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OPTIMAL WAGE SETTING: FOUR FAMILIES IN THE ECONOMIC LITERATURE

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Introduction

The aim of this paper is to discuss and examine the theoretical arguments about wage bargaining regimes with regard to their economic, social and distributional effect. The attention for collective bargaining systems has varied life over the past sixty years but yielded a solid body of literature examining the links between wage bargaining institutions, institutional structures, and economic performance.

This contribution highlights the implicit objectives targeted by the various theoretical approaches, their main lessons, and their limitations. The approaches presented here gravitate around the idea of an optimum wage rule for the euro area that would be part of an inclusive growth strategy. Such a wage setting rule that should warrant compliance with the competitive constraints imposed in a monetary, while at the same time covering redistribution and social cohesion.

As we will show, a large part of the literature, as early as the 1980s, studied collective bargaining regimes in relation to their ability to manage competitive disinflation and to absorb the various economic shocks to the European economies. This was made to the detriment of approaches that focus on redistributive objectives and emphasize the link between collective bargaining systems and productive efficiency. The renewed focus on wage rules in the post-crisis context does not derogate much from this rule, with a tendency to favour, even in post-Keynesian contributions, approaches centred on "nominal" evolutions.

We also stress that the increasing fragmentation of the national regulatory environments, the disappearance of the borders of the company and the increased monopsony power of firms requires a thorough renewal of theoretical approaches, as well as the search for tools and instruments capable of reinforcing working standards.

In the following paragraphs, we distinguish wage setting institutions (understood as the distinctive national systems affecting the level of centralization and coordination of bargaining, the mode of coordination and other bargaining institutions, including state interventions, following Visser (2008, 2013), and the "wage regimes", understood as the interplay of wages and productivity. Our discussion is organised in four families of approaches: 1) the theories favouring externalities of wage bargaining regimes on prices, 2) those favouring the impact on productive efficiency, 3) approaches centred on EMU issues (convergence, imbalances) and, 4) the approaches accounting for forms decisions and market imperfections (enforceability issues, monopsony power).

1 Externalities of wage bargaining on inflation and unemployment

The general theoretical argument in this strand of literature is that there are important externalities in wage-setting whereby the wage gains for one group of workers lower the welfare of other groups of workers. These externalities may be due to the effect of wage increases on consumer prices on the cost of complementary inputs in production or on the likelihood that unemployed workers can find new jobs. The approaches were developed in the context of stagflation and rising unemployment that followed the oil price shocks. As regards economic performance, it was essentially a matter of characterizing the collective bargaining systems most likely to avoid excessive growth of wages. These approaches have been renewed in the context of the nominal competitiveness constraint imposed by the generalization of competitive disinflation and convergence towards EMU and, more recently, in the context of the resilience of labour markets during the crisis.

1.1 The corporatist approaches

The early perspective on the links between institutions and macro-economic outcome came from political scientists, with the focus put on the role of interest groups intermediation in the political and decision process. 'Corporatist' institutional arrangements, which facilitate bargaining between labour, management, and the government, produce lower inflation and unemployment. Such institutional arrangements are supposed to produce implicit or explicit social contracts in which unions restrain wage demands in exchange for policy concessions from the government.

This approach was developed at the beginning of the eighties by Schmitter (1981) and Lehmbruch (1984). Schmitter focused more on interest intermediation, Lehmbruch more on the participation of interest organisation in public policy making. Another approach was provided by Crouch (1985, 1990, 2005), distinguishing between coordinated systems of wage bargaining ("neo corporatist") and uncoordinated systems ("liberal"). The main message of this type of approach is to highlight the effect of implicit or explicit social contracts on wage moderation. The economic micro-foundation of the decision making is fragile or absent.

As Freyssinet (2013) reminds us, in the case of pluralistic models, the different interests are represented by numerous, decentralized, non-hierarchical groups that alternate conflicts and compromises. In the case of neo-corporatist models, a small number of centralized organizations, e.g. trade unions and employers' federations, have a recognized monopoly of representation of the main economic and social groups and share responsibility for public policies. The legal standards are agreed upon by compromise or consensus; the hierarchy of standards ensures their consistency.

Empirical studies conducted in the 1980s and 1990s in this field yielded mixed results (Bruno and Sachs 1985, Crouch 1985, Therborn 1987), with difficulties to sustain the argument that corporatist industrial relations crucially determine differences in employment or unemployment, and corporatism being weakly or insignificantly related to wage restraint, for example.

The debates on the experience of social pacts were relaunched in the 1990s mainly in order to document the context and content of social pacts that accompanied the road towards EMU. This has been documented by Natali and Pochet (2009). They defined *social pacts* as a set of formal or informal agreements between representatives of governments and organized interests, who negotiate and implement policy change across a number of interconnected policy areas. In the 1990s, the macroeconomic context where these agreements have been signed involved a process of liberalization of Western European political economies, and the European context has seen the progressive economic integration of single states that led to the introduction of EMU in 1999. Natali and Pochet also insist on the changed content of these pacts: instead of providing for redistribution of growing economic and financial resources, they have been signed in a context of 'permanent austerity' consistent with the need for more competitive economies. In the 1990s and 2000s, therefore, the main focus was on documenting the process towards 'competition-oriented wage policies' (Schulten, 2002), created by the new monetary context and shared discipline brought by EMU.

Recently, a more explicit link with the labour market performance has been made, as the crisis offered the opportunity to compare responses of systems of industrial relations in Western Europe according to national specificities of the modes of production of the rules of the employment relationship. Freyssinet (2013), for example, showed the diversity of answers during the great recession, distinguishing three groups of countries: (1) some countries which had stable tripartite and/or joint institutions, mobilized them to seek agreement on joint or coordinated decisions (Netherlands, Ireland); (2) other countries which did not have such institutions, experimented with procedures aimed at articulating public policy and interprofessional bargaining (France, Spain, for example); and (3) in a third group, there are countries where relations between the state, employers and unions are established in a pragmatic and discontinuous, often informal, manner depending on the issues and circumstances (such as Germany or the United Kingdom).

1.2 Bargaining structure approach

As in the case of the corporatist approach, the bargaining structure literature was intended to reveal the externalities of the wage setting on inflation. Calmfors & Drifill (1988) developed their arguments in the context of a drastic reorientation of monetary policies toward inflation moderation (the turning point of the FED policy dates from 1979). The major challenge of the time was therefore to determine which wage regimes were more favourable than others to allow a rapid deceleration of inflation. However, the Calmfors and Driffill approach accords no role to monetary policy. It was mainly developed with the objective of analysing the effects of unions and bargaining, in a context where there was a great deal of interest in the 1980 for this issue, particularly in the Nordic Countries (Driffill, 2005). Specific attention was paid to the theory of collective action developed by Mancur Olson (The Rise and Decline of Nations, 1982 book), and whether or not organised interests can internalise the cost they impose on society.

