovered firms while the second is stronger in covered firms. This result has largely been discussed since then. Brandle (2017) and Mueller (2011) obtain similar results on the productivity outcome. But, as for wages, Gerlach and Meyer (2010) replicate Hübler and Jirjahn's work with administrative data in the same region and find opposite results. Gürtzen (2006) also finds a stronger impact of works council in covered firms while Addison et al (2010) and Brandle (2017) do not observe any significant difference based on the presence of a works council. In a later paper, Jirjahn explains these ambiguous results as follows: CBAs "can have two moderating influences. First, as in Hübler and Jirjahn's model, collective bargaining coverage limits the opportunities of a works council to engage in rent-seeking activities. Second, collective bargaining coverage increases the effectiveness of the work practices negotiated between works council and employer [and therefore the rent to be shared]" (Jirjahn, 2014, p. 3). Both push towards an increase in productivity but they go in opposite directions as for

wages (respectively negative and positive). Jirjahn therefore considers that depending on the sample and on the years, results may differ.

Results of the interaction between works council coverage and the existence or the use of derogations to CBAs are less ambiguous. According to Ellguth et al. (2014), of all firms covered by an industry-level CBA, 39% of those with a works council are bound to opening clauses against 21% for those with no works council. In both cases, about half of them use these clauses. This figure reflects the fact that opening clauses are not solely 'austerity measures' – which works council would be expected to limit – but also some 'stepping stones' changes in order to boost firms' competitiveness. As for the impact on wages, the existence of opening clause is associated with a rise in wages which is canceled by their use in firms with no works council but not in those with a works council (with a lesser degree of significance, Brandle (2017) finds this same latter result). Note that in Ellguth et al's views (2014, p. 105), "these results should not be interpreted as sheer rent-seeking actions because it may also be true that works councils offer alternative or even better and more sustainable solutions to economic problems than simple wage reductions".

## 1.2 The case for a focus on works councilors' wage in the German context

What are the main take-home points of the aforementioned literature? First, plant-level organizations entail both a rent-seeking and a rent-generating features. As such, their impact on firm performance, working conditions or wages is not clear-cut. Second, the balance between these two 'faces' is expectedly dependant on the quality of the representatives' relations with the managers. Cooperative relations are likely to enhance the organisation's capacity to generate rents, conflicting ones are expected to deter it and, conversely, to foster the dominance of its rent-seeking side. Third, in this respect, the correlation between the ability to seek rents or to generate rents is expected to be negative. In particular, larger entitlements to bargain over distributional topics are likely to create conflict between the two parties, to limit the cooperative nature of their relations and therefore to deter the organisation's ability to generate rents. As a result, existence of collective agreements at an upper scale matters. Employer-employee relations at the shop floor are likely to be the most cooperative in institutional frameworks with a large coverage and centralization of the collective bargaining. In these lines, the decentralization of collective bargaining undergoing in the OECD is expected to count (see box 2). Fourth, institutional rules entitle works councils to fewer bargaining rights over distributional topics and provide them with more specific tools to increase the enterprise 'pie' than unions. They are therefore likely to tip the balance towards rent-generation more strongly for works councils than for unions. Fifth, resulting from these first four elements, works councils are expected to have the largest ability to generate rents in Germany where the traditional model of industrial relations equips the organisation with the strongest co-determination rights and have industrial-level collective bargaining predominate on distributional questions.

These elements urge to open the black-box of plant-level bargaining and to turn an eye towards the relations between employers and representatives; this, especially in the case of German works councillors. Very little has been done on the matter. In 2010, Stormer stated "the main body of research on works councils has been conducted on a collective institutional level, neglecting works council members at an individual level" (Störmer, 2010, p. 244). Similarly, in 2014, Breda wrote:

“there is no quantitative economic paper in French or English dealing with the role of union leaders, either at the level of the firm or at the national level” (Breda, 2014, p. 6). To my knowledge, the only research dealing with workers’ representatives at the individual level is the French stream of research led by Breda (2014) and Bourdieu and Breda (2016). They turn the light towards union delegates and show that they are at risk of “strategic discrimination”. Breda (2014) elaborates the following reasoning. Shop-floor representatives play two bargaining games at once with their employer: one through their mandate on behalf of their colleagues, another one regarding their own career evolution (promotions, working conditions, etc) like any other employee. As a result, “two Nash equilibria can result from the interaction between the union representative and his employer” (Breda, 2014, p. 6). The first one is a cooperative equilibrium, where the representative trades laxity in her positions as elected delegate against special improvements in her working conditions – relatively to her colleagues. Conversely, a non-cooperative equilibrium will stem when the representative strongly negotiates for her colleagues. In this latter case, her employer could ensure that the delegate’s career stagnate to deter further union activism in the firm. Turning to empirics, Breda (2014) and Bourdieu and Breda (2016) find an average wage penalty of about 10% for union delegates which is positively correlated with the vehemence of the union to which they are affiliated. Bourdieu and Breda suggests that the penalty would stem from a smaller likelihood to be promoted. On these lines, they conclude to some ‘strategic discrimination’ from the employer’s part.

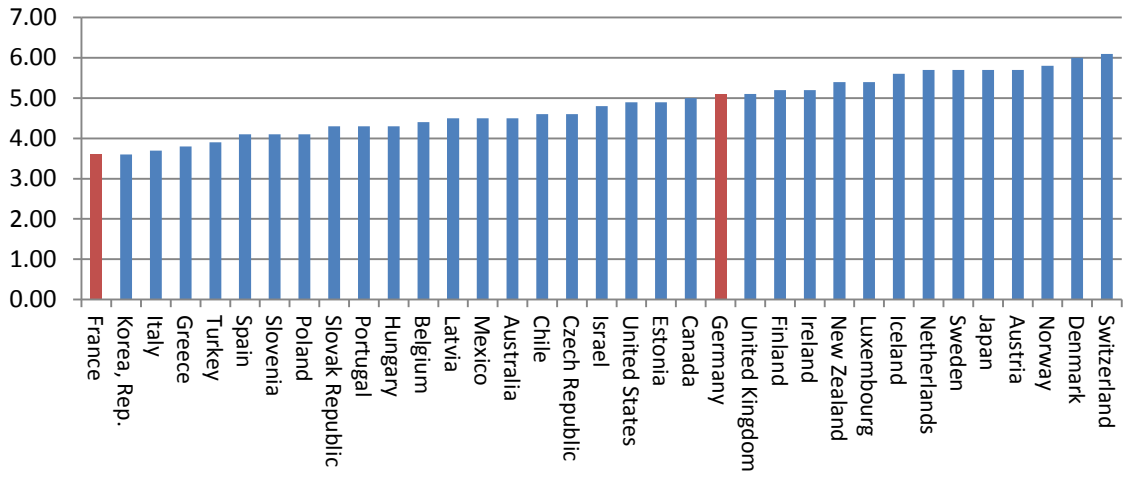
I apply the same reasoning to the case of German works councillors. According to the aforementioned elements, one would expect the traditional German model of industrial relations to protect works councillors from such risks of ‘strategic discrimination’. Yet the model has largely evolved and the extent to which this prevision still applies to contemporary Germany is not clear-cut. After exposing in more details its functioning, I describe the evolutions undergone by the traditional German model of industrial relations. I then turn to the data and estimations.

## Box 1 : Quality of the employer-employee relations in the OECD countries

As suggested above, the nature of the relations between employers and employee's representatives may affect the risk to encounter cases of strategic discrimination. I use here the Global Competitiveness Index Historical Dataset from the World Economic Forum which allows me to classify OECD countries per the quality of the labor-employer relations from the employers' view. Figure 3 displays the classification according to the 2007-2017 average of this index.

Germany ranks in the second third while France is last on this scale. Cases of strategic discrimination are therefore expected to be weaker in Germany than in what Breda (2014) and Breda and Bourdieu (2016) found for France.

**Figure 3 - Cooperation in labor-employer relations in the OECD countries**
**Averaged over 2007-2017**




Source : World Economic Forum - The Global Competitiveness Index Historical Dataset
Note : Self-declared estimation based on the question : "In your country, how do you characterize labor-employer relations?"
[1 = generally confrontational; 7 = generally cooperative]

## Box 2: The decentralization of collective wage bargaining and the rising strategic importance of shop-floor representatives for the firm.

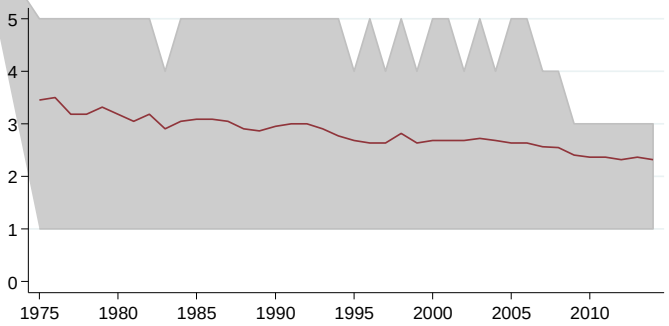
In this section, I use Visser's database on the Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS, Visser, 2015) to evidence the generalized process of decentralization of collective wage bargaining. Employer(s)-employees collective bargaining over key issues such as wages can take place at three different levels according to the national institutional framework: national/cross-industrial, industrial or company/establishment. The more centralized – i.e. the higher up on the scale – collective bargaining is, the more encompassing agreements are in terms of employees. To the extreme, workers' representatives (unions) negotiate with employers' associations for the whole workforce.

