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Not just black and white, but different shades of grey: Legal segmentation and its effect on labour market segmentation in Europe

Irene DINGELDEY[*] and Jean-Yves GERLITZ[**]

Abstract. *This article studies the impact of employment law on de facto labour market segmentation for 22 European countries from 1991 to 2014. Applying the concept of legal segmentation, the authors distinguish between the standard-setting (protective), privileging and equalizing functions of employment law and use descriptive and multivariate statistics to indicate their effects on overall employment, and male and female standard and non-standard employment. High privileging, in combination with high standard-setting, is found to favour male standard employment and female non-standard employment, while the equalizing function, aimed at improving the protection of women and other marginalized groups, actually increases male non-standard employment.*

Keywords: *labour law typology, labour market segmentation, standard employment relationship, atypical employment, gender, multivariate analysis, Europe.*

1. Introduction

Labour market segmentation is a long-standing issue within labour market research. Originally, segmentation was seen as a consequence of employers' investment in a core workforce, which created and reinforced socio-structural divides (Doeringer and Piore 1971; Reich, Gordon and Edwards 1973). In contrast, the "insider–outsider" theory discussed the political strategies of those holding

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protected jobs (insiders) against other, more vulnerable groups in the labour market (outsiders) (Lindbeck and Snower 2002).

The 2000s gave way to a critical assessment of the dualization of labour markets and the two strands of segmentation theory became entangled. Labour market segmentation was reduced to a structural "dualism" between the standard employment relationship (SER), characterized by permanent and full-time employment (Mückenberger and Deakin 1989), and non-standard employment relationships (NSERs), including forms of fixed-term and part-time employment, but also agency work and self-employment, as well as the unemployed. In this context, employment law was perceived as a barrier to mobility into the core labour market. Hence, a prominent explanation for labour market segmentation was that strong "insider" interest groups defended their privileges via employment law in combination with other institutional mechanisms such as (welfare) policies (Rueda 2005; Emmenegger et al. 2012).

This view was contested by institutionalist labour market segmentation theory, which perceived the insider–outsider dualism as being too simple – or too "black and white" – to mirror the complex structures of labour market segmentation and its multi-causality (De Stefano 2014; Rubery and Piasna 2016). We consider that these structures would be better conceptualized as "different shades of grey", given that protection for permanent full-time employees varies according to seniority rules and enterprise size, among other factors, and there is wide variation in the forms that NSERs take. Moreover, segmentation is not only found among different forms of employment, driven by employment law, but also among occupations, sectors, genders and ethnic groups, arising from social norms and values. In particular, gender differences are influenced by welfare state institutions and policies concerning childcare, taxation and social protection, which are strongly linked to social norms supporting different family employment models – namely, the male breadwinner and the dual full-time worker household models (Dingeldey 2001; Pfau-Effinger 2005; Daly 2011). Differences in de facto labour market structures – especially as regards gender – are therefore thought to arise from the interaction of different institutions and policies in various areas that guide the decisions of individuals (Dingeldey 2016).

In the wider literature, a fundamental part of the debate concerns the influence of employment law on employment and labour market segmentation. While studies by mainstream economists such as Lindbeck and Snower (2002) emphasize the detrimental effects of employment law, other research disproves a clear relationship between the level of employment protection for the SER or the flexibilization of NSERs and the level of employment (Howell et al. 2007; Avdagic 2015). Despite its relevance, employment law has been perceived mostly as being unidimensional, reflecting overall employment protection legislation. This restricted view ignores the fact that not all employees enjoy the same level of protection as that found in the relatively privileged SER. It also forgets that anti-discrimination legislation had already become an important focus of European employment law in 1975 and was further enhanced throughout the 1990s (Walby 2004; Fagan and Rubery 2018), not only addressing the equal treatment of women but also improving working conditions in NSERs. So far,

only a few studies have explored the relationship between these regulations and labour market segmentation (Deakin 2013; Dingeldey and Gerlitz 2022).

Furthermore, many studies that investigate the "flexibilization" of employment law are limited to temporary employment. This focus is partly chosen in order to demonstrate that temporary employment can only be lowered through a deregulation of the SER (Eichhorst, Marx and Wehner 2017) – mostly ignoring part-time employment and self-employment as dominant elements within the segmentation pattern by gender (Deakin 2013). Hence, many studies on European employment policies and their impact discuss the exclusive function of the SER (Mückenberger and Deakin 1989), which implies that full employment and social protection are only provided to those who comply, for example, with the full-time norm. This exclusive function may be intensified by the male breadwinner model, which is still inherent in some welfare state institutions and policies, to the extent that women – especially mothers – are marginalized.[1] However, these studies lack a detailed analysis of employment law across space and time to explain labour market segmentation.

To bring together and extend these different research strands, we consider whether and how different functions of labour law influence de facto labour market segmentation in "Greater Europe",[2] and whether this influence differs by gender. We draw on the concept of legal segmentation, which distinguishes between standard-setting (protective), privileging and equalizing functions (Dingeldey et al. 2020), and use the newly compiled Worlds of Labour dataset,[3] which comprises indicators from the Cambridge Centre for Business Research Labour Regulation Index (CBR-LRI) (Adams et al. 2017) and our own indicators (see Mückenberger and Dingeldey 2022). The application of fixed effects regressions on (gendered) employment rates extracted from the European Union Labour Force Survey (EU-LFS)[4] allows us to measure the impact of single functions of employment law and their interactions on employment and labour market segmentation. We are particularly interested in how they influence inclusion in, or exclusion from, the SER, with particular emphasis on gender differences. To capture the complexity of de facto labour market segmentation, we use the level of dependent employment as an indicator of labour market inclusion, study gender differences in standard employment (permanent and full-time), non-standard forms of employment (temporary and part-time – albeit aggregated) and among the most vulnerable group of employees – temporary, part-time employees.[5]

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[1] See, for example, Fagan and Rubery (2018), studies concerning the increase of part-time work (Fagan, O'Reilly and Rubery 2018) and changing employment patterns according to gender in the European Union's Member States (Lewis, Campbell and Huerta 2008).