Calmfors and Driffill (1988) extended this view to the famous 'hump-shaped' relationship between the degree of centralisation of the bargaining system and employment levels. The key argument relates to the capability of passing wage increases (negotiated by trade unions) into prices by firms. When bargaining is decentralized, the capacity of firms of passing on the wage increases into prices is low due to competitive product markets. As centralization increases (in case of industry bargaining), the capacity for externalization increases (all firms are subject to the increase). This encourages wage demands/claims, and in a context where labour demand will react, raises unemployment. When centralization proceeds even further, the costs of inflation and unemployment are increasingly internalized and the incentive for wage demands decreases. The model hence represents of the interaction between wage setting (the real wage being the union's objective), price setting (the firms mark up and employment decision), and capacity by negotiators to internalize the externalities.

This model has been put forward to explain why countries with decentralised wage bargaining, such as the United States, achieved well-aligned wage and productivity increases, while coordinated economies with industry-level wage bargaining tended to experience wage increases above productivity growth. If negotiations take place at the sectoral level, there is no mechanism restraining wage setting to increases below or close to productivity growth (Eurofound 2015). However, the Calmfors and Driffill approach suffers from several drawbacks, well identified and particularly impeding when considering the EMU context.

First, from a macro-economic theoretical point of view, a major objection is the fact that the model was developed in the context of a closed economy. As Danthine and Hunt (1994) stressed, the predictions of Calmfors and Driffill do not apply when assumptions of a closed economy and complete bargaining coverage are dropped: there is less ability to pass on wage increases into prices; less incentive for wage restraint in an open economy (import prices). As a consequence, economic performance becomes more or less independent of bargaining structure.

Second, there is also no consideration of the interactions with economic policies (monetary policy, as well as distributive policies). This point was raised by Iversen (1998), who developped the argument that in intermediately centralized systems, restrictive monetary policies can facilitate the solution of collective action problems by reducing the capacity of unions to externalize the costs of militancy. In centralized systems, by contrast, the capacity of unions to exercise self-restraint can be jeopardized by a conservative monetary policy that clashes with union internal compromises over distribution. Only in decentralized systems, where unions are too small to influence aggregate prices, do monetary policies fail to have any real effects.

Third, a more fundamental and well-known problem with the prediction by Calmfors and Driffill was that it is not able to explain the relatively favourable macroeconomic performance of many countries operating intermediate-level bargaining. In spite of the stability of the bargaining regime, unemployment has fallen

dramatically in countries with intermediate-level bargaining, such as Germany and the Netherlands, which was indicated soon after the publication of the Calmfors and Driffill paper by Soskice (1990).

Soskice (1990) argued, that it is not only the form, but also the substance of the bargaining that matters, and specifically the degree of collective bargaining coordination across the economy by trade union and employer organizations or, more widely, the organizational structures for wage bargaining, which can vary from country to country. Through coordination, the bargaining levels or actors taken into account the external consequences of wage agreements on the whole economy (Du Caju et al, 2008). The crux of Soskice's argument is that variation in unemployment is better explained when coordination is taken into consideration –with a negative correlation between unemployment and coordination, since fully decentralized collective bargaining systems do not necessarily lead to superior employment outcomes than an intermediate system operating at sector level and, as it is the case for countries with company-level negotiations in which bargaining outcomes are in fact highly coordinated. According to the coordination argument, if decentralized wage bargaining is organized around a pattern-setting mechanism or replaced by other mechanisms such as government intervention, the lack of formal centralization can be compensated. If there is no coordination in the wage bargaining behaviour, local wage bargaining will reflect the local conditions on the labour market and will not be sensitive to wider economic constraints. Moreover, local bargaining encourages leap-frogging with highly profitable companies influencing the expectations of workers in other companies. Local trade unions that are not embedded in a national bargaining system tend to exploit their bargaining power since they do not have any reason not to do so (Soskice, 1990; Flanagan, 1999).

While coordination of bargaining was initially discussed in the same way as the degree of centralization – as a one-dimensional variable indicating whether it took place at a low, medium or high level (Soskice, 1990; Iversen, 1999) – Traxler (2003) extensively discussed coordination in terms of qualitative institutional differences, in particular how the process of coordination is achieved and whether it is vertical and horizontal. For Traxler, vertical coordination refers to the coordination of individual bargainers (firms or sectors) across levels of bargaining of both employer associations and unions. In contrast, horizontal bargaining aims to satisfy collective interests such as employment and price stability and requires 'bargainers to coordinate their strategies', which might involve state intervention to enforce macro-coordination.

From an empirical point of view, a fundamental result has been to show the link between the flexibility of real wages and the level of centralization-coordination of the collective bargaining system. The virtues of coordination were highlighted in the context of the OECD Jobs Strategy launched in the early 1990s (OECD 1994, 1997a, 1997b). The empirical studies produced in the context of the OECD Job Strategy 2006 revision confirmed that 'corporatism', which is either highly centralised or co-ordinated collective bargaining significantly reduces unemployment, lending some support to the view that, in centralised/co-ordinated bargaining systems, unions and employers are able to internalise the adverse employment consequences of excessive wage claims (OECD, 2006).

The results presented in Chapter 3 of the OECD 2018 Employment Outlook (OECD 2018), posterior to the redaction of the present contribution confirm these findings. Using country-level data on labour market outcomes for 35 OECD countries between 1980 and 2016 and a novel characterisation of collective bargaining systems, the results show that co-ordinated systems are associated with higher employment, lower unemployment, a better integration of vulnerable groups and less wage inequality than fully decentralised systems. As pointed by Janssen 2018, these results constitute strong arguments against the idea that "decentralized negotiations necessarily improve labour market performance", and that "higher inequalities are the inevitable price to pay for improved labour market performance".

Interest in coordination has recently been renewed in the context of the crisis. Braakmann et al (2016) provided strong and robust empirical evidence that coordinated sectoral bargaining and governed multi-level bargaining systems are associated with an even higher efficacy than company and national bargaining.

Coordinated sector collective bargaining (as for example still common in Austria), governed company and sector bargaining (as for example common in Germany), and governed national, sectoral, and company level bargaining (as for example common in Nordic countries) are associated with a superior performance compared with other systems of collective and individual bargaining.

The bargaining structure approach suffers from several weaknesses. First, like most approaches centred on the analysis of collective bargaining systems, the exclusive focus on wage adjustment leads to neglecting the complementarities with other adjustments on the labour market (internal, external, functional flexibility). This complementarity is at the heart of the 'shocks and institutions' approach that developed in the late 1990s and early 2000s. Second, the questions relating to nominal and real convergence in the context of EMU, are not taken into account. Third, the characterization of collective bargaining systems is based on a stylized typology that is increasingly difficult to matches with reality due to the fragmentation of the national regulatory environments and the disappearance of the borders of the company.