The ICTWSS database includes a 'country × year' index accounting for the level at which most bargaining takes place according to the following scale: 1 for predominant shop-floor bargaining, 3 for industry-level dominance, 5 for national or cross-industry dominance; 2 and 4 accounts for intermediate situations[2]. Figure 1 displays the yearly average, bottom and top deciles of this index over the 25 OECD countries for which the data is available between 1975 and 2014. It evidences a clear trend of collective bargaining towards the firm level over the period and a decreasing spread in the late 2000s.

Importantly, Figure 1 gives no information on the extent to which CBAs apply such as signed at the predominant level. In many instances, actual wages deviate from the ones agreed on. Think for instance of additional local bargaining, derogation or open clauses, etc.. Visser therefore calculates a summary measure accounting for the *actual* level of centralization of wage bargaining. The measure takes simultaneously into consideration: the predominant level of wage bargaining, the frequency or scope of additional enterprise bargaining, the formality of additional enterprise bargaining and its control by union bodies, the ease to derogate from the hierarchy of norms and the existence of opening clauses. Displayed in Figure 2, the updated index shows an even stronger trend towards decentralization of collective bargaining.

Explaining this generalized trend goes beyond the scope of this work (see for example Baccaro and Howell, 2011; Visser, 2016; part 2.2.1 for Germany). What imports here is that, in countries where the legislation entitles workers to elect representatives at the firm level, decentralization of collective bargaining changes their role and is likely to foster their strategic importance for both the employers and employees. With increasing rights to negotiate with employees' delegates in the firm over encompassing issues, employers are likely to pay stronger attention to the composition of works councils and union delegations.

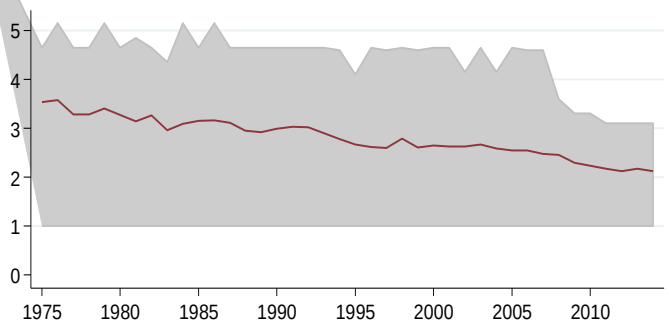
Figure 1 - Yearly average, bottom and top deciles of the 'predominant level of centralisation of wage bargaining' in the OECD




Note: The index goes from 1 (fully decentralized) to 5 (fully centralized).
The shaded area displays the range between the first bottom and top deciles.
Only countries with information over the full period are used.

Source: ICTWSS database (Visser, 2015)

Figure 2 - Yearly average, bottom and top deciles of the 'actual level of centralisation of wage bargaining' in the OECD




Note: The index goes from 1 (fully decentralized) to 5.75 (fully centralized).
It is calulated as: LEVEL - (fAEB+OCG)/4(=max value) + (Art+DR-1)/5(=max value),
where LEVEL= the predominant level at which wage bargaining takes place,
fAEB = the frequency or scope of additional enterprise bargaining,
Art= the formality of additional enterprise bargaining and its control by union bodies,
OCG = General Opening clauses in collective agreement,DR= Derogations.
The shaded area displays the range between the first bottom and top deciles.
Only countries with information over the full period are used.

Source: ICTWSS database (Visser, 2015)

[2] A given level predominates if it accounts for at least two-thirds of the total bargaining coverage rate in terms of employees covered.

# 2 The institutional context

Germany has long been considered an economy where a widespread dual system of industrial relations relying on both branch-level and firm-level coordination ensured a peaceful coordination between employers and employees favourable to rent generation. I first describe the traditional structure of bargaining before highlighting how it recently evolved.

## 2.1 The two pillars of the traditional German model of industrial relations

Modern industrial relations in Germany are structured around two pillars (re)institutionalized by the 1949 Collective Bargaining Act and the 1952 Works Constitution Act. The first pillar consists in industry-wide regional (or sectoral) collective bargaining taking place every four years between trade unions and business' associations. It typically includes questions of wages, working conditions, working time and job classifications. While the agreements reached by these bodies legally apply to unionized workers in the firms with a membership in the association who stroke the deal, they are generally applied to non-unionized colleagues within these companies. Conversely, they are rarely extended to the whole sector: in 2009, only 1.5% of all sectoral agreements had been so (Addison et al., 2017, p. 30). Importantly, unions are not entitled to call for strikes outside of these four-year rounds. Finally, note that collective agreements can also be struck at the firm-level between unions and a company, even though this possibility is barely used.

The second pillar consists in firm-level bargaining between employers and works councils. When referred to by the workers, employers are required by law to facilitate the constitution of a works council and to bear its costs – including the cost of the elections, works councillors' wage and training, the cost for premises and material facilities (2001 Works Constitution Act (WCA) (sections 20 & 40)) – in private firms with at least five permanent employees. There are also works councils in the public sector ("Personalrat") but with "somewhat fewer powers" (Müller-Jentsch, 1995). Professional elections take place every four years. As previously mentioned, legally, works councils can only strike deals on issues that "have [not] been fixed or are [not] normally fixed by collective agreement" (WCA Section 77-3). This can include pay systems, working time, holidays and social issues, but in the end, they have little rights over distributional issues (wages[3] …). Thus, according to Müller-Jentsch (1995, p. 60), "the potential for works council intervention in managerial decision decreases with the proximity to essential business decisions". Confined to the less conflicting questions of personal and social matters rather than to financial and economic decisions, they are expected to smooth relations between labour and employers at the plant-level. Thus, the WCA (section 2) states that works councils should cooperate with management "in a spirit of mutual trust […] for the good of the employees and of the establishment". Both should therefore "refrain from activities that interfere with operations or imperil the peace in the establishment" (section 74). Nevertheless, works council's powers should not be underestimated. They do benefit from extensive information on the firm's strategic orientations, they are very well represented in the supervisory

[3] Even though they can indirectly influence earnings via wage classification or by negotiating wage premiums (Ellguth et al, 2014:106). See Müller-Jentsch (1995:59-60) for an extensive description of the works council's participation rights.

board[4] and, for instance, have a veto right on some individual staff movements as well as co-determination rights on overtime and plans of reduced working time. Even though they cannot call for a strike, these entitlements provide them with some power resources to use over disagreements with the management. Note that, since 1989, the executive staff is entitled to set up separate representative committees (Müller-Jentsch, 1995, p. 61) – though joint-elections remain possible.

The two pillars are not fully independent for two reasons. First, when a collective agreement is reached, works councils are in charge of checking its application in the signatory firm(s)[5]. Second, works councils depend *de facto* on unions: the latter supplies the former with expertise and about two thirds of works councillors are union members (slowly decreasing).

## 2.2 A departure from this theoretical case

As previously mentioned, the traditional German model of industrial relations has been praised by both national and foreign actors. It is deemed to concentrate the conflicting questions at the branch level to ensure that works councils – entitled with strong codetermination rights – maximize their capacity to generate rents in a cooperative atmosphere at the firm level. Yet industrial relations have largely departed from this equilibrium since the 1970s.

### 2.2.1 A system under pressure

For several reasons, the collective feature of German Industrial Relations has been under pressure since the 1970s. First, the financialization of the economy has emphasized shorter-term objectives per the shareholders' interests. As a consequence, longer-run goals relying on stakeholders cooperation has come to secondary importance (Goyer, 2007). Second, the long-run trend of industrial and occupational restructuring has increased the interest for flexibility which is easier to reach at the level of the plant than at the branch level (Haipeter, 2011a, p. 176). Third, in the aftermath of the reunification, the difficulties endured by East-German firms limited companies' ability to engage under common collective agreements with the West. Since then, West-German firms have been taking advantage of an increasing room for maneuver due to the credible threat of shifting production to the East (both Eastern Germany and Eastern Europe) at a time when rates of unionization were decreasing. Last, the privatization of former public services has provided more space for retrenchment of collective bargaining agreements (ibid).

Accordingly, employers have increasingly got interest in bringing the core of industrial relations from the industrial or regional level back to the shop floor and growing power resources to do so. As a result, both an internal and external erosion of the traditional German model of industrial relations have materialized.

[4] E.g. half of the seats in the coal and steel industry, half minus one seat in other firms with more than 2.000 employees, a third in those with 500 to 2000 employees.

[5] This was their actual primer responsibility when they were legally established in the Weimar Republic (Müller-Jentsch, 1995:53-54)

### 2.2.2 Internal discrepancies from the traditional model of IR.

#### 2.2.2.1 'Wildcat cooperation' : works councils illegal deals in firms covered by CBA

In the pure traditional model described above[6] any workplace agreement between an employer and his works council to deviate from the collective agreement to the disadvantage of employees is null and void (Weiss and Schmidt, 2007). Yet, "it has long been recognized […] that the contents of works agreements negotiated between establishments and their work councils have in practice ranged much beyond the terms fixed by the law" (Addison et al., 2017, p. 4). Thus, according to Müller-Jentsch (Müller-Jentsch, 1995, p. 62), "during the 1960s and 1970s it was usual for works councils in large companies to negotiate informally with management about additional wage increases after conclusion of an industry-wide wage agreement, although this practice was not authorized by the law". In his 1980 paper, Witte finds that 85% of the large manufacturing firms had signed works agreements with their works council exceeding their legal rights to co-determination. This feature strengthened through the 1980s and 1990s. Normally in charge of ensuring that collective agreements are applied in their establishment, works councils have largely engaged in 'wildcat cooperation' with employers against the credible threat of outsourcing.

This feature highlights the strategic importance of works councillors for the firm. 'Wildcat cooperation' is increasingly taking place against downward pressure on employment. It therefore consists in trading negative components for the workforce against an increase in job security. An instance of circumvolution of the legal issue for works councils and employers is to turn a blind eye on employers' non-respect of collective agreements or to bargain over "amendments to every single individual employment contracts" (ibid).