[2] In order to give a fuller picture of Europe, we included not only European Union Member States (in 2013), but also the larger countries of the European Economic Zone that make up the European Free Trade Association.

[3] Heiner Fechner, "Worlds of Labour Dataset on Legal Segmentation in Labour Legislation: Version 01" (Bremen: Socium SFB 1342, forthcoming).

[4] See https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey.

[5] Our understanding of de facto labour market segmentation is related to a definition in Deakin (2013, 1), which states that segmentation occurs "when the labour market is divided or structured in a way which is reflected in the forms taken by the employment relationship or contract".

The remainder of the article is structured as follows. The second section provides a brief overview of the state of research. We lay out our theoretical assumptions and hypotheses for empirical research in the third section and describe our variables, data and methods in the fourth. The fifth section presents our results and the final section sets out our conclusions regarding the effects of legal segmentation on de facto labour market segmentation in Europe.

2. Controversies about development and the impact of employment law

In the past decade, when socio-economic labour market scholars identified a segmentation of labour markets, they saw labour market regulation as one causal factor among others. This led to the analysis of structural developments such as feminization, tertiarization and globalization, but also of particular social policy institutions, the strategies of collective actors and power relations (Palier and Thelen 2010; Emmenegger et al. 2012; Kinderman 2017). Orthodox mainstream economists supported the idea that, by and large, employment law favoured insiders over outsiders (Botero et al. 2004) and therefore demanded a more comprehensive deregulation in the name of social justice (Bentolila, Dolado and Jimeno 2019). Other economists, however, objected to this understanding and highlighted the cohesive power of labour institutions, including collective bargaining and trade unions for social inclusion (Freeman 2005).[6] Again, many other studies refuted the link between employment law and the overall level of employment (Howell et al. 2007). Some explicitly argued that strict employment protection, or its increase, does not necessarily have a negative impact on employment levels (Deakin and Sarkar 2008; ILO 2015, 111–129) and that flexibilization of employment law does not result in a period of renewed employment growth (Heyes and Lewis 2014; Avdagic 2015; Piasna and Myant 2017).

Connected to this discourse, research that used employment protection law indicators to explain labour market segmentation gained momentum. However, even comparative labour law research has hitherto mainly concentrated (whether positively or negatively) on the protective function of employment law, ignoring the multiple facets of its regulatory elements. Thus, legal changes at the national level – often induced by European anti-discrimination policies – are not sufficiently reflected. Moreover, this particular strand of research has hardly touched on the role of employment law in gendered labour market segmentation. Labour market structures are often modelled rather simply, using temporary employment as the only form of NSER (Barbieri and Cutuli 2016; Gebel and Giesecke 2016; Eichhorst, Marx and Wehner 2017). Overall, there is no evidence that strict regulation of permanent employment results in a higher share of temporary contracts (Myant and Brandhuber 2017). Lowering the protection of permanent jobs decreases the risk of having a temporary job only in the case of young workers (Gebel and Giesecke 2016). Moreover, results are

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[6] For further discussion, see Rubery and Piasna (2017).

rather consensual in indicating that the facilitation of the regulation of temporary jobs increases their use (OECD 2013, 65–126).

The complexity of labour market segmentation has been discussed within other strands of research, particularly in the feminist literature (see, for example, Fagan and Rubery 1996; Lewis, Campbell and Huerta 2008; Rubery et al. 1998). These strands highlight the impact of the institutional settings of different types of welfare states – namely, in terms of tax or contribution-based social security systems, the extent of childcare provision and individual or joint tax systems (Dingeldey 2001; Pascall and Lewis 2004) – but also of cultural values on country-specific differences in employment patterns (Pfau-Effinger 2005). The resultant variation offers little evidence of a convergence towards the dual full-time worker family model in Europe. This model only prevails in Central and Eastern Europe, Cyprus, Finland and Portugal, whereas in the other Nordic countries, France and the United Kingdom, most women in couple households work part-time, establishing the dominance of a modified male breadwinner model. In the other continental European countries and Ireland, we find almost equal shares of the dual full-time worker household, the modified male breadwinner and the traditional male breadwinner models (Sánchez-Mira and O'Reilly 2019). The impact of employment law on employment patterns is not clear, beyond the general critique that the SER tends to exclude women – especially mothers – and other marginal groups from the labour market (Mückenberger and Deakin 1989; Mückenberger and Dingeldey 2022; Fudge and Vosko 2001). In order to back up the statement concerning the exclusion of women and mothers with empirical evidence and explore gendered labour market segmentation, the effect of employment law still has to be examined.

Overall, there is a research gap as regards understanding the various facets of employment law when explaining labour market segmentation. Moreover, there is a need to capture the complexity of labour market segmentation analytically by looking at different forms of employment and gender differences.

