ETLA Working Papers | 118 7.9.2024

The Effects of the Decentralization of Collective Bargaining on Wage Differences Among Employee Groups

Antti Kauhanen
ETLA Economic Research, Finland
antti.kauhanen@etla.fi

Suggested citation:
Kauhanen, Antti (7.9.2024). "The Effects of the Decentralization of Collective Bargaining on Wage Differences Among Employee Groups".
ETLA Working Papers No 118.
http://pub.etla.fi/ETLA-Working-Papers-118.pdf

Julkivapaa lauantaina 7.9.2024 klo 00.01.

Abstract

Recently, Finnish forest industries shifted from sectoral collective bargaining to firm-level bargaining, and the IT services industry shifted to a hybrid of sector- and firm-level bargaining. These changes meant that all issues previously covered by sectoral agreements would now be negotiated at the firm level, which could lead to notable contract changes.

A study previously published by ETLA showed that decentralization of bargaining had only modest impacts on the level and dispersion of wages. Of the groups examined, only for blue-collar workers in paper industries, decentralization led to higher wages and increased wage dispersion within firms.

This study examines the effects of the transition to firm-level agreements on pay differences between different groups. Previous international research has shown that decentralization of the collective bargaining system can lead to an increase in the gender pay gap or to an increase in the pay gap between different educational groups.

The results of the study show that in Finland, the move away from union-specific bargaining did not increase pay differences between different groups.

Tiivistelmä

Neuvottelujärjestelmän hajautumisen vaikutus eri ryhmien välisiin palkkaeroihin

Metsäteollisuuden siirtyminen liittokohtaisesta sopimisesta yrityskohtaiseen sopimiseen oli merkittävä muutos Suomen työmarkkinoilla. Myös ohjelmistoalalla tapahtunut siirtyminen hybridimalliin, jossa alakohtaisen työehtosopimuksen lisäksi voidaan solmia yrityskohtaisia sopimuksia, lisäsi huomattavasti yrityskohtaista sopimista tällä alalla.

Etlan aiemmin julkaisema tutkimus osoitti, että siirtymisellä liittokohtaisesta sopimisesta kohti yrityskohtaista sopimista oli vain vähän vaikutusta palkkojen tasoon tai niiden hajontaan. Tarkastelluista ryhmistä ainoastaan paperiteollisuuden työntekijöiden osalta havaittiin, että yrityskohtaiseen sopimiseen siirtyminen nosti hieman ansioita ja kasvatti yritysten sisäistä palkkahajontaa.

Tässä tutkimuksessa tarkasteltiin yrityskohtaiseen sopimiseen siirtymisen vaikutuksia eri ryhmien välisiin palkkaeroihin. Aiempi kansainvälinen tutkimus on osoittanut, että työehtosopimusjärjestelmän hajautuminen voi johtaa sukupuolten välisen palkkaeron kasvuun tai eri koulutusryhmien välisten palkkaerojen kasvuun.

Tutkimuksen tulokset osoittavat, että Suomessa siirtyminen pois liittokohtaisesta sopimisesta ei kasvattanut eri ryhmien välisiä palkkaeroja.

D.Sc. (Econ.) **Antti Kauhanen** is a Research Director at Etla Economic Research and a Professor of Economics at Jyväskylä University School of Business and Economics.

KTT **Antti Kauhanen** on Elinkeinoelämän tutkimuslaitoksen tutkimusjohtaja ja taloustieteen professori Jyväskylän yliopiston kauppakorkeakoulussa.

Acknowledgements: The author is grateful to Pekka Vanhala for research assistance and thanks TT-säätiö for funding.

Kiitokset: Kirjoittaja kiittää Pekka Vanhalaa tutkimusavusta. Tämä Working Paper on osa TT-säätiön rahoittamaa hanketta *Yrityskohtaisen sopimisen vaikutus palkankorotusten kohdentumiseen*.