1.3 The equilibrium rate of unemployment

The literature on the equilibrium rate of unemployment developed in the nineties, in the context of mass unemployment, with the aim of determining the factors explaining the structural unemployment rate, and to highlight the economic characteristics and institutions of the countries that succeeded in significantly reducing unemployment, or even never experienced mass unemployment. Two main approaches can be distinguished: a structural Wage Setting-Price Setting (WS-PS) approach, initiated by Layard, Nickell and Jackman (1991); and a reduced-form approach seeking to establish a direct relationship between unemployment rates and institutional characteristics, mobilizing the macroeconomic relationship between the growth rate of nominal wages and the unemployment rate as defined in the Phillips curve (Phillips, 1958), Phelps (1967, 1968), Friedman (1968).

The Phillips curve – and the 'expectations augmented' variant - is a macroeconomic model of wage determination. The relationship describes the wage formation process as a functional link between the growth rate of the nominal wage and the unemployment rate. Given the sensitivity parameters of wages to unemployment and inflation, it is possible to estimate a NAIRU, the non-accelerating inflation rate of unemployment. Wage setting result in real wage growth rate being a decreasing function of the unemployment rate, while its equilibrium growth rate depends on labor productivity. Therefore, there is only one level of unemployment that equates the effective growth of the real wage with its equilibrium growth. The indexation of wages to expected inflation may be more or less strong, a low indexation reflecting nominal wage rigidity. Similarly, wages may react more or less to the labour market situation, synthesized by the unemployment rate. The Philips curve does not specifically formalize the process of wage formation: it leaves open the possibility that these perform through collective or individual wage negotiations. However, we can imagine their impact: in some countries, unions concerned with macroeconomic equilibrium or fearing central bank reactions may accept lower wage indexation to help combat inflation.

The Phillips curve model has been challenged by the Wage Setting-Price Setting (WS-PS) model. Research in this field developed in the 1980s, mainly in the London School of Economics (Layard, Nickell and Jackmann 1991, Bean 1994). Proponents of the WS-PS models radically rejected the Phillips curve mainly for its lack of theoretical underpinnings and for its inability to explain the persistence of unemployment in Europe (see, for example, Blanchflower and Oswald 1994, Bean 1994, Horty and Thibault 1998). According to these authors, wage formation related to the level of the real wage and not to the growth rate of the nominal wage. They proposed to replace the Phillips curve with the wage setting curve establishing a link between the real wage level and the unemployment rate. Their work has had a great influence on macro-economists and labour market economists, and in particular on the preparatory work for the first OECD Jobs Strategy (OECD 1994).

In the early 2000s, several papers focused on estimating the parameters of wage flexibility and on relating these parameters to the characteristics of collective bargaining systems (Blanchard and Wolfers 2000, Fitoussi et al., 2000, Fitoussi, Passet and Freyssinet 2000, Passet and Jestaz 1998). The work of Passet and Jestaz (1998) and Fitoussi et al. 2000 highlighted the complementarity between employment and wages adjustments or wage flexibility, and attempted to establish a relationship between these adjustments and collective bargaining systems. It is useful to recall the main results of this work.

Passet and Jestaz (1998), Fitoussi et al. 2000 demonstrated the fact that: (1) At the macro level, the combination flexible wages pay/ low employment responsiveness was traditionally better ensured in centralized, coordinated systems organized around a strong social consensus. (2) In countries with decentralized and or uncoordinated wage bargaining systems, wages played a minor role in labour market adjustment. Where the legislative and conventional framework gives room to companies on the modalities of adjustment, they generally opted for a quantitative adjustment of employment.

These empirical studies distinguish two types of flexibility: a "static" flexibility (internal flexibility of wages), and a "dynamic" flexibility (of external flexibility of employment). They also showed that the two types of flexibility were shared by countries with very different labour market performances, leading to the conclusion that the flexibility criterion did not appear to be very discriminating in explaining employment performance.

This type of approach was suffering from a very poor and approximate representation of wage bargaining systems due to the focus on wage setting at macro level. However, they presented the major advantage of looking at the impact of collective bargaining systems from a global point of view, and not only by focusing on wages.

2 Productive efficiency approach and solidaristic wage policies

The question to know whether unions obstruct or promote productivity growth has been treated in the literature since the 1980s. There are theoretical arguments in favour of both views. As Janssen (2017) explains, what matters is the net balance between, on the one hand, the negative effect on productivity due to monopolistic wage setting and, on the other hand, a positive effect coming from improved workplace organisation and reduced worker turnover.

Negative effects on productivity can be linked to the fact that union rent-seeking may impede investments and union bargaining may be detrimental to manager-worker collaboration. Grout (1984) developed a theoretical approach whereby he examined the situation where, in the absence of binding contracts at firm level, there may be a negative effect on investment and factor allocation, since the capacity of unions to extract rents from the new investment may negatively impact the willingness of shareholders to implement productive investment. A more recent empirical analysis is provided by Bryson, Forth and Laroche (2011), who examine the relationship between unionization and workplace financial performance in Britain and France, and found that union bargaining was detrimental to workplace financial performance in both countries (measured as profitability relative to competitors). The main shortcoming of their analysis is that they assume that unionization is exogenously determined.

Positive effects relate to work organisation, cohesion, and reduced turnover. Freeman and Medoff (1984) put forward the argument that unions may give a collective voice to workers and improve information flows. Local union bargaining may promote efficient provision of effort, with positive effects on productive efficiency. Unions contribute to aggregate and convey the preferences and the knowledge of workers to

management in a manner that can be more efficient than eliciting individual workers' voices or failing to engage with workers at all. Arguments pertaining to equity and the social exchange theory were developed by Akerlof and Yellen (Akerlof and Yellen 1988, Levine 1991). Akerlof and Yellen argue that within-firm wage compression may enhance productive efficiency, by yielding more harmonious labour relations. Similarly, Levine developed theoretical arguments in favour of lower wage dispersion, which can increase cohesiveness, and in participatory firms' cohesiveness can increase productivity. Finally, productivity relates to an "industrial policy" approach. The argument was for example theoretically developed by Moene and Wallerstein (1997). It pertains to the idea that wage coordination through centralized bargaining can result in higher profits and greater entry of new plants than either decentralized bargaining or a competitive labour market. Coordinated bargaining can have globally positive effects, by accelerating job destruction in relatively inefficient plants and job creation in new efficient plants, enhancing productive efficiency by speeding up the movement of labour and capital from low to high productivity activities. By putting wage floor, wage coordination therefore contributes to sanction non-performing firms, while at the same time shielding successful innovative companies from short term rent extraction strategies, hence boosting overall innovation and productivity (Janssen 2017). The role of coordinated sectoral bargaining in stimulating productivity and productive efficiency of less productive firms has often been mentioned as a useful instrument for dealing with the constraint imposed by a strong money in the case of Germany (Chagny 1997).