3. Theory and hypotheses

In contrast to unidimensional approaches that are limited to employment protection, the legal segmentation approach identifies three distinct functions of individual employment law that have segmenting effects (see Dingeldey et al. 2020; Mückenberger and Dingeldey 2022). The *standard-setting function* represents the employment protection level and is captured by legal norms that regulate dismissal and working time; its segmenting effect arises from the inclusion of those who qualify as employees and the exclusion of those who do not (for example, unpaid care workers and bogus self-employed workers). Within the population of employees, the *privileging function* is reflected in the active legal promotion of specific groups through (higher) employment protection based on seniority or firm size, among other factors. In the event of dismissal, for instance, long-term employees may be given longer notice periods or larger severance payments than more recent recruits. In contrast, the *equalizing function* encompasses legal constraints that react to existing mar-

ket inequalities. These inequalities may be based on personal characteristics, such as discrimination against women and minorities, or on contract-related factors, such as a less favourable treatment within NSERs, in which we include temporary and part-time employment, as well as self-employment. In both person-related and contract-related discrimination, equalizing regulations aim to level out unequal conditions, mostly with reference to the well-protected, mainly male, SER.

We apply two theoretical approaches to explain labour market segmentation. The two approaches are based on rather different ways of understanding the functioning and relevance of employment law in terms of de facto labour market structures. However, neither strand has a fully developed understanding of employment law as being multi-faceted, as suggested by the concept of legal segmentation. We combine the two concepts to formulate a set of hypotheses that differentiate the effects of the three functions of employment law on de facto labour market segmentation.

According to mainstream economists and the insider–outsider theory, labour market segmentation is a result of institutional constraints (Botero et al. 2004), among which employment protection – in our terminology, the standard-setting function – is argued to increase labour costs for employers when forecasting possible firing costs. Accordingly, strict employment protection of SERs supposedly reduces the demand for employment in core sectors and favours less protected forms of employment or increases unemployment. We may thus deduce that:

strict legal protection (high standard-setting) explains:

- *(H_{1a}) a low level of dependent employment and (H_{1b}) relatively high shares of NSERs.*

Deakin's (2013) more complex understanding of legal protection addresses what we call legal segmentation. He states that segmentation arises from the tendency of employment law to superimpose a set of status-based distinctions on work relations (SER theory). These legal taxonomies, which partition and stratify the workforce, are in part a response to external economic and political factors and in part internally generated by complex and multifunctional modes of regulation that characterize employment law systems (Deakin 2013). This is in line with Mückenberger and Dingeldey's (2022) statement that the emergence and dominance of SERs generate a type of legal segmentation that is not occasional, but rather systemic. The privileging function of employment law in the concept of legal segmentation refers to the selective provision of protection for some workers while excluding others. Typically, this applies to norms such as graded redundancy protection according to length of service. Thus, the creation of status-based distinctions automatically implies differential treatment between those segments of the labour market that hold the status (insiders) and those that do not (outsiders) (Mückenberger and Dingeldey 2022).

Institutional segmentation theory stresses that selectivity in different labour market segments is linked to the socio-economic characteristics of workers influencing employers' selection of employees (Rubery and Piasna 2016). The criticism of feminist scholars is that the SER itself generates status-based distinctions: women with care responsibilities cannot conform with the permanent

full-time employment norm when "familizing" policies[7] coupled with the male breadwinner model prevail. Thus, they are excluded from the SER and (self-) selected into less protected labour market segments, or they do not participate in the labour market at all. Other divisions may occur related to age or migrant status. Combining these theoretical assumptions, we may deduce that:

a strong privileging function promotes:

- *(H_{2a}) high shares of men in dependent employment – (H_{2b}) especially within the SER*
- *(H_{2c}) low shares of women in dependent employment – (H_{2d}) especially within the SER*
- *(H_{2e}) generally high shares of NSERs*
- *(H_{2f}) all of the above, even more strongly when combined with high standard-setting.*

Furthermore, institutional segmentation theory emphasizes that anti-discrimination legislation can provide important protection against exclusion and marginalization. Hence, "groups that stand to benefit the most from regulated access to employment are those with protected characteristics who might otherwise face discrimination" (Rubery and Piasna 2016, 20). Moreover, it is assumed that the regulation of non-standard employment by demanding equivalent or pro rata treatment between temporary or part-time workers and permanent, full-time workers indirectly validates, and thereby protects, the core SER concept (Vosko 2010; Rogowski 2013). Regulation of non-standard employment and gender-equalizing policies are reflected in the equalizing function of employment law. Accordingly, we deduce that:

strong equalizing regulation:

- *(H_{3a}) decreases the share of NSERs in general*
- *(H_{3b}) decreases the overrepresentation of women in NSERs*
- *(H_{3c}) increases the share of women in standard forms of employment.*

Our approach contributes to the existing research on the effects of employment regulation on the labour market and thus clearly focuses on one direction of causation. This does not mean that we negate the influence that labour markets have on employment regulation: the conception of the equalizing function as relating to norms that react to existing inequalities implies that society and social change impact law as well. However, law intends to influence the behaviour of actors, and we are interested in how these three functions shape employment patterns.

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[7] Familizing policies place the responsibility for childcare on private households, for example, by establishing relatively long periods of parental leave and providing inadequate formal childcare.