Keywords: Firm-level bargaining, Earnings, Wage dispersion, Gender wage differences

Asiasanat: Yrityskohtainen sopiminen, Ansiot, Palkkahajonta, Sukupuolten palkkaero

JEL: J31, J52, J53

Introduction

In October 2020, the Finnish forestry industry declared that it would shift from sectoral collective bargaining to firm-level bargaining. This change broke the long-standing tradition of sectoral bargaining in Finland and ended the generally binding collective agreements in the sector. This means that all issues previously covered by sectoral agreements would now be negotiated at the firm level, potentially leading to significant contract changes. Following suit, the technology industries announced in March 2021 will adopt a hybrid model of sector- and firm-level bargaining.

These developments are examples of collective bargaining decentralization, which has been occurring in most European countries over the past few decades (Visser 2016). Kauhanen (2024) shows that decentralization in these sectors lead to small changes in the level and dispersion of wages. Prior European studies have shown that decentralization may lead to increased wage differences between worker groups. Dahl et al. (2013) find that decentralization in Denmark lead to increased wage differences among educational groups and Amuedo-Dorantes and De la Rica (2006) find that decentralization increases gender wage differences in Spain.

In this study, I extend the analysis in Kauhanen (2024) to consider wage differences between men and women, high and low educated, and different age groups.

Institutional setting

In Finland, collective bargaining takes place at the sectoral level, with employer federations and trade unions being the parties involved. The agreements reached in these negotiations cover a variety of topics including wage formation, working hours, vacation time, social provisions, and parental leave. These contracts often extend to non-signatory parties with an independent committee making the decision to extend them. The primary factor determining whether to do so is the coverage of the agreement, and typically, a contract is extended if it covers at least 50% of the employees in a sector (Jonker-Hoffrén 2019). It is worth noting that the coverage of collective agreements in Finland is approximately 90%.

The Finnish system of collective bargaining has left little room for firm-level contracts or other forms of decentralization. The main form of decentralization has been the so-called local pots. These wage increases are negotiated and implemented locally according to the rules set in sectoral collective agreements. Their prevalence has varied over time and across industries (See Kauhanen et al. 2024 for more details). Employers have wished for more decentralized bargaining since at least the beginning of the millennium (Heikkilä and Piekkola 2005, Pekkarinen and Alho 2005). However, the collective bargaining system has not evolved as employers would have liked. This led some sectors to abandon the sectoral bargaining system in late 2020.

In October 2020, the Finnish Forest Industries Federation (FFIF) announced that it would not continue sectoral bargaining when contracts expired. This meant that the sector would shift to firm-level bargaining with no generally binding collective agreement. The change applied to both the paper industry and mechanical forest industry. In practice, this meant that the sectoral labor union would negotiate the contracts with individual firms instead of the FFIF.

In March 2021, the Technology Industries of Finland also announced that it would move to a hybrid model of sector- and firm-level bargaining.[1] In practice, there was a significant change in the collective bargaining system only in IT services. This is because in other technology industries, the sectoral agreement remained generally binding, making firm-level contracts practically obsolete.

Data

The main dataset used in this study is the Incomes Register from Statistics Finland, a national database maintained by the Finnish Tax Authority. It contains information on wages, pensions, and benefits. Information on wages is available as of January 2019. Owing to their nature, these data are accurate and reliable. The register also contains unique person and firm identifiers, which

makes it possible to follow individuals and firms over time. The data are released for research purposes at a monthly frequency.

The last month used in this study is March 2024. For the analyses, I aggregate the data to the industry level or the industry × worker (blue- or white-collar) group level. I use Statistics Finland's Standard Industrial Classification TOL 2008 and perform the aggregation at the two-digit level (78 industries), at which the extensions of collective agreements are typically defined. Because blue- and white-collar workers have different collective agreements in the manufacturing industries, I perform the aggregation separately for these two groups. In the IT industry, there is no need to separate blue- and white-collar workers, because there is a single collective agreement. I define blue- and white-collar workers as employees falling under Statistics Finland's National Classification of Occupations categories 5–9 and 1–4, respectively.[2]

The wage concept I use is the total wage. This includes all taxable earnings from employment relationships. The main dependent variable is the difference in the average wage of an industry for the given groups. For example, the gender wage difference is calculated as the difference in the average wages of men and women in a given industry.