Although it has been the subject of rich theoretical literature, the effect of wage bargaining systems on productive efficiency is rather scarce. The first empirical attempts to estimate the relationship were applied to Sweden, by Hibbs and Locking (2000). Hibbs and Locking (2010) aimed at estimating the impact of the solidarity wage policies implemented between the end of the 1950s and the beginning of the eighties on productive efficiency. From 1956 up to 1983, without interruption, the two peak bargaining organizations negotiated detailed 'framework' wage agreements covering the entire blue-collar labour force in Swedish private industry. In the initial phase of solidarity bargaining, which dates from the first comprehensive framework agreement in 1956 up to the end of the 1960s, central bargaining was guided by the principle of 'equal pay for equal work' regardless of firms' profitability or ability to pay. Weak industries and firms were therefore not permitted to survive by paying wages commensurate with their subpar productivity and profitability. The original 'solidarity wage policy' therefore sought equal pay for equal work by reducing pay differentials between industries and firms for workers doing the same job. Beginning in the late 1960s, however, the implementation of the policy evolved into a compression of differentials by gender, age, and skill. Wage solidarity took a more radically egalitarian form, moving in the direction of compressing relative wages more or less across the board, hence 'equal pay for unequal work'. Finally, the year 1983 marked the end of wage levelling policies.

The empirical work of Hibbs and Locking (2000) indicates that, after controlling for other influences, the 'equal pay for equal work' phase of the solidarity wage policy was associated with higher productivity, while the later 'equal pay for unequal work' phase of the policy reduced productivity. Hence these results do not support the thesis promoted by Akerlof and Yellen and Levine that wage levelling within workplaces or within industries may enhances productive efficiency. But it also indicates that an equal pay for equal work across industry policy can been interpreted as an industrial policy tool: if wage levels are sufficiently restrained in the expanding sectors, solidaristic policies might boost industrial output as well as productivity growth (Moene and Wallerstein 1997). Arguments in favour of solidaristic wage policies are also to be found in Schulten (2002).

A more recent empirical estimation of the impact of trade unions on productivity in the case of Scandinavia was proposed by Barth, Bryson and Dale-Olsen (2017). They try to identify the effects of changes in workplace union density on workplace productivity and wages in Norwegian manufacturing firms over the period 2001 to 2012. The results indicate that increases in union density lead to substantial increases in total factor productivity. Although unions are able to claw back part of that additional productivity through a

higher union wage premium, it turned out that for high productivity firms, unions actually put a cap on wages.

A recent and large comprehensive meta-analysis (301 new studies reporting 2.257 estimates of union effects) of the effect of trade unions was proposed by Doucouliagos, Freeman and Laroche (2017), and reviewed by the TUAC (Janssen (2017). Doucouliagos, Freeman and Laroche (2017) find an overall positive, but small relationship between trade unions and productivity, with, however, clear country differences (a coefficient very close to zero or statistically not significant for the US, Germany, France and Italy but positive in Japan, Canada and developing countries, negative in the case of the UK). As pointed by Janssen, "the main conclusion that can be drawn from this meta-analysis is that the neoclassical view that unions are invariably harmful to productivity is to be rejected. At the same time, the analysis also shows that the impact of trade unions on productivity may depend on a number of factors such as the sectors and counties concerned, the time period investigated and the institutional settings such as labour market regulation." Moreover, according to Janssen, the material collected by Doucouliagos, Freeman and Laroche for their meta-analysis tends to underreport findings from continental European and Nordic economies, where wage bargaining is coordinated. In that sense, the 'industrial policy' role of wage bargaining, via coordination, in sanctioning non-performing companies while at the same time shielding successful innovative companies is neglected.

3 Wage convergence in a monetary union

The issue of nominal and real convergence of wages and the impact on collective bargaining systems have been at the heart of many theoretical debates concerning the road towards the European monetary union (EMU), the imbalances that emerged in the decade following the introduction of the Euro, and more recently on the means to resolve these imbalances in the aftermath of the crisis (see for example Chagny, Husson and Lerais, 2013).

It is interesting to recall the debates prior to the establishment of the EMU, because they highlight the blind spots which were rediscovered in the crisis. The theoretical reference was the concept of Optimal Currency Area (OCA), due to the economist Robert Mundell, dating back the 1960s. Mundell advocated the introduction of a single European currency because it would trigger a process of convergence, especially with respect to inflation rates. In the optimistic version of the *currency area theory*, convergence was to be achieved via the following virtuous circle: productivity gains are a priori more dynamic in the least advanced countries; this can be accompanied by higher inflation, which can result in trade deficits. But these deficits are made up by capital inflows, which in turn increase investment and reinforce productivity gains, so that in the end inflation will slow down and trade deficits will be reduced (see especially Blanchard and Giavazzi 2002).

The problem is that the euro zone differed from an 'optimum wage regime' on two fundamental points: the absence of real wage convergence and diverging inflation rates. Before the introduction of the euro area, very few economists had perceived the consequences that could result from a lack of nominal convergence. One of the most systematic studies on this issue has been proposed by Delessy et al. (1993), pointing out that a similar level of inflation rates is certainly an essential feature of a monetary union, but that the debate remains open about the degree of convergence needed before entry and the degree to which it can be made within the monetary union. They therefore considered that it would be unwise to allow countries with too high inflation to enter the EMU, which would risk significant losses of competitiveness in the first years. There would be two possible strategies for these countries: either to accept these losses of competitiveness, or to compensate them by an expansionary budgetary policy. This formulation was rather premonitory.

The impact on the collective bargaining systems of the period of wage discipline linked to the generalization of competitive disinflation (1980s) and qualification policies for the euro area (early 1990s) has given rise to a vast literature (see for example: Pochet (2002), Dufresne (2009), Janssen and Mermet (2003), Dufour and Hege (2010)).

With the imbalances inherited after the EMU implementation and prior to the crisis and the role attributed to wages in these imbalances by the new European governance (on this point, see for example Raveaud, 2013), we have witnessed a renewal of analyses focusing on the link between nominal and real convergence within the EMU and collective bargaining systems. The impact on the collective bargaining systems of the period of wage discipline linked to the generalization of competitive disinflation (1980s) and qualification policies for the euro area (early 1990s) has given rise to a vast literature (see for example: Pochet (2002), Dufresne (2009), Janssen and Mermet (2003), Dufour and Hege (2010)). The approaches are mostly macroeconomic. They seek to characterize the dynamics/wage rules most likely to help resolve the imbalances inherited from the EMU, to offer a way out of the crisis as an alternative to so-called 'internal devaluation', with its recessionary impact and stimulation of new divergences between countries.