4. Operationalization of variables, data and methods

Labour market segmentation – our *explicandum* – is measured as defined by Deakin (2013) in the context of industrialized countries (ignoring informal employment) using a contract–spatial concept. In this context, the SER (Mückenberger and Deakin 1989) is at the centre of the labour market, while NSERs, such as temporary and part-time employment, constitute semi-peripheral labour market positions.[8] The underlying assumptions are that the level of precariousness rises as divergence from the SER grows because disadvantages accumulate, and that the security of having a permanent job is more advantageous than full-time employment. The most peripheral position is that of non-employment, reflected in unemployment and (formal) inactivity, which can be perceived as the explicit and silent labour market reserve (see figure 1); however, in our analysis we do not distinguish between the two.

Consequently, our dependent variables are employment rates across gender and different forms of employment. First, to analyse the exclusive effect of employment law, we looked at the overall level of dependent employment. Second, the impact of legal segmentation was captured by SERs, overall NSERs

Figure 1. Contract–spatial concept of labour market segmentation
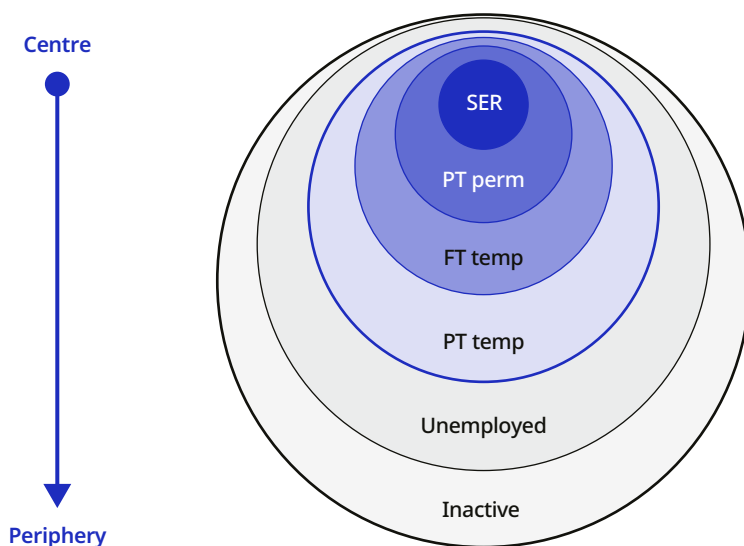
Notes: SER = standard employment relationship, PT = part-time, FT = full-time, temp = temporary, perm = permanent.
Source: Authors' own design.

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[8] Self-employment is a particular category within labour market segmentation, as it includes both precarious and the most privileged forms of work beyond dependent employment. Our analysis found no significant effect of labour law on the share of self-employment and the latter is not considered in this article.

and temporary part-time employment – the polar opposite of the SER among all forms of dependent employment. To capture gender effects, we looked at total rates as well as rates differentiated for men and women. All employment rates relate to the whole working-age population (18–64 years) and are based on the European Union Labour Force Survey (EU-LFS) 2017 and its categorization of different forms of employment.

Legal segmentation – our *explicans* – was incorporated by the standard-setting, privileging and equalizing functions of employment law identified by Dingeldey et al. (2020). The three functions were measured by 35 indicators – 23 from the CBR-LRI 2017 (Adams et al. 2017)[9] and 12 collected by the Worlds of Labour project[10]– according to a measurement concept presented in detail in Dingeldey et al. (2020) and an index calculation method presented in Dingeldey et al. (2021). Index values range from 0 to 1, where 0 constitutes the minimum (that is, absence) and 1 the maximum levels of standard-setting, privileging and equalizing, respectively. Standard-setting was captured by indicators such as the maximum daily working time and the application of a legally mandated notice period; privileging by indicators such as the use of seniority as a decisive selection criterion in case of redundancy, and the application of minimum qualifying periods for dismissal protection; and equalizing by indicators such as equal access to work for men and women and the equal treatment of part-time workers.

We performed descriptive and multivariate analyses at the country level. The former were cross-sectional analyses for the year 2013 and served an illustrative purpose, showing the distribution of employment rates and functions, and providing a first impression of correlations between the two. For the multivariate analysis, we used fixed effects panel regressions to investigate causal effects of the three functions of employment law on the respective employment rates. For 7 of our 12 dependent variables (the overall employment rate, and the male and female standard employment, non-standard employment and temporary part-time employment rates) the robust Hausman test (Schaffer and Stillman 2006) advised against the use of the more efficient random effects models (that is, those with a smaller variance). Thus, to be consistent, we used fixed effects in all cases. Here, we also looked into interactions between the three functions, applying the double-demeaning approach for fixed effects models suggested by Giesselmann and Schmidt-Catran (2022). Fixed effects models are superior to descriptive bivariate analysis and to cross-sectional regressions because, in contrast to the latter, coefficients are based on within(-case) and not between(-case) estimation, thus controlling for unobserved heterogeneity of time-invariant characteristics. Instead of more ambitious approaches, such as those used in pseudo-panel analysis (see Barbieri and Cutuli 2016; Biegert 2017), we stayed at the country level.[11]

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[9] Zoe Adams, Louise Bishop and Simon Deakin, "CBR Labour Regulation Index (Dataset of 117 Countries)", in Simon Deakin, John Armour and Mathias Siems, eds. *CBR Leximetric Datasets [updated]* dataset (2017). https://doi.org/10.17863/CAM.9130.

[10] See note 3.

[11] To obtain reliable fixed effects estimates, dependent and independent indicators should be on the same level (Wooldridge 2013).