Treatment and control groups

The treatment groups are the paper industry (TOL 17), the mechanical forest industry (16), and IT services (62 and 63[3]). The control group consists of all untreated industries, except for industries 31 and 32. I exclude the manufacturing of furniture (31) and other manufacturing industries (32) from the analyses because they used to have two generally binding collective agreements—one with the Technology Industries of Finland and one with the FFIF—and the impact of FFIF's decision to switch to firm-level bargaining on these industries is unclear. I also exclude programming and broadcasting activities (60) and gambling and betting activities (92) from the analyses of blue-collar workers because of the small number of such workers in these industries. The treatment period starts in January 2022 for the paper industry, March 2022 for the mechanical forest industry, and December 2021 for IT services.

Methods

To estimate the causal effects of decentralization, I use the synthetic difference-in-differences method (Arkhangelsky et al. 2021), which generalizes and unifies the difference-in-differences and synthetic control methods. Similar to the synthetic control method, it matches the pretreatment trends of the treatment and control units, and similar to the difference-in-differences method, it allows additive unit-level shifts. Given the few treated industries, many control industries, and relatively many periods included in this study, this method is suitable for the analysis.

I use placebo variance estimation to calculate standard errors, which is the only option given that there is only one treated unit per estimation (Arkhangelsky et al. 2021, Algorithm 4). I use 1000 bootstrap replications. Arkhangelsky et al. (2021) simulation studies show good properties, with similar numbers of cross-sectional units and periods to those in my analysis. To estimate the model, I use the Stata command described by Clarke et al. (2023).

Results

Table 1 presents the results. The general observation of the results is that the transition to firm-level agreements did not typically have a statistically significant effect on pay differences between different groups.

For paper industry workers, the results show that the gender pay gap narrowed by approximately €200 per month more than in the control group after the transition to firm-level agreements. However, this difference is not statistically significant. A similar observation applies to the other groups: the estimated pay gaps are positive, but these results are not statistically significant.

For white-collar employees in the paper industry, estimates of the effects of firm-level agreements on pay dif-

ferences between different groups are negative, except for the pay gap between 30–49-olds and those aged under 30, but these are not statistically significant. Typically, the order of magnitude is lower than that of employees.

For employees in the mechanical forest industry, estimates of the impact of the transition to firm-level agreements on pay differences between different groups point to narrowed pay differences, except for the difference between genders. For the most part, the estimated effects on the differences are very small, and none of them are statistically significant. For white-collar workers, the transition to firm-level agreements seems to have slightly raised pay differentials between different groups, but these estimates are not statistically significant.

In IT services, the earnings of those aged 30–49 grew faster than those of those aged 50–70. This impact estimate is statistically significant. For the other groups, the results are not statistically significant, although the pay gap between women and men appears to have widened.

In IT services, it is seen that the earnings of those aged 30 to 49 have grown faster than those of those aged 50 to 70. This impact estimate is statistically significant. For the other groups, the results are not statistically significant, although the pay gap between women and men appears to have widened somewhat.

Table 1 The impact of decentralization on wage differences

	Women vs men	Highly educated vs others	30–49-year-olds vs less than 30-year-olds	50–70-year-olds vs 30–49-year-olds
A. Blue-collar workers, Paper Industry				
Treatment effect	205.704	72.423	93.901	54.514
	(252.369)	(203.554)	(161.743)	(113.528)
N	4599	4599	4536	4536
B. White-collar workers, Paper Industry				
Treatment effect	-16.666	-101.004	42.055	-1.417
	(156.843)	(140.946)	(156.065)	(124.387)
N	4725	4725	4725	4725
C. Blue-collar workers, Mechanical Forest Industry				
Treatment effect	25.425	-45.306	-136.204	-54.702
	(252.281)	(156.252)	(103.974)	(100.577)
N	4599	4599	4536	4536
D. White-collar workers, Mechanical Forest Industry				
Treatment effect	19.069	12.658	-31.652	56.327
	(143.202)	(130.801)	(166.489)	(122.713)
N	4725	4725	4725	4725
E. IT services				
Treatment effect	-125.167	34.777	-28.074	-91.829*
	(96.15)	(79.904)	(74.247)	(53.269)
NN	4788	4788	4788	4788

Note: The table displays the treatment effects and standard errors estimated using the synthetic difference-in-differences method.
* p < 0.1, ** p < 0.05, *** p < 0.01.