#### 2.2.2.2 'Organised' erosion : the growing number and use of derogations

To limit the recourse to these strategies and accommodate with firms' claims for flexibility rather than a 'one fits all' approach in a context of downward pressure on membership rates, employers' associations and unions have been constrained to engage with innovative institutional designs. They include some 'job alliances'[7] allowing for some derogations to the hierarchy of legislation which normally prevents plant agreements to be worse off than branch ones for employees. They are of several types.

First set up at the time of the reunification, 'hardship clauses' applied to the case of firms' economic distress in Eastern Germany. Generalized to the West under the name of "restructuring clauses", they entitle an employer and a works council to sign agreements on the condition that the collective organisations have ratified the clause. Note that these latter have a right to ask for detailed economic information to make sure that the deal is indeed necessary and helpful for the company's recovery.

[6] I.e. in the absence of clauses at the collective level, see hereafter.

[7] Following Bellmann et al (2008, p. 534) I use the term 'job alliance' for "all types of company-specific deviations from a collective contract"

'Opening clauses' consist as well in branch-level agreements between unions and employers' associations to let local actors bargain over topics which do normally not lie in their reserved area, including the possibility to deviate from the existing collective agreement. But here, the clauses can be subject to an explicit goal of competitiveness increase, a commitment to innovation or, more broadly, to upcoming investments. Depending on the collective agreement, the firm may have to justify its position against the collective actors or not. Yet when it is the case, the requirements are lighter than for hardship clauses (Silvia and Schroeder, 2007, p. 1452). According to Brändle (2013), while opt-out clauses on working time were more numerous in the 1990s, the ones on earnings are most frequent nowadays. For an opening clause to be used in a firm, the management and the workforce or the works council have to come to an agreement on the issue. The 'job alliance' is therefore often reached against some explicit pledges from the employers' part to protect employment or to engage in investment programs. According to Seifert and Massa-Wirth (2005), 87% of all job alliances involved concessions from management in 2003. In this case, 'job alliances' are generally branded 'company-level pacts' or 'pacts for employment and competitiveness' (PEC hereafter). Note that PECs do not necessitate the existence of a works council in the firm since the workforce can be directly consulted.

A third innovative institutional design is the development of the OT (Ohne Tarifbindung) membership. This new type of affiliation provides a firm the traditional services of an employers' association but does not compel it to apply the collective agreements. Note that the capacity for an employer to have recourse to this form of affiliation relies on the lack of power resource of the industrial union to oppose it. As such, it is mostly taken up by small and medium-sized firms where unionization is the weakest (Haipeter, 2011a, p. 182).

The trend goes towards a strong development of these designs. Addison et al. (2017, p. 46) observes that PEC covered 15.0% of German employees in 2009 against 13.7% in 2006, that 52.7% of all employees covered by a collective agreement worked in firms entitled to use opening clauses in 2011 against 39.7% in 2005 and that respectively 77.0% and 52.9% of them worked in establishments which did use a clause.

These institutional innovations displace the core of industrial relations from the branch to the firm. As such, they strengthen the importance of works councils both positively and negatively. Positively first, because, in the aforementioned cases, works councillors cannot rely on the mandatory character of branch regulations anymore and therefore have to engage in bargaining over broader issues than in the traditional model. As a result, their claims have gained in strategic importance and the management has increasing incentives to take actions to privilege more peaceful members against radical ones at election time. Negatively then because management's utility may be positively associated with the absence of a works council. Hardship clauses, opening clauses and PECs can be used in the absence of a works council by bargaining directly with the workforce. This is most frequently the case in terms of establishment numbers the pattern – though not in terms of employees – and the trend is clearly positive (Addison et al., 2017, p. 46)[8]. It is known that works

[8] Thus, counter intuitively, "there is little indication that the pronounced increase in the use of opening clauses has stimulated works councils since their relative incidence is little affected by activation or nonactivation. And, as far as pacts [CPLs] are concerned, although works councils are even more dominant […], their incidence has unambiguously declined both in employee and employer shares".

councillors are more unionized than the average worker (respectively about 60% and less than 20%[9]) and therefore may be more exigent in the concessions demanded from the management. As a result, employers may be tempted to avoid the creation of a works council when inexistent in the firm or to undermine its continuation when pre-existent in the establishment. OT affiliations are exemplary of this latter case. They prevent firm-members from benefitting from the smoothing feature of the traditional collective model. By not taking part in branch collective bargaining, the firm exposes itself to local strikes triggered by a union willing to enact collective firm-level agreements. As such, one would expect employers benefitting from OT membership to be harsher against unionized workers – whose leaders are often works councillors – than firms with the traditional membership.

### 2.2.3 External discrepancies : Incidence of works councils and coverage of collective bargaining

The traditional dual system of industrial relations is not anymore the rule in Germany. To a certain extent this has never been the case. According to the Codetermination Commission (1998) cited in Addison et al (2004, pp. 401–402), in 1984, more than a third of all German employees were not working in a firm with a works council. In the private sector, the figure was of about a half and was even larger for small firms and in the service sector. To a lower extent, this also applied to branch collective bargaining since about 20% of all German employees were not covered in 1980. Despite these figures, the traditional model still occupied a central position until the mid-1980s because non-covered firms often used the standards set up in the collective agreements as reference points (even though a mitigation by sector would be necessary).

The external erosion has deepened concomitantly to the aforementioned internal erosion. Accordingly, nowadays, of all German employees working in firms with five or more employees, only less than half is represented by a works council and about 60% is covered by collective bargaining. In the end, only 40% is benefitting from both mainstays of the traditional German model of industrial relations (Oberfichtner and Schnabel, 2017, p. 22). Moreover, company and establishments agreements in non-covered firms decreasingly take industrial collective agreements as a baseline (Haipeter, 2011a). The gap with covered firms is therefore strengthening.

This process of external erosion has not affected all firms similarly. In 1996[10], works council and collective bargaining agreements were already more frequent in the manufacturing sector, the public sector and in large firms overall. But the difference got stronger since then. As for collective bargaining coverage, the drop is negatively correlated with the establishment size and is stronger in services[11] than in the manufacturing sector while the public sector was not affected (in relation to the respective situations in 1996). The trend is the same regarding works council coverage. For our case, we should keep in mind that a lower incidence of works council and a stronger trend towards external erosion is likely to evidence a stronger opposition of employers against these institutions.

[9] Addison et al (2006 :7) ; same in my data.

[10] The figure comes from the IAB Establishment panel which was first introduced in 1993 but included Eastern Germany only by 1996.

[11] Note the spread among services: the banking and insurance sector is widely covered whereas industrial services are at the opposite of the spectrum. Note that none of these sectors exhibit a significative trend between 2001 and 2008.

# 3 Data

The estimations are led on different sub-samples of the German Socio-Economic Panel (GSOEP). The database is a yearly survey representative at the household and the individual levels (Haisken-DeNew and Frick, 2005). To my knowledge, it is the only database combining information on wages and works councilor membership in Germany. Note that there is no firm-identifier in the panel.

The availability of the main variables of interest in the German Socio-Economic panel according to the wave is displayed in table 1. Respondents are surveyed about their status of works councilor in 2001, 2003, 2006, 2007, 2011 and 2015. I therefore only use these waves. Next, in what follows, the goal is to estimate the importance of the causal (dis-)advantage of being a works councilor in terms of wage. As previously mentioned, employees working in firms covered with works councils are a minority and differ from the rest of the workforce on different observables (see part 4 and table 4 in appendix). It can therefore be expected that they also differ on a number of non-observables. As a result, Information on works council coverage being only available in 2001, 2006, 2011 and 2016, I drop observations from agents working in non-covered firms in the first three of these waves. To limit the full loss of the waves 2003, 2007 and 2015, I assume that, if a firm has not changed status between two consecutive waves with coverage information (e.g. between 2001 and 2006), it has experienced no variation on the matter in the meanwhile. Among the agents exhibiting such sequence of status as for their firm, I therefore approximate the works council status in 2003 (resp. 2007, 2015) by the one applying in 2001 and 2006 (resp. 2006 and 2011, 2011 and 2016) if the person did not change firm in-between. The recoding procedure seems legit since works councils elections normally take place once every four years. Note that some robustness checks are led in part 5 using two alternative samples built without this assumption. Finally, it is known that about two thirds of the works councilors are unionized. The impact of the two variables should therefore be disentangled. Information on union status is given in all years of interest but 2006. For the respondents who answered both in 2006 and 2007 and who did not change firm in-between, I therefore assign to the 2006 wave the same union status as in 2007[12]. The other observations in 2006 are dropped.

These procedures bias the sample towards longer seniority. It should not be problematic for the results, especially given that works councilors already tend to have longer seniority than average. The procedure is also likely to add some noise, especially given the 2006 recoding on union status[13]. In the end, I can infer the works council status for about 40% of the respondents in waves 2003, 2007 and 2015. Among this population, about 75% works in a covered firm against 65% in other waves. The difference likely stems from the stronger stability of works councilors in their job. Note that the share of works councilors among covered firm in the final sample (see hereafter) is of about 7.8% similarly in each wave (year-to-year ttests show no difference in the yearly share of WC members at the 10% level).

Once the recoding procedure done, I further restrict the sample to full-time workers (i.e. between 30 and 60 working hours per week), aged between 20 and 64 and employed on open-ended contracts in firms with more than 5 employees. Civil servants are dropped as well as apprentices and interns,

[12] I restrict the recodification to respondents who did not switch firm on the rational that union status is associated both with the job and the industry.