While fixed effects take care of unobserved heterogeneity, spurious correlation might spring from unobserved time-variant characteristics. Thus, in the multivariate analysis, we controlled for various covariates that might have an effect on employment and, to a great extent, we follow Biegert's (2017) operationalization of central welfare state characteristics as well as the debate on institutional segmentation and gendering effects (see sections 1 and 3). Economic performance and the business cycle were accounted for by the GDP per capita[12] and the economic output gap.[13] Strategies to deal with unemployment were represented by public expenditure on active (training, employment services, job creation, employment and start-up incentives) and passive (income support, early retirement) labour market policies as percentages of GDP.[14] Regulations that specifically influence female labour market participation were incorporated by familizing (cash benefits) and de-familizing (in-kind benefits) policies as a percentage of GDP.[15] Furthermore, collective agreements that are strongly related to the SER and might have an impact on gendered employment were covered by the adjusted bargaining coverage rate.[16] Lastly, we controlled for the degree of decommodification by relating minimum income benefits – based on the Social Assistance and Minimum Income Protection Interim Dataset (SAMIP), provided as part of the Social Policy Indicators (SPIN) database (Nelson et al. 2020) – to the median equivalized income.[17] Where covariates were not available for each country-year, gaps were interpolated or extrapolated based on existing data. In addition, we controlled for time by including year dummies in the analysis.

Our analysis with regard to time and space was constrained by data availability. As regards time, data were left-censored by the availability of covariates – minimum income benefits are available from 1990 onwards. The data were right-censored by our *explicans* – CBR-LRI indicators cover the period from 1990 until 2013. As we applied a one-year time lag between independent (*explicans* and covariates) and dependent variables (*explicandum*) to strengthen the causal claim, our analysis covers employment information from 1991 to 2014. As regards space, descriptive analysis was based on 30 European countries.[18] In contrast, multivariate analysis was restricted to 22 countries (in bold) since

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[12] OECD, "Level of GDP Per Capita and Productivity", OECD.stat database. https://stats.oecd.org/Index.aspx?QueryId=54369.

[13] OECD, "Economic Outlook No 106 – November 2019: Output Gaps: Deviations of Actual GDP from Potential GDP as % of Potential GDP", OECD.stat database. https://stats.oecd.org/index.aspx?QueryId=51655#.

[14] OECD, "Public Spending on Labour Markets" (indicator), https://doi.org/10.1787/911b8753-en.

[15] OECD, "Family Benefits Public Spending" (indicator), https://doi.org/10.1787/8e8b3273-en.

[16] Jelle Visser, ICTWSS Database. Version 6.1. Amsterdam: Amsterdam Institute for Advanced Labour Studies (AIAS), University of Amsterdam. (November 2019). https://www.ictwss.org/downloads.

[17] Luxembourg Income Study (LIS), "LIS Inequality and Poverty Key Figures". http://www.lisdatacenter.org.

[18] **Austria**, **Belgium**, Bulgaria, Croatia, Cyprus, **Czechia**, **Denmark**, **Estonia**, **Finland**, **France**, **Germany**, **Greece**, Hungary, Iceland, **Ireland**, **Italy**, Latvia, **Lithuania**, **Luxembourg**, **Netherlands**, **Norway**, **Poland**, Portugal, Romania, **Slovakia**, **Slovenia**, **Spain**, **Sweden**, **Switzerland**, **United Kingdom**.

covariates (business cycle, family policies and bargaining coverage) were missing for the other countries. The estimates are based on an unbalanced panel (not all countries had information for all years) that consists of 448 country-years in total.