Conclusion

This study shows that shift to firm-level bargaining did not increase wage differences among different employee groups in Finland, except for some age groups in IT services. These results differ from earlier European studies that find that decentralization is associated with larger wage differences among educational groups (Dahl et al. 2013) or between genders (Amuedo-Dorantes and De la Rica 2006). There are at least two explanations for the differences. First, the nature of decentralization differs by institutional context. Second, I consider short-term results and in the long run the differences may be larger.

Disclosure of interest

The author reports there are no competing interests to declare.

Endnotes

1 https://teknologiateollisuus.fi/en/ajankohtaista/press-release/technology-industries-finlands-activities-be-divided-between-two

2 This classification is based on the International Standard Classification of Occupations ISCO-08.

3 The collective agreement for IT services does not cover the three-digit industry 639, which is thus excluded from the analysis.

References

Amuedo-Dorantes, Catalina & De la Rica, Sara (2006). The Role of Segregation and Pay Structure on the Gender Wage Gap: Evidence from Matched Employer-Employee Data for Spain. *B.E. Journal of Economic Analysis and Policy: Contributions to Economic Analysis and Policy*. 5(1):1-32.

Arkhangelsky, Dmitry, Athey, Susan, Hirshberg, David A., Imbens, Guido W. & Wager, Stefan (2021). Synthetic Difference-in-Differences. *American Economic Review*. 111(12):4088-4118.

Clarke, Damian, Pailañir, Daniel, Athey, Susan & Imbens, Guido (2023). Synthetic Difference in Differences Estimation. *arXiv preprint. arXiv:2301.11859*.

Dahl, Christian M., le Maire, Daniel & Munch, Jakob R. (2013). Wage Dispersion and Decentralization of Wage Bargaining. *Journal of Labor Economics*. 31(3):501-533.

Heikkilä, Anni & Piekkola, Hannu (2005). Explaining the Desire for Local Bargaining: Evidence from a Finnish Survey of Employers and Employees. *Labour*. 19(2):399-423.

Jonker-Hoffrén, Paul (2019). Finland: Goodbye Centralised Bargaining? The Emergence of a New Industrial Bargaining Regime. In Thorsten Müller, Kurt Vandaele and Jeremy Waddington. *Collective Bargaining in Europe: Towards an Endgame. Volume I*, pp 197-216. Brussels: ETUI

Kauhanen, Antti (2024). The Effects of the Decentralization of Collective Bargaining on Wages and Wage Dispersion: Evidence from the Finnish Forest and It Industries. *British Journal of Industrial Relations*. 62(2):319-334.

Kauhanen, Antti, Maczulskij, Terhi & Riukula, Krista (2024). The Incidence and Effects of Decentralized Wage Bargaining in Finland. *Journal of Labor Research*.

Pekkarinen, Jukka & Alho, Kari E.O. (2005). The Finnish Bargaining System: Actors' Perceptions. In Hannu Piekkola and Kenneth Snellman. *Collective Bargaining and Wage Formation*, pp 61-84. Heidelberg: Springer.

Visser, Jelle (2016). What Happened to Collective Bargaining during the Great Recession? *IZA Journal of Labor Policy*. 5(1):9.

Elinkeinoelämän tutkimuslaitos

ETLA Economic Research

ISSN-L 2323-2420
ISSN 2323-2420 (print)
ISSN 2323-2439 (pdf)

Publisher: Taloustieto Oy

Tel. +358-9-609 900
www.etla.fi
firstname.lastname@etla.fi

Arkadiankatu 23 B
FIN-00100 Helsinki