[13] It can be shown that yearly union status change is normally of about 5% in the sample.

voluntary workers, militaries and workers of the agricultural sector. At that point, the sample therefore includes 12 985 person-time observations with an average of 2.15 observations per person. Because I use models with individual fixed effects, I drop individuals with only one observation. The final unbalanced panel therefore includes 9769 observations from 2835 respondents. On average, a respondent is observed 3.45 times over 7.3 years (corresponding to the time span between the first and last observations).

The main dependent variable is the logarithm of the hourly gross wage. It is calculated using the answers to the questions "How high was your income from employment last month?" and "how many hours [per week] do your actual working-hours consist of including possible over-time". It consists in taking the log of the ratio between the first and the second answer – the latter multiplied by 4.3. Robustness checks will separately be displayed on the gross monthly wage and the actual number of hours. In each wave, I finally trim the bottom and top 1% of the distribution of the gross hourly wage.

**Table 1 : Availability of the main variables of interest in the German Socio-Economic Panel according to the wave**

| | 2001 | 2003 | 2006 | 2007 | 2011 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|
| **Coverage status of the firm** | ✓ | | ✓ | | ✓ | | ✓ |
| **Works council membership** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| **Union membership** | ✓ | ✓ | | ✓ | ✓ | ✓ | |

**Box 3: Works councilors' timetables and earnings**

In this box, I give details on the number of works councilors per firm, their time of delegation, the way they are remunerated and the timing of elections.

The number of works councilors per firm and, among them, the number to receive full release depends on the firm size (see table 2, in appendix). The decision on which councilors will benefit from full releases is taken after an internal ballot of the works council. Note that, in the process, the council can decide to share a full release between several members. For the representatives chosen in the process, the amount of time to spend on their mandate is clear-cut. For the others, the blurred definition of released time makes things more difficult. The WCA states "the members of the works council shall be released from their work duties […] to the extent necessary for the proper performance of their functions, having regard to the size and nature of the establishment" (WCA, Section 37-2). As a result, a works council member is expected to take the initiative on the amount of time needed to properly accomplish her mandate and inform her employer in due time. The risk is that the employer may (rightly or not) consider this 'unproductive' time as excessive. A conciliation meeting can then be seized in case of disagreement. In theory, as far as possible, any hour of representation must be spent on normal working hours. When impossible, the extra hours spent on a mandate are to be converted in time-off in the following 30 days and, only in last resort, be paid (WCA, section). Note however that, works councilors not benefitting from full-release are generally said to spend undeclared extra-time working on their mandate.

As for wages, section 37-1 of the WCA states: "The post of member of the works council shall be unpaid". Being a works councilor is not a job in legislative terms. In other words, it is an honorary position and, as such, an elected representative keeps the same contract as the one she had before with the same remuneration. In these lines, two works councilors spending identical amounts of time on their mandate (say, fully released for instance) will not earn the same amount if they used to receive different wages prior to their election. As for wage evolution, "during his term of office and for one year thereafter [it should] not be fixed at a lower rate than the remuneration paid to workers in a comparable position who have followed the career that is usual in the establishment. The same shall apply to general benefits granted by the employer" (WCA, section 37-4). As a result, if a councilor used to receive a bonus for working on Sunday and, once elected, works only from Monday to Friday, she should keep receiving the aforementioned bonus if this is part of the remuneration of her 'comparable' colleagues.

Finally, elections normally take place every four years, at the same time in all firm. Since 2000, they should take place between 1 March and 31 May in 2002, 2006, 2010, 2014 and 2018. Note however that there are non-negligible exceptions to the rule which, to my knowledge, are not quantified. This will prevent me from using election time in the identification strategy.

# 4 Descriptive statistics

Table 3 shows the incidence of works council and union memberships in the final sample. As previously mentioned, works councilors account for 7.8% of the sample and, among them, about two thirds are unionized. Overall, trade union members account for about a third of the sample. This rate is an average over the panel duration. Yearly rates do show a decreasing trend in the final sample, even though it is much weaker than in the firms with no works council.

**Table 3: Incidence of WoCo and union memberships in the final sample**

| | | Member of a Trade Union | | |
|---|---|---|---|---|
| | | No | Yes | Total |
| Member of the Works Council | No | 6379 | 2630 | 9009 |
| | | 65.3% | 26.9% | 92.2% |
| | Yes | 262 | 498 | 760 |
| | | 2.7% | 5.1% | 7.8% |
| | Total | 6641 | 3128 | 9769 |
| | | 68.0% | 32.0% | 100.0% |

Source : German Socio-Economic Panel, own calculations

Table 4 in annex shows average values of different variables according to the coverage of the firm and, within covered firm, according to the WoCo membership status. For the sample of covered workers – which is the one used in the baseline regression, see hereafter – t-tests for mean difference between WoCo members and non-members are provided. It shows an average difference of 234€ in gross monthly wage – significantly not null at the 1% level – which corresponds to 7% of the average wage of non-members of works councils. Note that the bottom and top 1% of gross hourly wages as well as self-declared hours worked are trimmed. Were I to trim both at the 5% level, the difference would then go down to 3.8% and still be significantly different from 0 at the 1% level. No trimming leads to a difference of 7.5%.

In the final sample, workers out of office declare working about 20 minutes more per week (unsignificantly different from 0 at the standard levels). This equals to less than 1% of the 42 and a half weekly hours they declare. Note that this figure in no way brings elements about over- or under-reporting in working hours in each of the groups. Difference in hourly gross wage is of about 5.5% of the control group's average one – which is significantly negative at the 1% level. More generally, works council members are on average older in age and seniority, less well educated and more often males than the control group. Note that they also work relatively more often in smaller firms which is a mechanic consequence of the rule for the number of works council per firm (see table 2 in appendix).

# 5 Estimations

What follows is organised in 4 steps. First, the baseline regression is estimated. It is an OLS model with individual and time fixed-effects. The dependent variable is the log of the hourly gross wage and independent variables of interest are union and works council memberships. Then, I verify that the baseline results are driven by 'pure income' rather than working hours. Third, robustness checks are led on different samples (all respondents working in firms with more than 200 employees, all respondents observed in office at least once). I also show that attrition in wave $t+1$ does not depend on works council membership in wave $t$. Fourth, to ensure causality in the results, I test for the absence of difference in pre-trends between respondents about to be treated (i.e. about to become works councilor) and the rest.

In all estimations, I use as control variables: the age, the age², seniority, seniority², the SES and firm sector at the 1-digit level, the firm size (6 categories), the month of interview and dummies to control for the region (East, West) and for whether the individual has a contract specifying the number of working hours. As mentioned before, a time fixed effect is also included. In the few regressions with no individual fixed effect, I also control by the level of education (6 categories) and the sex. Standard errors are clustered in these latter cases.

## 5.1 A differentiated impact of works council and union memberships on hourly gross wages according to the sector.

Table 5 displays the estimations of the baseline OLS regression with time and individual fixed effects. Columns (2) and (3) show that the association between works council membership and wage goes in opposite directions according to the sector. In the manufacturing sector, works council membership is associated with an increase of 4.8% in hourly gross wage whereas, in the service sector, it comes with a penalty of 4.2%. Note that no effect can be evidenced in the public sector for non-civil-servants (column (4)). As a result, when leading the estimation on the whole sample, no overall wage (dis)advantage can be evidenced for works councilors (column (1)).

Importantly, the association between works council membership and wage displayed in table 5 is the resulting effect of both changes in status when voted in and out of the works council. Table 6 in appendix disentangles between the two, separately for the manufacturing sector and the private service sectors. To simplify, I separate agents who switch status at least once (hereafter the "switchers") into three groups: respondents whose only change in status is to become a works councilor, respondents whose only change in status is to leave the works council and respondents who are observed both voted in and out of the organisation. In column (1) and (3) 'switchers' from the second and third groups as well as respondents always in office are dropped from the sample. In these columns, the coefficient of interest is therefore only estimated with information from 'switchers' entering the treatment. Following the same principle, in columns (2) and (4) 'switchers' from the first and third groups as well as respondents always in office are dropped. Here, the coefficient of interest is estimated on the only agents who switched out of the treatment. Interestingly, no significant difference can be observed per sector between the two types of

estimations. In other words, the association between membership and wage plays all along the elected years and earnings go back to pre-election levels (relatively to the control group) when voted out of the organization.

**Table 5: Effect of works council and union memberships on the log hourly gross wage according to the sector (baseline model)**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | All sectors | Manufacturing sector | Private service sectors | Public Sector (no civil servant) |
| Member of the Works Council | -0.004 | 0.048*** | -0.042** | -0.008 |
| | (0.009) | (0.018) | (0.018) | (0.016) |
| Member of a Trade Union | -0.014* | 0.004 | -0.075*** | -0.001 |
| | (0.007) | (0.015) | (0.018) | (0.014) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Observations | 9,769 | 2,321 | 2,080 | 2,682 |
| R-squared | 0.896 | 0.893 | 0.933 | 0.879 |
| Individuals | 2833 | 734 | 687 | 820 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

Interpretation of the coefficients in tables 5 and 6 in terms of yearly association between works council membership and wage is not straightforward. In this paragraph, I give a more intelligible flavor of it by estimating the average evolution of earnings per year of membership. To simplify the process, assume that the (dis-)advantage is linear over time and I only focus on agents becoming works councilors (i.e. from the first group defined above). To do so, for each switcher, it is needed to have knowledge of the timing of the election preceding her last observation out of office and her first observation in office. Yet, no information in the GSOEP allows me to infer the election time for each switcher[14]. As a result, the most I can do is to provide an interval of the yearly association between works council membership and wage according to different assumptions on the timing of the professional elections taking place in each firm. On average**,** switcher's observations when in office are distanced by about 4.20 years from their last observation out of office, by about 1.25 years from their first observation in office and by about 1.97 years from the 'normal year of election' (see box 3). As a result, the yearly advantage associated with being elected works councilor in the manufacturing sector ranges between a wage surplus of 1.10 and 3.68 percents per year[15]. Similarly, in the private service sector, the disadvantage ranges between a wage penalty of 0.93 and 2.51 percents per year.