5. Findings
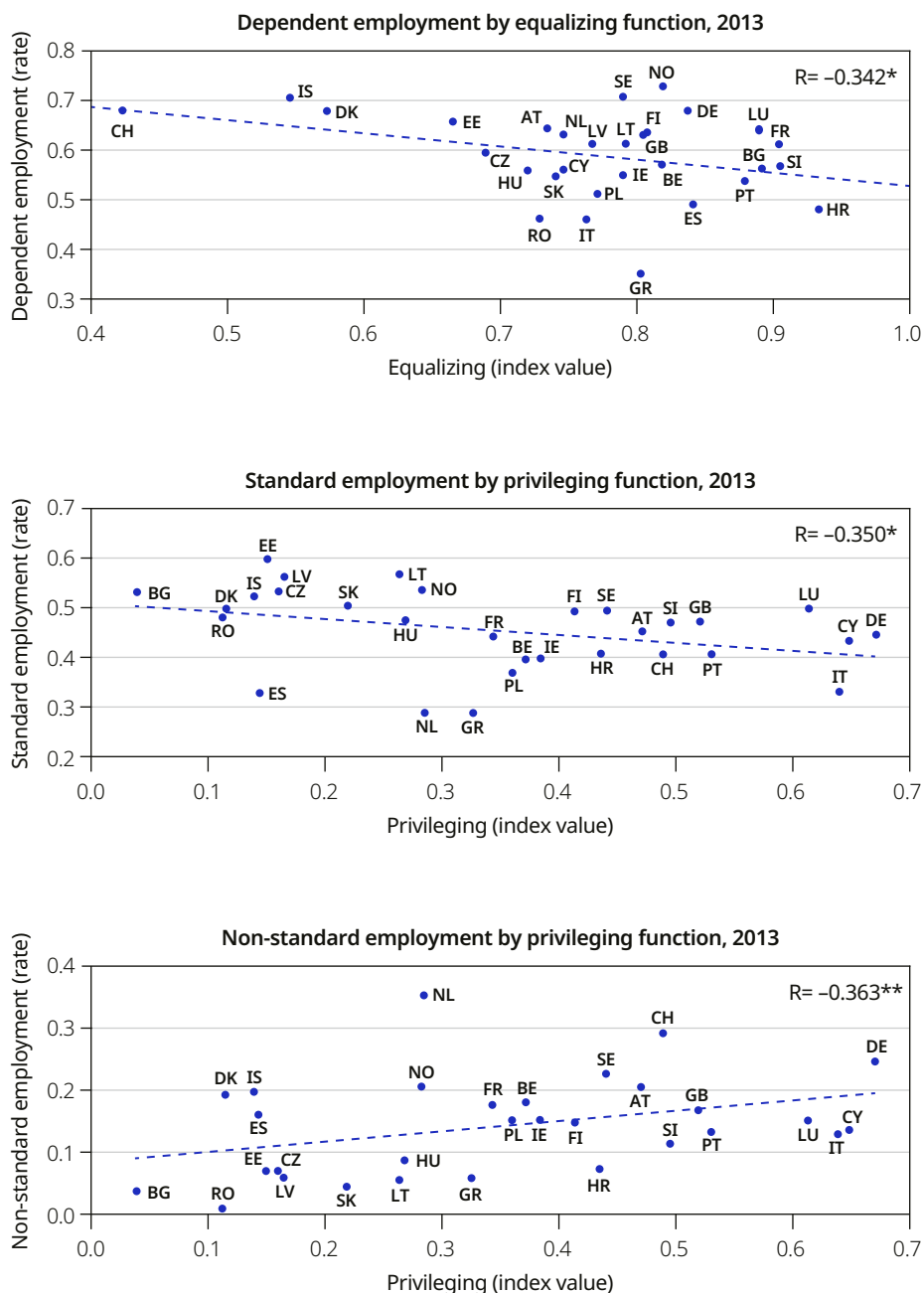
5.1. Descriptive analysis

While the descriptive analyses primarily serve an illustrative function, they nevertheless seem to support some of our central hypotheses. Our caution regarding the findings of this section stems, on the one hand, from the relatively low number of cases in our data and, on the other, from the risk that correlations observed in bivariate, cross-sectional analysis might prove to be spurious when applying causal models in the next step. However, the results indicate that the three functions of employment law influence employment quite differently, and that legal segmentation does indeed affect the segmentation of labour markets.

In this study, we refrained from a differentiation by gender and limited our analysis to employment rates for the whole working-age population. Most of the bivariate correlations were non-significant – including the correlation between standard-setting and overall employment, refuting hypothesis H_{1a} (the assumption that employment protection hinders employment). However, we found two correlations at the 10 per cent significance level and one at the 5 per cent significance level, as reported in figure 2. In the scatter plots, the privileging function can be observed to have a negative effect on the SER, while at the same time having a positive effect on non-standard employment. These two findings support H_{2e}, suggesting that privileging indeed has a segmenting function on the labour market, limiting jobs that enjoy strong protection and fostering the creation of more precarious jobs. This context might result in employment patterns coupling male breadwinners in SERs with women in part-time employment. Furthermore, we can observe a negative relationship between the equalizing function and dependent employment, suggesting that it is the equal treatment of NSERs and SERs that decreases job availability.

5.2. Multivariate analysis

The results of the multivariate fixed effects models confirm our basic assumptions. Table 1 provides an overview of the hypothesized and observed effects of the three functions on different forms of employment. First, the three functions of employment law have quite different effects on labour market segmentation – that is, on the shares of standard and non-standard employment. Second, they have quite different effects on the male and female shares of the working-age population. And third, especially high privileging in combination with high standard-setting fosters the presence of men in standard employment and women in non-standard employment. We will now elaborate on these findings.

Figure 2. Bivariate correlations between functions of employment law and employment rates, 2013

Dependent employment by equalizing function, 2013

Standard employment by privileging function, 2013

Non-standard employment by privileging function, 2013

* and ** indicate statistical significance at the 10 and 5 per cent levels, respectively.

Notes: N = 30; bivariate correlation coefficients; depicted country codes = ISO 3166-1 alpha-2.

Source: Authors' calculations based on data from the Worlds of Labour Dataset, CBR-LRI and EU-LFS.

Table 1. Expected and observed effects of the three functions of employment law on employment

Functions	Hypotheses			Findings		
	All	Male	Female	All	Male	Female
	Dependent employment					
S	–	–	–			–
P		+	–		+	
E						
S&P		+	–		+	–
P&E						
S&E						
	Standard employment					
S	–	–	–	+	+	+
P		+	–			–
E	+		+			
S&P		+	–		+	
P&E						–
S&E				–		
	Non-standard employment					
S	+	+	+	–	–	–
P	+	+	+	+	+	+
E	–	–	–	+	+	
S&P	+	+	+	+		+
P&E						
S&E						

Notes: S = standard-setting; P = privileging; E = equalizing; & = interaction; + = positive effect; – = negative effect.
Source: Authors' compilation.

Figure 3 presents the effects of the three functions of employment law on dependent employment. The coefficient plot in the left panel depicts the effects on the whole working-age population, and on men and women separately, based on table A1 in the online supplement. For the whole population, none of the three functions has a significant effect (the lines representing the 95 per cent confidence interval touch the zero line); this reconfirms the finding that standard-setting – our term for employment protection – does not hinder overall employment (thus rejecting H_{1a}). However, analyses differentiated by gender show a negative effect of the standard-setting function on the dependent employment of women (thus partly confirming H_{1a}). Furthermore, we find a positive effect for the privileging function for men – confirming H_{2a}. Introducing interaction terms (see table A2 in the online supplement) shows that, for men, the positive effect of privileging slightly increases when standard-setting rises, while for women the negative effect of standard-setting increases with privileging (both confirming H_{2f}); the contour plot in the right panel of figure 3 indicates that female employment decreases when standard-setting and privileging increase.

