An Analysis of Industrial Relations and Gender Pay Gaps in European Member States[1]

Alexandre Ounnas

October 2022

This paper proposes an analysis of gender pay gaps (GPGs) and Industrial Relations (IR) in European Member States using data from four waves of the Structure of Earnings Survey (SES) between 2006 and 2018. The links between the GPG and IR have already been studied in the academic literature. However, these analysis usually considered narrower definitions of IR, that focused primarily on the effects of trade union (TU) membership (Card et al, 1996) or certain aspects of wage bargaining (e.g. centralisation, coordination). These IR characteristics impact the GPG because more centralised/coordinated bargaining systems result in more compressed wage distributions (Freeman, 2007) and TU usually seek to impose higher wage floors (Blau and Kahn, 2003) and pursue more egalitarian pay policies (Cardoso and Portugal, 2005). These effects tend to benefit workers at the lower end of the wage distribution, women in particular.[2]

The wage compression effects appear to be relatively consensual in the literature, but IR regimes are broader and include dimensions related to the involvement of workers at the firm level (through work councils (WC) or company boards) or to the role given to social dialogue in policymaking (tripartite/bipartite councils/negotiations, see Visser, 2009a). Our focus on IR systems therefore requires a quantitative measure that would encompass all the various aspects of IR and their combinations. A solution is to use the composite index built by Ounnas (2022), which is constructed from 24 variables on four IR dimensions used by Visser (2009b) to construct his typology (i.e. TU strength, wage bargaining, involvement and participation in policy arrangements). This index has the advantage of being available at yearly frequency and for all European countries. It is relevant for our analysis since it assigns high values to IR systems with strong social partners (i.e. high TU and Employer organisation density), some degree of centralisation/coordination of wage bargaining, and workers/unions' representation at the firm level through work councils (WC).

With regards to the GPG, the SES offers many advantages to analyse gender disparities in pay across European Member States. The SES is a large and representative survey of employees which provides, on paper, harmonised data on hourly earnings including payments for overtime and shift work. Moreover, it contains basic personal characteristics on employees (age, tenure, education, …) and firms (ownership, size and sector). The limitations of the SES are primarily related to the use of anonymised scientific files, which implies that the information available can differ across countries. Therefore, the SES requires some adjustments to ensure better comparability of data before any analysis can be performed. Furthermore, scientific files for Austria and Ireland are not available and data for specific countries and years can sometime be missing.

Once SES samples have been cleaned, we note that the evidence on the links between (certain aspects of) IR and wages suggests that IR affect returns to (observed) characteristics on the labour market through, for instance, the pursuit of more egalitarian pay policies by TU. The difference in returns between men and women can be seen to corresponds to the unexplained (or adjusted) component from the standard Oaxaca-Blinder (OB) decomposition method. We can then expect strong TU, centralised wage bargaining, etc, to reduce the differences in returns and as such, lower the unexplained component of the GPG. Thus, higher

[1] This work is part of a paper already (or very soon to be) available from the following website: https://www.ceps.eu/ceps-projects/virage/ under `Deliverable', and which has been produced as part of the VIRAGE project funded by the EU under the Employment and Social Innovation (EaSI) programme.

[2] Other IR aspects, such as worker representation at the firm level through work councils, have been shown to also potentially affect the GPG (Heinze and Wolf, 2010).

values of the IR index are expected to be associated with a lower adjusted GPG.

In practical terms, we decompose the GPG for each country and each year to retrieve the adjusted components. The limits of the OB methods are well-known (Kunze, 2008) and since our focus is on the unexplained component, we also implement the exact matching method proposed by Ñopo (2008) to obtain a second measure of the adjusted component. We obtain an (unbalanced) panel of 78 adjusted GPGs between 2006 and 2018 and estimate static panel models (random and fixed effects). We explore the possibility for non-linear effects of IR on the GPG, controlling for macroeconomic characteristics and year effects.

The results show that higher values of the IR index are associated with lower adjusted GPG for both the OB or the Ñopo methods. However, the relationship appears to be U-shaped and the effects of IR could become positive for high index values. To better understand this result, we exploit the fact that indices for the four IR dimensions (TU strength, bargaining, …) are available separately. Hence, we swap the overall index and reestimate the static panel data models leading to two main results:

1. the IR dimensions on bargaining and involvement have significant and negative effects on the GPG, consistent with evidence from the academic literature (Blau and Kahn, 2003; Heinze and Wolf, 2010).
2. the TU strength dimensions is estimated to have a U-shaped or strictly increasing effect, which becomes positive when trade unions are strong. This could contribute to explain the U-shaped effect reported for the overall IR index.

Keywords: Gender pay gap, Industrial Relations, decomposition methods

References

Blau, F. D. and Kahn, L. M. (2003), 'Understanding international differences in the gender pay gap', *Journalof Labor Economics*, Vol. 21, No 1, pp. 106–144.

Card, D. (1996), 'The effect of unions on the structure of wages: A longitudinal analysis', *Econometrica: Journal of the Econometric Society*, pp. 957–979.

Cardoso, A. R. and Portugal, P. (2005), 'Contractual wages and the wage cushion under different bargaining settings', *Journal of Labor Economics*, Vol. 23, No 4, pp. 875–902.

Freeman, R. B. (2007), *Labor market institutions around the world*, NBER Working Paper No. 13242, National Bureau of Economic Research, Cambridge, Mass., USA.

Heinze, A. and Wolf, E. (2010), 'The intra-firm gender wage gap: a new view on wage differentials based on linked employer–employee data', *Journal of Population Economics*, Vol. 23, No 3, pp. 851–879.

Kunze, A. (2008), 'Gender wage gap studies: consistency and decomposition', *Empirical Economics*, Vol. 35, No 1, pp. 63–76.

Ñopo, H. (2008), 'Matching as a tool to decompose wage gaps', *The Review of Economics and Statistics*,Vol. 90, No 2, pp. 290–299.

Ounnas, A. (2022), (unpublished), 'An Index of Industrial Relations for European Countries'.

Visser, J. (2009a), 'Europe's industrial relations in a global perspective', in *Industrial Relations in Europe 2008*. European Commission and Directorate-General for Employment, Social Affairs and Inclusion, Publication Office of the European Union, Luxembourg, pp. 19–44.

Visser, J. (2009b), 'The quality of industrial relations and the Lisbon Strategy', in *Industrial Relations in Europe 2008*. European Commission and Directorate-General for Employment, Social Affairs and Inclusion, Publication Office of the European Union, Luxembourg, pp. 45–72.