3.1 The golden rule for wage setting aimed at correcting EMU imbalances with the view of wage-led demand regimes

This approach was mainly developed after the crisis, with a view to recommending wage rules that could correct intra-EMU imbalances from a post-Keynesian perspective, as it gives a prominent place to demand-side policies to reduce the imbalances. A notable example is the case of wage-led regimes, defended by economists like Stockhammer, Lavoie, the IMK, etc. The argument here is the following: in light of the importance of domestic demand for a country's economic performance, rather than focusing on exports, a more promising approach would be to pursue a wage-led growth model based on reversing the current trends of falling wage shares and a redistribution from labour to capital income (Lavoie and Stockhammer 2013). This approach focuses mainly on the lack of nominal convergence after the entry into force of the euro area, the distortion of wages shares, the differences in unit labour cost growth between northern EMU and southern EMU countries, the consequences of these developments on the imbalances of current payments between countries and, from a broader point of view, the economic growth of the area euro as a whole. The structural factors that may have led to a lack of nominal convergence after the entry into force of the euro area are not very present in these analyses, and therefore that the question of real convergence is somehow out of the field of reflection.

The book edited by Lavoie and Stockhammer (2013) offers a comprehensive view of the wage-led approach and the labour share approach. The contributions insist on the fact that the distributional shifts in favour of capital and the rise in income inequality have educed economic growth and increased economic instability. They develop the arguments that rebalancing income distribution in favour of wage is an essential element of 'equitable and sustainable growth'. In connection with this wage-led approach to euro area imbalances, precise guidelines in terms of wage rule are for example developed in Stockhammer and Onaran (2012). Stockhammer et Onaran (2012) advocate a system of coordinated wage bargaining that aims at wages rising in line with productivity growth and a substantially upward-revised inflation target. More precisely: rebalancing and wage coordination is the strategy considered as viable for the Euro area for rebalancing the current account positions. And the means to achieve this is for German unit labour costs (ULC) to rise substantially. If Greece, Ireland and Portugal were to maintain moderate growth rates that result in moderate inflation of, say 2% per year, this would require inflation in Germany of 4–5%. Stockhammer et Onaran (2012) call this inflationary rebalancing.

The wage formula advocated by Stockhammer and Onaran (2012) entailed: an inflation target, national average productivity, plus an additional term referring to the difference between in the EU at the whole and national trend. The objective to rebalance ULC trends and competitive advantages is straightforward. It is

clear that the wage rule aims at ensuring that German wages would grow substantially faster than those of the Greece, Ireland, Portugal and Spain. Recent proposals in favour of more expansionary wage developments in Germany in order to reduce the excessive current account can for example be found in Hein and Kruger (2017).

In order to favour the implementation of the wage formula, Stockhammer and Onaran (2012) also suggest a system of coordinated national collective bargaining where social partners are also part of tripartite commissions that decide on fiscal and monetary policy, which would lead to substantial changes in the bargaining systems of many countries.

Proposals more directly anchored in the existing industrial relation systems , although rather general, are made for favouring wage led regimes by e.g. Onaran and Galanis (2013) , including strengthening the power of the labour unions via an improvement in union legislation, increasing the coverage of collective bargaining, increasing the social wage via public goods and social security, establishing sufficiently high minimum wages, and levelling the global playground through international labour standards. These latest recommendations are more generally aimed at reinforcing bargaining structure and collective bargaining and deal less with convergence issues.

It is also in terms of the consequences of the lack of nominal convergence in the euro area that certain recommendations for wage rules have been formulated in the context of the IAGS reports produced by a consortium of European economic institutes (IAGS 2017). To ensure that nominal convergence is achieved, i.e. that inflation rates are harmonized and that there is no distortion of relative price competitiveness, the IAGS report advocates a coordinated wage policy built on the 'golden wage rule', as developed by Watt (2007). The golden wage rule implies that nominal wages increase at the rate of domestic productivity augmented by the ECB inflation target of 2%. But following IAGS recommendations, in the short run the rule should be amended to correct for the existing nominal imbalances, i.e. wages increasing faster than the rule in the North, and slower in the South. More precisely, in a very similar pattern as the wage led approach described above, IAGS advocates that wages in the North would rise faster than the rule during a given period, while they would rise slower in the South. For this objective to be reached, IAGS considers also that the Macroeconomic Imbalance Procedure rules needs to be made more symmetric. But, beyond that, new tools should also be implemented: generalization of wage floors through minimum wages or collective agreements and cross-country coordination of their increases, recentralization of wage negotiations at the national and sectoral levels, generalizations of collective agreements. In other words: there is a strong necessity to reinforce the collective bargaining power.

The two previous approaches develop wage rules mainly focused on the issue of nominal convergence between the different countries of the euro area. This primacy given to nominal convergence over real convergence is very clear in the interpretation of the lack of convergence of wage and inflation rates after the entry into force of the EMU, as this quote from the 2017 IAGS report suggests: "the euro area divergence mainly comes from an inflation differential, which is a clear sign of a failure of the EU market doctrine. In contrast to the neoliberal concept of market integration, prices did not converge under the single currency—quite to the contrary, they diverged".

3.2 Optimum wage regime and the necessity to combine nominal constraint with productive efficiency improvements

The main rationale of the optimal wage regime developed in the context of earlier CAWIE research (Chagny, Husson 2015) is to argue that any progress toward an optimum wage regime in the Euro-zone requires to clearly recognize the incompleteness of the European construction, and to implement economic policies aimed both at enforcing balanced wage regimes and ensuring a convergence in productive performances.

The wage regimes are understood as the parameters governing the country-specific relationship between wages and labour productivity in the Euro-zone countries, and across sectors within countries. An optimal wage regime is understood as an organisation of wages and productivity allowing to combine: (1) within country social cohesion objectives in terms of redistribution of higher productivity gains from the most efficient sectors to the less efficient, and allowing for a balanced distribution between wages and profits in the economy as a whole; (2) an upward convergence of real wages *among* countries, meaning inevitably that real wages should grow faster in countries starting from a lower initial level of productivity to catch up; (3) and the respect of the 'nominal' competitiveness constraint imposed by a single currency area, in the sense that it cannot lead to systematic distortion of cost competitiveness because it is impossible to correct these distortions by nominal devaluations within a single currency area.

The motivation for the optimal wage regime proposal was to draw conclusions from the disequilibria inherited from the pre-crisis period, not only in terms of nominal divergences and ULC trends and their consequences on imbalances, but also following a broader approach looking at the coherence within countries and across countries of the observed wage and productivity trends.

This research produced some important results:

The first was that none of the EMU countries was able to fulfil all the internal objectives one could assign to an optimal wage regime**,** i.e. the capacity to combine an improved productive efficiency via capital allocation, a redistribution of productivity gains towards less productive sectors (via rather homogeneous wage trends), and the respect of the competitiveness constraint. The specificity of Germany during the pre-crisis period was that it was one of the rare countries where wage growth was not relatively uniform across sectors. This absence of redistribution was beneficial to the manufacturing sector competitiveness. In contrast, in the Southern Countries, more homogeneous wage developments across sectors ended up, in a context of mis allocation of productive capital, to a deterioration of price competitiveness.