Figure 3. Fixed effects models: Effects of the three functions of employment law on dependent employment – Coefficients and interactions
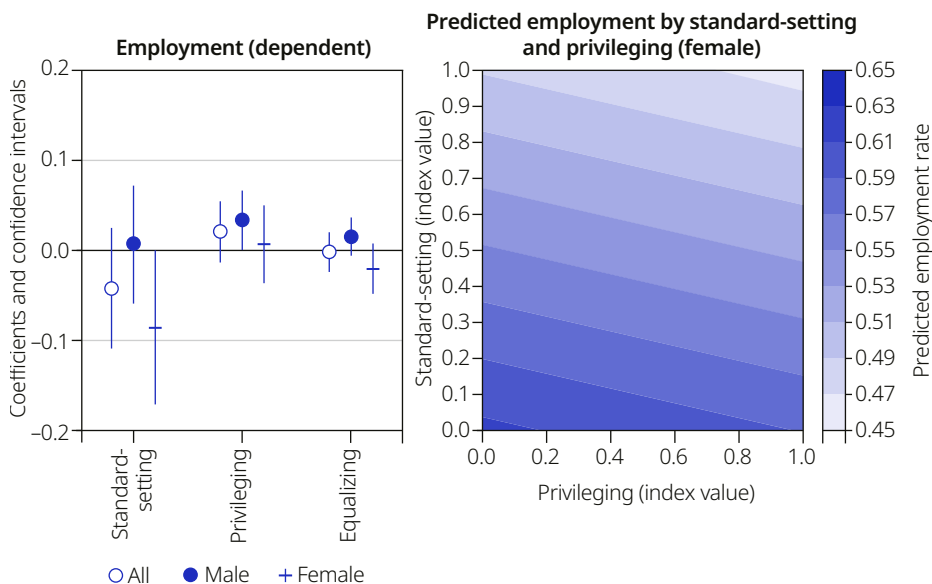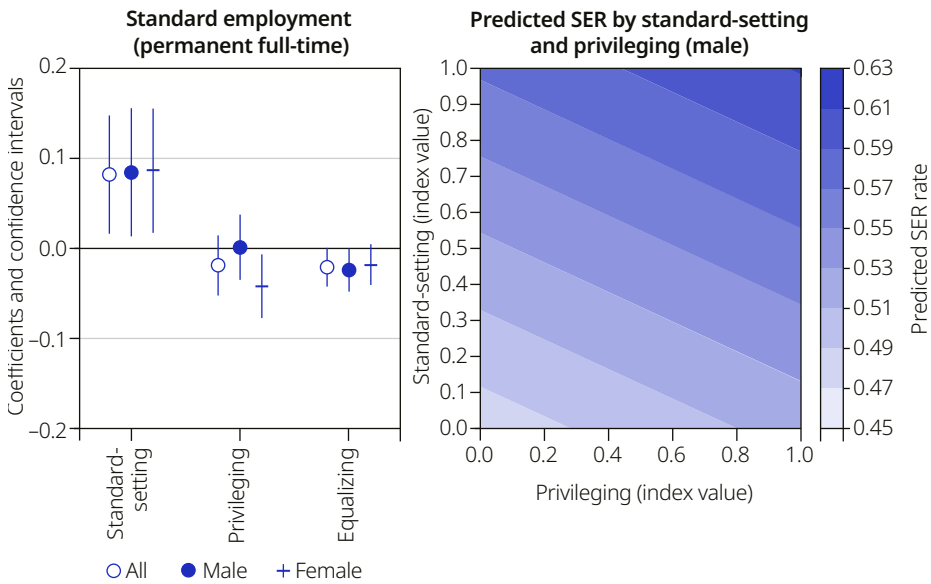

Notes: N = 448 country-years/22 countries; fixed effects estimators.

Source: Authors' calculations based on data from the Worlds of Labour Dataset, CBR-LRI, EU-LFS, OECD.stat, SAMIP and LIS.

The left panel in figure 4 shows the coefficients of the three functions for the SER (for the whole model, see table A3 in the online supplement). We can observe a positive effect of standard-setting on SERs for the whole working-age population, and for men and women alike. Women's SER rate is negatively affected by privileging – confirming H_{2d}. When considering interactions between the three functions (see table A4 in the supplement), for men, the effect of standard-setting becomes stronger with growing privileging (confirming H_{2f}; see also right panel of figure 4), and weaker with growing equalizing; male standard employment is apparently affected differently by privileging and the equalizing of non-standard employment. For women, the negative effect of privileging on the SER rate is reinforced with increasing equalizing (partly refuting H_{3c}). Here, the favourable conditions within the SER, coupled with more comparable working conditions for NSERs, seem to foster the "modernized" male breadwinner model that incentivizes women to take up non-standard work in order to reconcile labour market integration and care.

Results for all non-standards forms of employment combined are presented in figure 5. The left panel (based on analysis in table A5 in the online supplement) shows a negative effect of standard-setting on non-standard employment (the counterpart to the positive effect on standard employment) – rejecting H_{1b}. High labour standards seem to provide negative incentives for entering NSERs. In contrast, privileging seems to have a positive effect – for the whole population, and for men and women alike – confirming H_{2e} and demonstrating the segmenting effect of this function.