[14] As mentioned in box 3, the 'normal years of election' cannot be used with confidence.
[15] 1.10% (resp.3.68%) is the result from the ratio 4.6%/4.20 (resp. 4.6%/1.25). 4.6% is the estimate from column (1) in table 6.

As for union membership, table 5 shows an overall wage penalty of 1.4% stemming fully from the private service sectors where the dis-advantage spikes to 7.5%. In comparative terms, Bourdieu and Breda (2016) find an average penalty of 3 to 4% in France, Booth and Bryan (2004) evidence a non-significant impact in the UK and Eren (2009) exhibits a wage benefit of 9% in the US.

## 5.2 Works council and union memberships affect 'pure' wages rather than working hours

In the baseline regressions, the dependent variable is calculated as the ratio between the actual number of weekly working hours and the monthly gross wage – both self-declared. The correlations between hourly gross wages and works council or unions membership can therefore be driven by both the numerator or the denominator. In particular, works councilors with no fixed release are generally said to exert the tasks for their mandate as undeclared extra hours (see box 3). In table 7, I therefore lead regressions in a similar spirit as the baseline ones but, as for the dependent variable, separately on the actual number of weekly working hours and on the log of the monthly gross wage. Note that the sample is similar in all these regressions for the sake of presentation. If I trim the bottom and top 1% of the log monthly gross wage distribution (rather than considering the distribution of the log hourly gross wage) or to use observations with no wage information in the case of working hours, the results remains.

It appears that the association between hourly gross wages and entrance into or out from works councils or unions is mostly driven by the monthly wage. Columns (1) and (2) of table 7 indeed show results of similar range as columns (2) and (3) from table 5 for both the manufacturing sector and the private service sectors. Unexpectedly, no significant correlation of works council and union statuses can be evidenced with working hours. **Say stg on the negative coeff in the manuf and positive in the service.** The presence of an individual fixed effect in the model could explain this result. Switchers to and from the works council may have some intrinsic interest for dealing with work-related issues outside of working hours. In this case, being voted in or out of the institution would not affect much their amount of extra hours. Self-declaration of hours may also be playing a role here.

Similarly, union membership is only significantly associated with monthly gross wages in the private service sectors. Here again, the coefficient are very close from the one displayed in the benchmark regression.

**Table 7: Alternative dependent variable: log monthly gross wage and number of actual working hours**

| | Dependent variable : log of the monthy gross wage | | Dependent variable : number of actual working hours | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| | Manufacturing sector | Private service sectors | Manufacturing sector | Private service sectors |
| Member of the Works Council | 0.044** | -0.029* | -0.263 | 0.564 |
| | (0.017) | (0.017) | (0.408) | (0.461) |
| Member of a Trade Union | 0.003 | -0.066*** | -0.083 | 0.389 |
| | (0.014) | (0.017) | (0.328) | (0.474) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Observations | 2,321 | 2,080 | 2,321 | 2,080 |
| R-squared | 0.921 | 0.951 | 0.763 | 0.771 |
| Individuals | 734 | 687 | 734 | 687 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

## 5.3 Robustness checks – estimation of the baseline regression on two alternative sample and test of a differentiated attrition between the treated and control groups.

In this part, I lead two series of robustness checks based on changes in the sample. The first one is motivated by a risk of measurement error stemming from the self-declared feature of works council coverage and the recoding procedure explained in part 3**.** Regarding the first issue, despite the central importance of works councils in the traditional German model of industrial relations, employees may not be fully aware of whether or not there is one in their firm. Use of self-declared existence of a works council in respondent's firm to restrict the main sample to covered workers – per the argument that workers in uncovered firms cannot become works councilor and may differ in unobservable ways from covered workers – may therefore have brought some endogeneity in the regressions. Moreover, the recoding procedure led to avoid losing all observations from waves 2003, 2007 and 2015, in which no information on coverage is available, increases the risk of measurement error. To ensure that the previous results are not dependent on these choices, I build a first alternative sample including all workers – observed at least twice – from firms with more than 200 employees. The same restrictions as in the main sample are applied. This first alternative sample is motivated by the strong positive correlation between works council coverage and firm size. Thus, in the database, among the workers employed in firms with more than 200 workers and giving information on the existence of a works council in their firm, more than 90% declare working in a covered firm.

The second alternative sample is a partition of the main sample restricted to workers observed at least once in office. The rationale behind this sample is that these individuals may have some common career evolution independent from their mandate but systematically diverging from their colleagues. An instance could be a lesser tendency to be promoted (constrained by the employer or not).

Built as such, the first alternative sample includes 10 424 observations, two thirds of which are in common with the main sample. The second alternative sample sums up to 1546 observations, all included in the main sample. **Tables 8 and 9 in appendix** show that the conclusions on the association between works council membership and wage from the main sample remain valid when estimations are led on the first and second alternative samples. Strikingly, coefficients in both the manufacturing and the private service sectors are very close to those unveiled in the baseline regressions.

Correlations between wages and union status describe in the baseline analysis are much less robust. While they hold in the case of the sample composed of the sole 'switchers', they do not when it comes to the sample of workers from large firms. The effect becomes negative in the manufacturing sector and, more strikingly, loses its significance in the private service sectors. Two opposite moderating influence seems to be playing on the correlation between union membership and wage: firm size and coverage status. It can be shown that a restriction of the main sample to workers employed in large firms leads to no change of nature in the baseline results for both the manufacturing sector and the private service sectors[16]. Conversely, if the regression is led on a sample built on a similar spirit like the main one, but gathering this time only workers from uncovered firms[17], it appears that union membership plays negatively on wages in the manufacturing sector and positively in the service sector – though non significantly for the latter at the usual thresholds. Despite their weak representation in the alternative sample based on large firms, the presence of uncovered unionized workers could affect the estimates of the coefficient for union membership.

The last robustness check consists in ensuring that there is no differentiated attrition likelihood between the treated and the control groups in the main sample. Finding such a spread would indeed evidence a risk of endogeneity bias in the estimates. For instance, works councilors could have a stronger intrinsic motivation to reply and the latter could be positively correlated with wages. Table 10 in appendix shows the estimates from a probit regression of the likelihood to disappear in wave $t+1$ given the presence in the sample in $t$[18]. No systematic association between works council or union memberships and attrition can be evidenced.

[16] Results available from the author upon request

[17] As in the procedure for the main sample, the self-declared status of workers' firm and the recoding method described in **part 3** are used here

[18] $t$ is 1 for wave 2001, 2 of wave 2003, etc. Note that the observations from wave 2015 are not used in the regression.

## 5.4 How to explain the results – some adverse selection at stake?

What do we learn from the preceding estimations? First: works council membership and wage are negatively associated in the private service sectors and positively so in the manufacturing sector. Second: the association stems from an evolution in the 'pure wage' rather than in the number of working hours. Third, these associations are not biased by some unequal attrition likelihood between the treatment and control groups and they are robust to different samples. Fourth: in firms covered with a works council, the association between union membership and wage seems to be negative in the private service sector and null in the manufacturing sector – though definite conclusions are harder to provide given the lesser stability of these results in firms with no works council.

Now, are the relations between union or works council memberships and wage simple associations or causal impacts? I build here on Breda (2014) and Bourdieu and Breda (2016). Consider first the risk of adverse selection. The most typical case of adverse selection applies when the treatment and control groups display inherent differences in productivity. It is excluded here given the presence of individual fixed effects in the main models. Conversely, some reverse causality may be playing. It is possible that agents experiencing differentiated wage evolution as compared to 'normal' trajectories are more likely to run for elections because of this specific trend[19]. Two typical examples could rationalize this behavior in the case of a downward pre-trend on wage. First, consider an employee who has been shirking for some years. At a point, her employer notices it and freezes her earnings to their current level. With time, the worker therefore suffers a downward trend in her wage relatively to her colleagues while being at risk of losing her job. She therefore successively runs for works council elections to benefit from the job protection feature attached to the position. As required by the WCA (see box 3) her wage trajectory then keeps up with the pace of her colleagues' – though at a lower level due to the relative stagnation previously endured. A second example comes from Artus' typology (2013) of typical profiles likely to fight for collective action in the private service sectors. One of the three profiles she describes includes "employees who have, in the past, invested much personal energy and time to work in their occupational activity […] and who have either not been 'thanked' for their engagement, or who can or will no longer meet the high level of loyalty and demands required. In response to the threat they are going to lose something they worked hard to achieve in the past – either their occupational status or even their job – they sometimes try […] to mobilize new power resources in the workplace arena" (ibid: 418)[20]. Here, candidates for works council elections have endured downward relative wage trajectories for reasons which do not necessarily relate to their productivity[21]. They enter the works council to fight for the recognition of their own – as well as their colleagues' – past implication in the job.

Intuitively, these two examples – as well as most other stories justifying to treat the risk of reverse causality – are not straight-forwardly compatible with the fact that the association between wage

[19] Note that the relation has to be causal to infer adverse selection – i.e. the drop in wage must urge the person to run for elections. Otherwise, it is possible that workers aiming at upcoming elections begin to lose in wage ex-ante (think of discrimination or of a drop in their productivity) without this being a case of adverse selection.