The second is that real convergence did not happen in the pre-crisis period. Real-wage dispersion (across countries) slightly declined in manufacturing, but not in services. Neither did the convergence of productivity performance happen. This absence of real wage and productivity catch up prior to the crisis is fundamental. It was addressed by the European Commission (2013), and more recent empirical studies (ECB, 2015); Marelli et al. 2017) confirm these results. The author of the European Commission study, Narcissa Balta, emphasised an important phenomenon: "There is strong evidence that the pattern of convergence changed considerably in the euro area prior to the crisis". Similar conclusions are drawn by the ECB (2015): "Little real convergence has taken place among the euro area economies since the establishment of the euro, despite initial expectations that the single currency would act as a catalyst for faster real convergence."

These results were the main drivers for the proposals made in the CAWIE project in order to make progress toward an optimum wage rule in the euro zone to favour: (1) clear recognition that the European construction is incomplete; (2) economic policies aimed both at enforcing balanced wage regimes and ensuring convergence of productive performance. In other words: the solution is not to be found in "nominal rules", but in "real rules", i.e. in measures favouring productive efficiency.

Only transfers and investments directed towards sectors in which productivity can be raised significantly in the catch-up countries would trigger convergence of productivity gains, which in turn constitutes the material basis underlying the homogenisation of wage earners' living standards. From this point of view, we can highlight the worrying developments observed since 2010 and the fact that the crisis that has removed the mobility of capital between the countries of the euro zone. However, as underlined by Artus (2018), this implies that the savings surpluses of Germany and the Netherlands no longer finance the investments of countries in the euro area where per capita income is lower, which prevents the convergence of living standards.

These arguments also lead to adopt a rather critical view of the wage rules proposed and presented above. Indeed, any rule relying exclusively on favouring nominal readjustments (in other words: higher inflation dynamics in Germany than in the Southern Countries) would end up in favouring the 'frontier' countries, without any consideration of the fact that there was no catch up of the southern countries, and the main reason why this did not happen is because of capital misallocation!

This argument is present by the IAGS report, that recognises (albeit beneath the recommendation of reversing wage inflation) that "even if nominal convergence is a necessary condition for the coherence of the Monetary Union, it shall not be sufficient. Policies aiming at the convergence of productive capacities and standards of living must also be implemented".

A major shortcoming of the optimal regime approach developed by Chagny and Husson (2015) is its lack of articulation with collective bargaining systems. Some institutional explanations are provided for explaining the trade off in favour of more 'solidaristic wage developments' in the Southern EMU Countries (i.e. more homogeneous wage developments in the sheltered and the exposed sectors), and to the detriment of productive efficiency. But none of these arguments establishes a link with the institutional bargaining structure. In the above-mentioned paper, the assumption was made that inflation rate depends on the intensity of distributional conflicts (initially higher in Southern catching up countries), and, in line with Bertola (2013), that there is a trade-off between reducing inequality and economic efficiency. The slow factor productivity growth and declining inequality observed in countries that accumulated negative imbalances may therefore in part have resulted from a tendency to trade production efficiency for social protection: a tendency that would have been justified if productivity growth had materialized. In the Chagny and Husson (2015) paper, the conclusion is drawn that there a distinction has to be made between Northern countries, that performed better in terms of productive efficiency, but at the cost of an increase in inequalities and, Southern countries (including France), where total factor productivity declined or stagnated, and inequality decreased - or only slightly increased. This is specifically the ambition of the next approach to close the bridge between wage bargaining systems and the divergent inflation dynamics across EMU countries.

3.3 The corporatist labour markets superiority hypothesis

In the book published in 2016, Johnston aims at explaining why the EMU core countries were more effective than the periphery EMU countries in delivering wage moderation especially in the sheltered sector and why this divergence in wage moderation between north and south was largely limited to the pre-crisis EMU period. As in the optimal wage rule approach, the analysis takes as a starting point the observation that wage inflation in the sheltered sectors in "peripherical" economies outpaced those in the tradable sector, placing upward pressure on inflation, whereas in EMU's core economies, especially Germany, heavy wage moderation in sheltered sectors was maintained. The core of the argument is to link these developments to the specificity of wage bargaining systems. Johnston (2016) argues that the EMU established a playing field that economically advantaged low inflation north-west European economies with their corporatist labour markets over her high inflation peripherical economies with their non-corporatist labour markets. According to Johnston, such an advantage is delivered through centralised and highly coordinated wage setting institutions, which were largely a product of the political power of their export sectors in economic policy making. EMU north, thanks to its corporatist labour markets, was therefore better equipped to produce external trade and lending surpluses. In contrast, countries without export sector favouring corporatist institutions suffered 'three distinct insults' under monetary union: (1) they lost their competitiveness vis-à-vis their corporatist neighbours; (2) they uncured persistently rising trade /current account deficits; and (3) in turn they relied more heavily on international borrowing. Very similar recommendations as those formulated by the wage led approach are formulated, in favor of a pro-growth strategy of demand expansion via wage inflation in Germany.

This approach, as the wage led one, suffers the major drawback of focusing exclusively on nominal convergence. By doing this, it omits the trade-off that occurred between inflation-rather egalitarian wage developments and productive efficiency in the Southern Countries. The recommendations favouring more inflationary wage developments in the surplus countries suffer consequently several limitations. They omit to provide any concrete solutions for favouring real convergence, they omit to consider that since the catch-up process did not happen, favouring wage inflation to the most "advanced" economies with current surplus would be difficult to sustain with regard the objectives of reducing per capita disparities across EMU countries. Lastly, the superiority of coordinated bargaining systems for explaining the wage moderation of sheltered sectors can be seriously be questioned when it comes to the case of Germany. As evidenced now by a relatively abundant literature (Dustmann et al. 2014, Eichhorst 2015, Burda and Hunt 2011), the dualization of the German labour market has little to do with coordinated wage setting institutions. The tolerance for wage discrepancies is by some aspects constituent of the labour market (the male bread winner model) and was considerably encouraged by the fundamental erosion of collective bargaining system that occurred after the mid 1990s.

4 Accounting for firms' decision and market imperfections (monopsony power, enforceability issues)

The last family of theories addresses the inadequacy of the assumption of perfect competition, by exploring the factors that can hamper the market power of firms and employees. An important advantage of these approaches is that they attempt to account for firm decisions, market imperfections, and can provide concrete operational tools for reinforcing bargaining power at firm level.