[20] The second case includes precarious workers without much to lose while the third one corresponds to employees who "do not rely exclusively upon rational cost-benefit calculations, but rather have a pronounced orientation towards the symbolic values of justice, respect, solidarity and dignity" (Artus, 2013:418)

[21] Promotion could be randomly offered to employees with similar levels of productivity, lack of acquaintance with the employer may limit career evolutions independently of productivity levels, etc…

and works council membership is positive in the manufacturing sector and negative in the private service sectors. Rigorously, how to treat risks of reverse causality? First-best most-used solutions are unsuited here: no source of exogenous variation explaining elections into or out of the works council is available, differentiating the time fixed-effect for switchers and non-switchers would necessitate a database of a larger size[22], event studies methods or graphical analyses would need longer sequences of observations of switchers' status after their election. What follows is therefore a second-best solution. It aims at testing whether pre-trends in wages differ between respondents about to become works councilor and workers who will never be in office.

The strategy goes as follows. I first identify the year $t_i$ defined for each agent $i$ displaying a sequence of works council membership of the following sort: be observed out of office between the first response and $t_i$, be in office between dates $t_i + j_i$ and $t_i + j_i + l_i$ and be unobserved at all between $t_i$ and $t_i + j_i$. Note that $l_i$ can be null and $j_i$ be 1. In a more schematic way, $t_i$ – when it exists – is the year of the last '0' in the respondent's first sequence '$0\ ;\ \dots\ ;\ 0\ ;\ 1\ ;\ \dots\ ;\ 1$' of the dummy variable taking the value 1 for works council membership – provided that the respondent was not in office when first observed. Given $t_i$ I can identify the last two consecutive years $t_i - 1$ and $t_i$[23] preceding the election with certainty[24]; a trend in hourly gross wage between these two years is then calculated. For these agents, all observations but $t_i$ are then dropped. Observations in $t_i$ constitute the 'about to be treated' group. The control group is composed of all respondents $j$ never observed in office. For all their observations $j, k$ observed in $t_{j,k}$, I calculate the trend in hourly gross wage between $t_{j,k} - 1$ and $t_{j,k}$. Table 11 displays the regression estimates of the trend in log hourly gross wage on a dummy taking the value 1 for agents about to be elected and 0 for the rest. The model is a probit with clustered standard errors since the sample includes only one observation for agents to be treated but several for the controls.

[22] Given that switchers do not enter or leave the WoCo at the same time

[23] Calculating the trend between $t_i - 1$ and $t_i$ is possible since the GSOEP provides yearly information on wages (contrarily to information on WoCo and union memberships).

[24] As previously mentioned, knowledge of exact election time is impossible and it can only be situated in the time span $[t_i\ ;\ t_i + j_i]$ at best. The average length of this frame is 3.1 years in both the manufacturing and the private service sectors.

**Table 11: Test of differences in pre-trends between the treatment and control groups. Model : probit with clustered standard errors; the marginal effects are given. Dependent variable: dummy variable taking the value 1 if the respondent is works councilors in the following wave (see text)**

| | (1) | (2) |
|---|---|---|
| | Manufacturing sector | Private service sectors |
| Pre-trend in the hourly gross wage | -.023 | 4.1e-03 |
| | (.026) | (.028) |
| Individual Fixed Effect | No | No |
| Time Fixed Effect | Yes | Yes |
| Observations | 1,469 | 1,199 |
| Individuals | 607 | 532 |

Standard errors in parentheses, clustered by individual.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

As table 11 shows, the absence of difference in pre-trends in the log hourly gross wage cannot be rejected at the standard levels. Importantly, the non-negligible value of the variance partially stems from the low number of respondents for whom the dummy of interest is 1 (43 in the manufacturing sector, 37 in the service sector). Yet, as shown in table 12 in annex, this number is still sufficient to find significant results – and similar to the baseline regressions – as for the impact of works council membership on wages. As a result, the yearly trend in hourly gross wage of workers to be elected works councilor within, on average, the following three years does not differ from the one of their colleagues. Yet, once elected, they display a wage surplus (resp. penalty) in the manufacturing sector (resp. private service sectors).

Despite the exclusion of differences of intrinsic productivity and pre-trend in wages between works councilors and their unelected colleagues, adverse selection could still be playing. Once in office, works councilors could indeed loose/gain in productivity relatively to their counterparts. Two different channels could be playing. First, representatives benefit from released time and therefore spend less hours on their usual 'productive' tasks. As a result, when confronted with options to promote workers, rational employers may, illegally (see part 6) privilege unelected employees. Second, when elected, works councilors benefit from job protection and may then start shirking thereby urging rational employers to decrease their relative earnings. No proper econometric test can be provided for these two paths. Yet, first, the two channels assume employers' ability to measure councilors' productivity given their delegation time which for many is not formally defined

and evolves over time[25]. Second, again, they seem inappropriate to account for the positive causal impact of works council membership on wages in the manufacturing sector[26]. As a result, even though they cannot be fully excluded, risks of adverse selection seem limited in the present case.

# 6 How to explain the results – bringing back the context, a case for strategic discrimination

Discrimination is a second source to explain the relation between works membership on wages, but this time in terms of causality. I provide here some elements suggesting that some strategic discrimination may be playing. Representatives are "supposed to negotiate with [their] employer as equals, but [are] under his authority as employee[s]" (Breda, 2014). This statement Breda applies to union delegates in France is also valid for works councilors in Germany. As previously mentioned, the two bargaining games played by works councilors with their employer which consist in negotiating deals for the workforce and in negotiating over their own career evolution (promotions, etc..) are intertwined. The employer has the ability to put pressure on representatives' demands in the first bargaining game by slowing down or speeding up their career advancements in the second one. As mentioned in box 3, if acknowledged such practice would be illegal. According to the WCA (section 119): "prejudicing or favouring a member or substitute member of the works council […] by reason of his office [is] punishable by a term of imprisonment not exceeding one year or a fine, or both" (WCA, section 119).

Despite its non-legality, some elements suggest that some strategic discrimination may explain (at least part of) the impact of mandates on wages. I first bring back some elements of context to explain why a discrimination of opposite sign could be playing in the manufacturing sector and in the service sector. I then show that all works councilors are not affected to the same extent and that political involved representatives in fact experience most of the effect in both sectors.

Consider first the manufacturing sample. Historically, the sector has been at the core of the traditional model of industrial relations in Germany. As such, it has long been characterized with strong density of employers' and employees' unions, resulting in a large coverage of collective bargaining agreements (CBAs). Because coverage and norms were the most generalised in this sector, employers' demands for more flexibility in the CBAs have emerged the strongest there. In the wave of the reunification and at a time when Germany was called the 'sick man of Europe', the 'organised' decentralization of industrial relations described in part 2.2.2.2 has therefore first been applied in the manufacturing sector in the 1990s, to the benefit of firms in economic distress. This first series of open-clauses resulted in a large wave of wage restraints. As a result, when branch-level associations agreed upon further spread of derogations conditioned on laxer economic requirements

[25] Note that, would employers be unable to properly measure productivity, they may, rightly or not, still believe that representatives do shirk when elected. On the lines of what precedes they would then limit wage increases for works councilors but the mechanism would therefore relate to statistical discrimination rather than to adverse selection.

[26] This limitation similarly applies to explanations in terms of statistical discrimination

in the early 2000s[27], employees strongly opposed their application in firms considering them "as violations of the norms of distributional justice" (ibid: 689). Works councils' support for firm-level dialogue over the enactment of derogations therefore gained in strategic importance for employers. Their role, when it comes to these negotiations, is clearly established in Haipeter's study of 12 firms, half from the metal-working industry, half from the chemical one (ibid). He shows that, in the early 2000s, works councils were constrained to enter into negotiations against employers' threat of imminent job drops (through outsourcing in particular). But, once the dialogue on these matters started, they structured with their union "to develop common strategies and demands for the negotiations with management [and were] able to negotiate with their management on equal terms. They were recognized by management as competent and powerful negotiators. In many cases they even gained more respect from management" (ibid: 687). As a result, "by demonstrating a new capacity to act, in most of the cases they have been able to regain a great deal of the power lost through the structural constraints management was able to impose on them" (ibid).

In the end, despite employees' opposition, works councils and unions proved to be cooperative partners for employers willing to use their recent rights to derogate from CBAs. Concretely, in Haipeter's sample of firms, works councils implemented two strategies in this vein. The first one consisted in gathering employees (sometimes with the management) to insist on the risk that some of them were to lose their job and therefore on the need to stand unified against it. The second strategy was to organize short term strikes to "channe[l] the critical attitude towards derogations into broad support for the works councils in their negotiations with management". Note that, when this second strategy was applied, works councilors ended up restraining employees to intensify their struggle once sufficient levels of supports were achieved (ibid).

It should be understood that works councils generally obtained concessions from the management and did not give employers free rein to freely have recourse to derogatory agreements. In Haipeter's words, "[they] were not helpless victims of structural constraints; on the contrary, they actively tried to restructure the situation to their own advantage" (ibid:687). From these elements therefore emerges the fact that, in the manufacturing sector, both employers and works councils gained in negotiating over derogations which employees first rejected. The positive impact of works council membership on wage in the sector could therefore be interpreted as incentives for, or valorization of, works councilors' investment into negotiations.

Providing general elements of context in the private service sector on the vein of what precedes proves more difficult given the variety of industries employing the respondents in this sample. 25% of them work in trade, 16% in transport, 23% in banking or insurance and 8% in service to industries and 28% in personal services. Yet, it should be noted that all these sectors but the financial one have weak historical traditions of collective bargaining: coverage of CBAs and works councils is lower than in the manufacturing sector. In the non-manufacturing sectors, decisions are thus more often seen as pertaining to managers and firm-holders. As such, works councils are more often considered as exceeding the normal prerogatives of employees. As a result, managers from the non-manufacturing sector more often classify works agreements as increasing the rigidity in the firm (Nienhueser, 2009). Case studies on the relations between works councilors and the management are fewer in the

[27] E.g. the Pforzheim agreements signed in 2004 in the metal-working industry rendered derogations possible provided that : "jobs would be safeguarded or created as a result and they would help to improve competitiveness and the ability to innovate, as well as investment conditions" (Haipeter, 2011-b:184)

private service sector than in the manufacturing one. But among these, Artus' works stand apart. She focuses on the low-wage private services and evidences the strong opposition of managers against, first, the formation of works councils and, once set up, the most vehement councilors. In these sectors, "wage costs and flexible work-time are key dimensions of [the] competitive strategies" and are altered by councilors' demands (Artus, 2013, p. 415). Moreover, in some of the cases studied, she notices the prevalence of a strong corporate identify. In these firms, "the absolute identification with the company […] is an explicit aim of personnel policy" (ibid: 416). Employees "try[ing] to establish the legitimacy of other interests" than those of the company community are therefore castigated (ibid). In the end, in the precarious service sectors, "co-determination arrangements remain a permanent deviation from the norm in a cultural universe that is oriented towards unilateral management decisions. Even when a works council exists, a climate that is hostile to co-determination still dominates". In these lines, the negative impact of works council membership on wages should therefore be interpreted as a proof of works council busting driven by the precarious services which constitute a large chunk of the sample.

The (dis-)advantage works councilors experience in terms of wage seems therefore (at least) partly stemming from voluntary policies of strategic discrimination implemented by managers in the manufacturing and the service sectors. In the last forthcoming development, I provide some elements strengthening this interpretation by showing that these wage policies seem to be mostly aimed at the most politically active representatives. Tables 13 and 14 display the estimates from the regressions of the main dependent variables on the interaction of works council membership with two types of political involvement: first, union membership and, second, political steadfastness. The latter is measured by a dummy variable taking the value 1 (resp. 0) if the respondent positively (resp. negatively) answers the following question: "many people in Germany lean towards one party in the long term, even if they occasionally vote for another party. Do you lean towards a particular party?". Note that about half of the respondents fall in each category of the dummy variable and that the correlation with union membership is very low. In the manufacturing sector, the estimates show that among works councilors, mostly union members benefit from the increase in monthly wage and in hourly gross wage – though not significantly for the latter. Politically steadfast representatives benefit as well from a significantly stronger advantage in terms of hourly gross wage, but this seems partly driven by a smaller amount of self-declared working hours. In the private service sectors, the (negative) premium also concentrates on politically involved works councilors. Yet, here, it is political steadfastness rather than unionization which negatively impacts representatives' wage[28].

[28] In both the manufacturing and the private service sectors, political steadfastness matters independently of the colour of the political party (results available upon demand) and its effect does not change if the dummy variable takes the value 0 for respondents leaning towards a party only fairly weakly or very weakly.

**Table 13: Effect of the interaction between works council and union memberships on the log hourly gross wage, the log monthly gross wage and the actual number of working hours**

| | Dependent variable : log hourly gross wage | | Dependent variable : log monthly gross wage | | Dependent variable : number of actual working hours | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Manufacturing sector | Private service sectors | Manufacturing sector | Private service sectors | Manufacturing sector | Private service sectors |
| Member of the Works Council | 0.012 | -0.036 | -0.001 | -0.017 | -0.654 | 0.837 |
| | (0.032) | (0.022) | (0.030) | (0.021) | (0.713) | (0.585) |
| Member of a Trade Union | 0.001 | -0.072*** | -0.002 | -0.060*** | -0.122 | 0.533 |
| | (0.015) | (0.020) | (0.014) | (0.019) | (0.333) | (0.511) |
| WoCo Member * Union Member | 0.052 | -0.015 | 0.065* | -0.029 | 0.559 | -0.656 |
| | (0.037) | (0.033) | (0.035) | (0.031) | (0.838) | (0.863) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,321 | 2,080 | 2,321 | 2,080 | 2,321 | 2,080 |
| R-squared | 0.893 | 0.933 | 0.921 | 0.951 | 0.763 | 0.771 |
| Individuals | 734 | 687 | 734 | 687 | 734 | 687 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

**Table 14: Effect of the interaction between works council and political steadfastness on the log hourly gross wage, the log monthly gross wage and the actual number of working hours**

| | Dependent variable : log hourly gross wage | | Dependent variable : log monthly gross wage | | Dependent variable : number of actual working hours | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Manufacturing sector | Private service sectors | Manufacturing sector | Private service sectors | Manufacturing sector | Private service sectors |
| Supports a Political Party | 0.009 | -0.003 | 0.013 | 0.003 | 0.161 | 0.297 |
| | (0.011) | (0.011) | (0.010) | (0.010) | (0.240) | (0.273) |
| Member of the Works Council | 0.015 | 0.001 | 0.023 | 0.008 | 0.349 | 0.283 |
| | (0.025) | (0.023) | (0.023) | (0.022) | (0.555) | (0.593) |
| Member of a Trade Union | 0.004 | -0.073*** | 0.003 | -0.064*** | -0.075 | 0.356 |
| | (0.015) | (0.018) | (0.014) | (0.017) | (0.329) | (0.473) |
| WoCo Member * Supports a Pol. Party | 0.063** | -0.078*** | 0.039 | -0.069*** | -1.111 | 0.473 |
| | (0.031) | (0.027) | (0.030) | (0.026) | (0.701) | (0.699) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,321 | 2,080 | 2,321 | 2,080 | 2,321 | 2,080 |
| R-squared | 0.893 | 0.933 | 0.921 | 0.951 | 0.763 | 0.771 |
| Individuals | 734 | 687 | 734 | 687 | 734 | 687 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

As previously suggested, in the negotiations over the application of derogations to bargaining agreements in the manufacturing sector, works councils played the role of "junior partners in the labour coalition with the unions" (Haipeter, 2011b, p. 687) and relied to a large extent on the support of their union. They indeed considered that derogations were part of the collective bargaining sphere which should be managed by unions and needed some expertise on the topics at stake. In parallel, IG Metall and IG BCE – the metal-working workers' union and the chemical one – were having increasing interests into collaboration on the firm ground. In a context of dropping union density, they both ruled for increased participation rights of union members at the shop-floor and privileged cooperation with works councils in gaining concessions from employers to frontal opposition about negotiations rights (ibid). As a result, it is expected that unionized works councilors had a particular strategic importance within the works council for employers as go-betweens with the union. As such, targeting wage premia on these works council members could be rational.

For what regards the private service sectors, here again, I focus on elements of understanding applying to the low-wage sector. Lack of more general literature on the issue prevents me from going further into general statements relevant to private service sectors. The following lines of explanation should therefore only be taken as some suggestive elements. According to Artus (2013), managerial

intrusion into the composition of works councils is common in the low-wage service sector. It can manifest through pro-management lists, or corruption. In both cases, "dependable members of lower and middle management are […] instructed to make themselves available as worker representatives." (ibid: 419). Works councils therefore end up mixing up pro-management members with vehement delegates. The latter – previously described in part 5.3 – take "more strongly diverging positions of interest representation" and often label their struggle as 'war' (ibid: 420). According to these elements, it is expected that the most politically active councilors experience most of the negative effect of membership on wages. Note that it would be expected that the rest actually receive a premium from their mandate; but this is not observed in the data. Finally, as for union involvement, they "often play a rather ambivalent role. […] For the trade union organisations concerned, the question here is whether it is worthwhile to engage with all-powerful companies, as long as the general works council chairperson […] [is] a ver.di member and (at least) bothers to enforce the low-wage sectoral collective agreement. These union organisations would, in turn, have to be a bit 'crazy' to invest work and time in the organisation and defence of the precariously employed, whose membership dues are tiny and who in three months will change jobs again anyway. […] The 'all-too-critical' activists are often advised to take the settlements offered and not to start yet more 'crazy' conflicts that cannot be maintained over the longer term". These elements are therefore likely to explain the negative impact of works council membership on wages for politically steadfast councilors, the absence of effect for their colleagues and the non-significant impact of the interaction between works council and union membership on wages.

# Conclusion

This paper estimates the impact of works council membership on wages in Germany between 2001 and 2015. It falls within a stream of research on collective organisations which has moved the focus away from the perspective of covered firms and their average worker to concentrate on the actors leading the negotiations (Breda, 2014). To my knowledge this is the first analysis of non-unionized form of representation taking this orientation. In a generalized context of decentralization of collective bargaining, shop-floor delegates are gaining in power and therefore in strategic importance for both the employers and the employees. Their career evolution therefore has a revealing role of the 'black box' of, increasingly, the new core of collective bargaining. The case of Germany is chosen because both national and foreign economic actors have steadily been praising its traditional dual model of industrial relations for the cooperative feature it entails at the shop floor. Yet, as discussed in the paper, it has strongly changed since the German reunification and it is expected that the nature of employer-employee relations also evolved since then.

The main model of identification is an OLS with time and individual fixed effects led on a subsample of the German Socio-Economic Panel. I have shown that, for individuals switching status, being a works councilor increases the hourly gross wage by about 5% in the manufacturing sector while a penalty of 4% is evidenced in the private service sectors. Causality is ensured by verifying that wage pre-trends do not differ between the treated and the control groups. I have finally brought elements suggesting that the (dis-)advantage of works councilors is mostly experienced by politically involved representatives in both sectors. Bringing back the context, I have explained why this may evidence a strategic behavior of rational employers.