4.1 Enforceability, "Social Dumping" literature

According to the OECD in Chapter 4 of the Employment Outlook 2017 edition, devoted to collective bargaining: "Co-ordination and centralisation without compliance and enforcement are simply ineffective". This point was initially put forward by Traxler (2003). It refers to the question of the governability, the legal enforceability of collective agreements and the impact on labour standards and working conditions. More fundamentally, it makes it necessary to think about the reasons and the means to realize the workers' rights with respect to representation and action in a context of increasing fragmentation of national regulation and of blurring boundaries of the company.

However, the literature on industrial relations systems and their impact on labour market performance is poor in indicators of governability and the enforcement of collective agreements. For example, in the abovementioned Chapter 4, enforcement capacity is measured by an indicator of the level of trust between social partners, which is actually a very poor indicator of co-operation in labour-employer relations. Moreover, as is further pointed in the report, available empirical evidence on compliance to labour market regulations is quite scarce and, as far as collective bargaining goes, almost inexistent. Admittedly, measuring the extent of non-compliance is very difficult to do, given data limitations and measurement error. Garnero et al. (2015) provide a first estimate of non-compliance to wage floors fixed by collective agreements in seven European countries. They find that on average in 2007-09, the share of workers paid less than the negotiated wage floors was 13% in Italy, 8% in Germany, 4% in Austria and Belgium, and around 2% in Finland and Denmark. It is precisely because of these difficulties in measuring the effect of the transformations of productive systems and the strategy of the companies on the enforceability of collective bargaining that the literature on social dumping provides useful and valuable arguments for better

understanding the effects of social dumping on working conditions, collective bargaining systems, and ways to boost labour capacity to counteract these trends.

An important contribution has been proposed by a publication edited in 2015 by Magdalena Bernaciak called "Market Expansion and Social Dumping in Europe". The contributions adopt a broad view of social dumping, by defining it as the practices, undertaken by self-interested market participants, of undermining or evading existing social regulations with the aim of gaining a competitive advantage. In that sense, social dumping does not refer only to rulings of the European Court of justice or violation of wage laws and legally extended collective agreements. Rather, social dumping refers to any competitive strategy which relies on accessing labour supplies that are cheaper due to looser regulatory frameworks or differences in wage levels or wage expectations. There is therefore an explicit reference to the approach of Streeck and the game of 'creating and exploiting regime competition' (Streeck, 1992). The book examines social dumping practices accompanying labour migration, employee posting and cross-border investment distribution. In addition, the book also outlines the process of formation of social standards and trace initiatives at EU and national levels that contribute to the spread of social dumping in Europe. Concretely, it deals with the question of how to surpass the company level, deal concretely with the fragmentation of employee's interest and representation associated with the fragmentation of core workplaces through outsourcing, vertical disintegration of companies, rise in non-standard labour contracts, labour migration and posted worker flows, the social dumping strategies.

Companies strategise between the regulatory frameworks of various national industrial relations systems (Bernaciak, 2015), using all the various tools at their disposal: posted work, agency work: regulatory evasion, arbitrage. Multinational companies pursue also a multitude of social dumping strategies at their own locations: interplant 'beauty contests' based on benchmarking, outsourcing, employment flexibilisation and concession bargaining. The consequence is that it simply results in a fundamental weakening of national industrial regimes, and there is the necessity to take into account the strategies of firms, notably multinationals, to circumvent and arbitrate between these different regimes. In the same way, this makes it necessary to look at all labour strategies aimed at countering this trend. In other words, collective bargaining and co- determination – are currently used to push through social dumping measures; and this requires thinking about other strategies/solutions.

As pointed out by Greer and Hauptmeier (Greer I., Hauptmeier M., 2015), whipsawing has corrosive effects upon collective bargaining and worker representation institutions, mainly in relation to the threat of exit (Hirschman, 1970). The function of collective bargaining changes from one of ensuring worker voice, fair pay or macroeconomic stability due to strong worker demand to a focus by labour representatives on production allocation with the aim of securing jobs and maintaining previous labour gains. In their contribution to the book, Berntsen and Lillie (Berntsen and Lillie 2015) identified three distinct categories of firms' cost- saving strategies in engaging with regulatory frameworks: regulatory evasion, regulatory arbitrage and regulatory conformance.

Regulatory evasion refers to the violation of formal and informal national industrial relations rules, and to the concealment of these violations, presumably to avoid enforcement. Quite often, this is done by obscuring a firm's practices or by increasing the level of legal uncertainty about whether a firm's practices are illegal by means of regulatory arbitrage. For example, by hiring employees in another national juridiction than the one in which the work is performed, regulatory evaders make it difficult for regulatory authorities to check whether the employment conditions meet the existing standards. The article examines in detail the example of Atlanco Rimec, a multinational manpower firm that has made a business out of hiring workers from low-wage EU countries for work in high- wage EU countries.

Regulatory arbitrage is defined as strategizing about the regulatory treatment of a transaction in the selection between two (or more) alternative regulatory regimes from different sovereign territories. Regulatory arbitrage is the exploitation of differences between national systems within the constraints set out by the

Posted Workers Directive (PWD). Firms strategically locate themselves and post employees so as to benefit from the differences between national social security systems in Europe. The PWD ensures a minimum set of rights for posted workers, including minimum- wage standards in countries where these are present, but this list of rights does not concern social contributions. The practice of regulatory arbitrage is a known phenomenon among agency firms in the construction sector, as this Dutch trade union official (2011) elaborates:

Regulatory conformance means conforming to the formal industrial relations system but potentially manipulating the rules for cost advantages. Regulatory conformance does not involve breaking industrial relations rules directly, but it may put them under pressure as employers access foreign workers who may accept worse treatment than natives on an informal level. Even when firms comply with the regulatory framework, they can still set in motion a social dumping dynamic. The authors refer to this as regulatory conformance, which means conforming to the formal industrial relations system, but manipulating the rules for cost advantage In the Dutch supermarket distribution sector, for instance, firms exploit loop-holes in the TWA regulatory regime to segment the labour market into domestic core workers and contingent foreign workers in order to maximize their flexibility and achieve cost savings In the sector examined here, the regulations are used in such a manner that Polish agency workers almost never attain this more secure phase of employment.

Bernsten and Lillie (2015) emphasize the challenge of controlling and enforcement rules for compelling client firms to avoid using subcontractors who practise regulatory evasion, and the fact that EU regulations on transnational employment relations are not yet well established and firms exploit existing legal uncertainties to their advantage. In her contribution**, Trappmann** (2015), focuses on multinational companies and the fact that, in face of intensifying competition, these firms seek to lower labour costs by taking recourse to practices that may be considered to be social dumping. Trappmann (2015) shows that given the limited power of local managers, the only source of resistance to social dumping pressures is the resourcefulness of local worker representatives. She suggests that the most important factors accounting for the variation in the effectiveness of labour responses (at local or transnational level via European Works Councils or transnational solidarity actions) is the resourcefulness and the agency of local actors. Trappmann also recalls that her findings are consistent with arguments put forward by Kahancová (2007) and Doellgast (2010), who claim that employment relations are to a large degree determined by micro- political negotiations at the workplace. In other words, it is fundamental to take into account, in a context of fragmented value chains, the ability of actors to negotiate at local level and, where appropriate, to strengthen their bargaining power, irrespective of the bargaining regime.

A very concrete example is provided by Telljohann (2015) in the automotive sector. A successful coordination initiative has taken place within a German- based supply park (4000 people, one- third in industrial firms, two- thirds in service companies, a high share of low- skilled workers of migrant origin, with a low unionization rate among these workers!). IG Metall decided to treat the entire supply park as a single company. Following the first positive results of the organizing strategy, IG Metall established a network at the level of the supply park that included trade union officers, members of the works councils, union workplace representatives and representatives of young trade union members. IG Metall followed a gradual, clearly structured approach in building up employee interest representation at the supply park. The union drew on the OEM's Social Charter, which provided for the right to set up company- level structures of interest representation at the OEM's first- tier business partners. The achievements of the project were significant: IG Metall succeeded in increasing the trade union presence within the supply park and contributed to a more systematic application of information and consultation rights as laid down in Directive 2002/14/EC, which was particularly important for workers employed by firms located at the lower end of the automotive value chain.

Another local example is provided by the 'Airbus working community' (Coordination CGT aéronautique, 2017). Airbus management estimates that 80% of the value added of its aircraft is made by subcontracting, including regional outsourcing to companies whose work contributes to the production of Airbus goods and services that they are socially responsible, that is, they respect a number of commitments, particularly social ones: the International labour Organization's Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, ISO 26000 on Responsible Organization, ISO 20 400 on Responsible Procurement, OECD Guidelines for Business, United Nations Global Compact (UN Global Compact) ... Airbus claims to be a socially responsible company (see the CSR pages of the Airbus MD & A published pursuant to Article R.225-105-1 of the French Commercial Code). But as the workers of aeronautics live, there is far from theory to practice. The ordering company is responsible for the impacts (social, environmental, etc.) that it generates on society in general and its subcontractors in particular. It is this idea that the French CGT trade union has made its own by creating in 2013 the 'Airbus working community'. Starting from the idea that all the workers, whether they are employees or not of Airbus, should benefit from the same rights from the moment they all contribute to the creation of the same goods and services; it's a way of embodying fraternity. The first victory was that employees of subcontracting companies could be elected as representatives of the employees on the lists of the unions of the ordering company.

Even if this is insufficient for preventing whipsawing strategies, there is explicit evidence that the extension of worker participation rights to the transnational scale and firm- level transnational agreements at Europe's MNCs were implemented with the explicit aim of curbing social dumping by introducing certain norms (Greer, Hauptmeier, 2008 2015). At Daimler and VW, for example, there were several innovations aimed at improving transnational labour-management partnership, including the extension of the EWC to the global level as a World Works (Greer and Hauptmeier 2008).

4.2 Monopsony power

Very concrete lessons can be drawn in terms of a recommendation aiming at reinforcing bargaining structures and pushing higher minimum wage to raise both wages and employment, instead of recommendations to align wage developments with those of productivity, and to limit excessive wage growth, on the side of the literature looking at the negative effects of increased business monospace power. This argument has, for example, been advanced by TUAC in several of its comments on the OECD Strategy Review (TUAC 2017, R. Janssen presentation to the TUREC network in September 2017). As pointed out by Janssen (2017), "After three decades of falling labour share, [it is difficult] to simply repeat that productivity is main driving force of higher wages".

Potential effects of monopsony power on the bargaining position of labour is, however, rarely invoked in the European context, especially in Anglo-Saxon literature. The TUAC remarks that Freeman et al. (2017) entirely overlooked imperfect competition in their literature review of empirical work on the Economics of Trade Unions. Arguments for taking monopsony power into account have recently been advanced for the United States by the Council of Economic Advisors of the United States (Council of Economic Advisors, 2016); in charge of advising the President of the United States on economic policy. In a 2016 memo, the Council of Economic Advisors recalls that a firm with monopsony power has the ability to pay a lower wage than would prevail in a competitive market without losing all its workers to competing employers, and that like monopoly power, monopsony generally leads to economic inefficiency. Yet, as detailed by the Council of Economic advisors, implications of monopsony power are straightforward. It weakens the link between labour productivity and wages, alters the redistribution of value added between wages and profits, causes rising disparity in pay among workers. Moreover, these trends also have broader implications for the economy as a whole: instead of promoting growth, forces that undermine competition tend to reduce efficiency, and can lead to lower output, employment, and social welfare.

The consequences in terms of recommendations are immediate (Janssen, 2017). Since in a labour market monopsony, employers do have some power to set wages at a level below what would be the competitive equilibrium, in that case, by bargaining collectively, trade unions push wages higher and closer to the market equilibrium, hence improving employment, investment and productivity.

5 Conclusion

We brought together the theoretical arguments put forward in the literature on wage bargaining with the economic, social and redistributive objectives that can be identified in the operational context of the EMU, taking into account the transformations in productive systems and firms' strategies. This article extends the investigations initiated in the framework of the CAWIE 2 project (Chagny and Husson, 2015) about the definition of what could be an optimal wage rule in the post-financial crisis context of the EMU.

By optimum wage regime, we understand a relationship between wages and productivity in each EMU country making compatible the objectives of promoting social cohesion, enabling real convergence and respecting the competitive constraints imposed by a single currency area.

There are three main lessons arising from this review of literature:

- There is hardly any approach in the literature putting forward 'real convergence' objectives (i.e. convergence of productive performance, productivity, living standards), with most of the the emphasis put on the 'nominal' dimension (i.e. in terms of inflation targets, nominal wages, price-cost competitiveness, etc.). Yet, it is now well established that little real convergence has taken place among the euro area economies since the establishment of the euro. Only transfers and investments directed towards sectors in which productivity can be raised significantly would be able to trigger convergence of productivity gains, which in turn constitutes the material basis underlying the homogenisation of wage earners' living standards. In other words: the solution is not to be found in 'nominal rules', but in 'real rules', i.e. in measures favouring productive efficiency.
- There is scarse consideration in the literature on wage bargaining systems for firms' decisions and market imperfections. The literature is also poor in indicators of governability and the enforcement of collective agreements. In this respect, the literature accounting for firms' decision and market imperfections (monopsony power, enforceability issues) provides useful and valuable arguments for reinforcing bargaining structures, strengthening the ability of actors to negotiate at local level irrespective of the bargaining regime and pushing higher minimum wages.
- Since the beginning of the 2000s, and with the exception of the period of the crisis, wage bargaining systems are often analysed in a 'partial' framework. There is little consideration for all the 'institutional arrangements', and more particularly the articulation between employment, functional, and wages adjustments, which constitutes an argument in favour of more 'macro' analyses.

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