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# Appendix

**Table 1 : Number of works councilors according to the firm size**

| Number of employees | Number of works councilors | Number of works councilors fully released |
|---|---|---|
| 5–20 | 1 | 0 |
| 21–50 | 3 | 0 |
| 51–150 | 5 | 0 |
| 151–200 | 7 | 0 |
| 201-300 | 7 | 1 |
| 301-500 | 9 | 1 |
| 501–600 | 9 | 2 |
| 601–900 | 11 | 2 |
| 901-1000 | 11 | 3 |
| 1001–1500 | 15 | 3 |
| 1501-2000 | 15 | 4 |
| 2001–2500 | 19 | 5 |
| 2500-3000 | 21 | 5 |
| 3001–3500 | 23 | 6 |
| 3500-4000 | 25 | 6 |
| 4001–4500 | 27 | 7 |
| 4501-5000 | 29 | 7 |
| 5001–6000 | 31 | 8 |
| 6001–7000 | 33 | 9 |
| 7001–8000 | 35 | 10 |
| 8001-9000 | 35 | 11 |
| 9001-10000 | | 12 |
| >9000 | +2 per bracket of supplementary 3000 workers | |
| >12000 | | +1 per bracket of supplementary 2000 workers |

Source : 2001 Works Council Act

**Table 4: Average values of different variables according to firm coverage and, within covered firm, according to the WoCo membership status**.

| | Workers in covered firms | Workers in uncovered firms | WoCo members in covered firms | WoCo non-members in covered firms | Difference (3) – (4) |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Hourly gross wage | 13.76 | 18.19 | 17.17 | 18.18 | -1.01*** |
| Monthly gross wage | 2632.39 | 3343.19 | 3102.77 | 3336.97 | -234.20*** |
| Actual working hours | 44.37 | 42.43 | 42.08 | 42.40 | -0.31 |
| Sex, m=1 fem=2 | 1.31 | 1.31 | 1.28 | 1.32 | -0.04** |
| Age of Individual | 42.28 | 44.50 | 45.39 | 44.43 | 0.96*** |
| No working hour agreement | 0.06 | 0.03 | 0.01 | 0.03 | -0.02*** |
| Region, W=1 E=2 | 1.31 | 1.23 | 1.24 | 1.23 | 0.01 |
| Seniority | 10.34 | 15.68 | 16.64 | 15.79 | 0.85** |
| | | | | | |
| Education | | | | | |
| General Elementary | 0.05 | 0.06 | 0.06 | 0.06 | -0.00 |
| Middle vocational | 0.58 | 0.49 | 0.56 | 0.48 | 0.07*** |
| Vocational + Abitur | 0.08 | 0.08 | 0.07 | 0.08 | -0.01 |
| Higher Vocational | 0.10 | 0.10 | 0.07 | 0.10 | -0.02** |
| Higher Education | 0.18 | 0.26 | 0.23 | 0.27 | -0.04** |
| Inadequately or no Answer | 0.01 | 0.01 | 0.01 | 0.01 | -0.00 |
| | | | | | |
| Isco88 (1 digit) | | | | | |
| Legislators, senior officials and managers | 0.08 | 0.06 | 0.06 | 0.06 | -0.00 |
| Professionals | 0.11 | 0.18 | 0.18 | 0.19 | -0.01 |
| Technicians and associate professionals | 0.22 | 0.27 | 0.27 | 0.27 | -0.00 |
| Clerks | 0.10 | 0.13 | 0.14 | 0.14 | 0.00 |
| Service workers and shop and market sales workers | 0.08 | 0.03 | 0.03 | 0.03 | -0.00 |
| Craft and related workers | 0.27 | 0.16 | 0.19 | 0.15 | 0.04*** |
| Plant and machine operators and assemblers | 0.09 | 0.11 | 0.08 | 0.11 | -0.03** |
| Elementary occupations | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 |
| | | | | | |
| Sector (1 digit) | | | | | |
| Energy | 0.00 | 0.02 | 0.02 | 0.02 | -0.00 |
| Mining | 0.00 | 0.01 | 0.01 | 0.00 | 0.01** |
| Manufacturing | 0.24 | 0.27 | 0.27 | 0.27 | 0.00 |
| Construction | 0.20 | 0.15 | 0.13 | 0.15 | -0.02* |
| Trade | 0.21 | 0.06 | 0.09 | 0.06 | 0.03*** |
| Transport | 0.05 | 0.07 | 0.07 | 0.07 | 0.00 |
| Bank, Insurance | 0.01 | 0.08 | 0.06 | 0.08 | -0.02** |
| Services | 0.23 | 0.30 | 0.32 | 0.31 | 0.02 |
| Public sector | 0.05 | 0.04 | 0.03 | 0.04 | -0.01 |
| Unknown | 0.05 | 0.30 | 0.30 | 0.31 | -0.01 |
| | | | | | |
| Firm size | | | | | |
| Ge 5 Lt 20 | 0.38 | 0.02 | 0.03 | 0.02 | 0.01 |
| Ge 20 Lt 100 | 0.37 | 0.12 | 0.17 | 0.10 | 0.07*** |
| Ge 100 Lt 200 | 0.10 | 0.11 | 0.12 | 0.11 | 0.01 |
| Ge 200 Lt 2000 | 0.10 | 0.36 | 0.37 | 0.37 | 0.00 |
| Ge 2000 | 0.05 | 0.38 | 0.32 | 0.40 | -0.09*** |

Source : German Socio-Economic Panel, own calculations

**Table 6: Differentiation of the baseline effects between entrance and exit from the works council. Dependent variable: log hourly gross wage**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Manufacturing sector | Manufacturing sector | Private service sectors | Private service sectors |
| Member of the Works Council | 0.046** | 0.069** | -0.042* | -0.032 |
| | (0.022) | (0.033) | (0.022) | (0.035) |
| Member of a Trade Union | 0.005 | -0.002 | -0.082*** | -0.077*** |
| | (0.015) | (0.016) | (0.020) | (0.022) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Group 1[+] | ✓ | | ✓ | |
| Group 2[+] | | ✓ | | ✓ |
| Group 3[+] | | | | |
| Group 4[+] | | | | |
| Group 5[+] | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,200 | 2,107 | 1,909 | 1,819 |
| R-squared | 0.900 | 0.900 | 0.939 | 0.932 |
| Individuals | 700 | 671 | 636 | 609 |

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Source : German Socio-Economic Panel, own calculations

[+] I separate agents who are observed at least once as a works councilor into four groups. Among the 'switchers', group 1 includes respondents whose only change in status is to become a works councilor, group 2 includes respondents whose only change in status is to leave the works council, group 3 includes respondents who are observed both voted in and out of the organisation. Group 4 includes respondents always observed in office. Respondents never observed in office are part of the group 5

**Table 8: Alternative sample 1 - workers in firms with more than 200 employees. Dependent variable - log hourly gross wage**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | All sectors | Manufacturing sector | Private service sectors | Public Sector (no civil servant) |
| Member of the Works Council | -0.006 | 0.032* | -0.060*** | -0.016 |
| | (0.010) | (0.018) | (0.022) | (0.020) |
| Member of a Trade Union | -0.007 | -0.025* | -0.009 | -0.002 |
| | (0.008) | (0.014) | (0.020) | (0.017) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Observations | 10,424 | 2,561 | 2,494 | 2,396 |
| R-squared | 0.900 | 0.894 | 0.931 | 0.879 |
| Individuals | 3262 | 847 | 875 | 792 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

**Table 9 : Alternative sample 2 - respondents observed at least once in office. Dependent variable - log hourly gross wage**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | All sectors | Manufacturing sector | Private service sectors | Public Sector (no civil servant) |
| Member of the Works Council | -0.008 | 0.052** | -0.059*** | -0.010 |
| | (0.009) | (0.022) | (0.021) | (0.016) |
| Member of a Trade Union | 0.003 | 0.033 | -0.059* | 0.013 |
| | (0.016) | (0.039) | (0.035) | (0.032) |
| Individual Fixed Effect | Yes | Yes | Yes | Yes |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Observations | 1,546 | 352 | 329 | 391 |
| R-squared | 0.867 | 0.861 | 0.912 | 0.884 |
| Individuals | 403 | 102 | 100 | 104 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

**Table 10: Test of a differentiated attrition between the treatment and the control. The model is a probit with clustered standard errors. Dependent variable - probability to be unobserved in the following wage**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | All sectors | Manufacturing sector | Private service sectors | Public Sector (no civil servant) |
| Member of the Works Council | -0.092 | -0.011 | 0.029 | -0.158 |
| | (0.068) | (0.140) | (0.144) | (0.134) |
| Member of a Trade Union | 0.045 | 0.111 | 0.054 | 0.092 |
| | (0.041) | (0.082) | (0.108) | (0.078) |
| Individual Fixed Effect | No | No | No | No |
| Time Fixed Effect | Yes | Yes | Yes | Yes |
| Observations | 8,789 | 2,092 | 1,815 | 2,362 |
| Individuals | 2833 | 733 | 680 | 820 |

Standard errors in parentheses, clustered by individual.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations

**Table 12: Restriction of the sample to the indivduals whose observations have been used for the pre-trend test. Dependent variable: log hourly gross wage**

| | (2) | (3) |
|---|---|---|
| | Manufacturing sector | Private service sectors |
| Member of the Works Council | 0.063*** | -0.052** |
| | (0.024) | (0.024) |
| Member of a Trade Union | -0.014 | -0.078*** |
| | (0.015) | (0.020) |
| Individual Fixed Effect | Yes | Yes |
| Time Fixed Effect | Yes | Yes |
| Observations | 1,859 | 1,563 |
| R-squared | 0.913 | 0.947 |
| Individuals | 607 | 532 |

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source : German Socio-Economic Panel, own calculations