Figure 4. Fixed effects models: Effects of the three functions of employment law on standard employment – Coefficients and interactions

Notes: N = 448 country-years/22 countries; fixed effects estimators.

Source: Authors' calculations based on data from the Worlds of Labour Dataset, CBR-LRI, EU-LFS, OECD.stat, SAMIP and LIS.

Figure 5. Fixed effects models: Effects of the three functions of employment law on non-standard employment – Coefficients and interactions
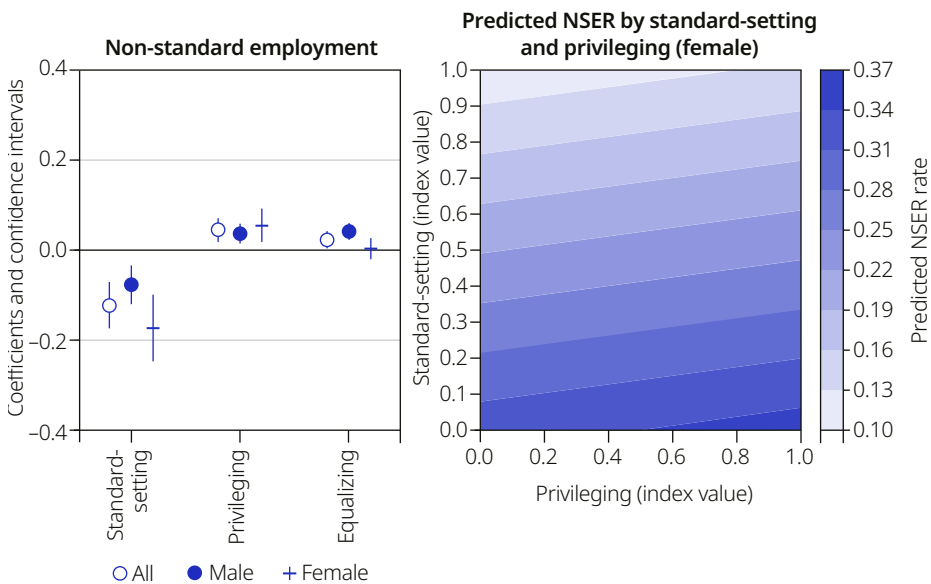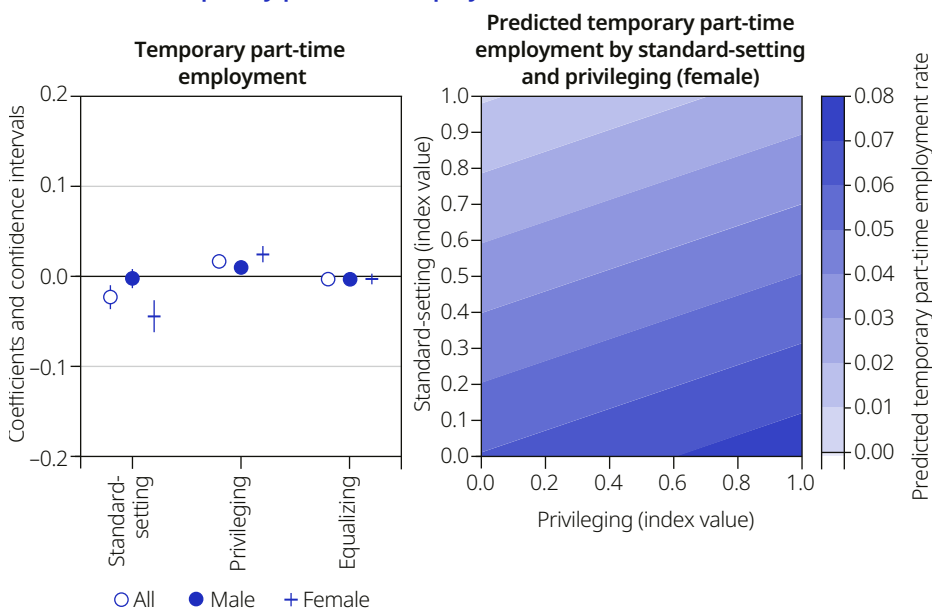

Notes: N = 448 country-years/22 countries; fixed effects estimators.

Source: Authors' calculations based on data from the Worlds of Labour Dataset, CBR-LRI, EU-LFS, OECD.stat, SAMIP and LIS.

This clearly indicates that two functions that are central to the constitution of the SER actually have contradicting impacts on employment – something that is not dealt with by unidimensional operationalizations of employment protection. Furthermore, the positive effect of equalizing on NSERs that can be observed for the whole population apparently stems from the male population alone. The introduction of interaction terms (see table A6 in the online supplement) reveals that the negative effect of standard-setting on NSERs decreases as privileging increases. This interaction stems from the female population, among whom this effect is particularly strong (see also right panel of figure 5). This again indicates that it is especially the privileging function that supports the SER for men, in combination with female non-standard employment (indirectly supporting H_{2d} and H_{2f}), thus promoting the modernized male breadwinner model.

Lastly, we turn to the margins of the active labour market: temporary part-time employment. While this accounts for a fairly small group, the findings are nevertheless strong (see figure 6). In the left panel, we observe that standard-setting has a negative effect on this most precarious form of formal dependent employment, which is solely accounted for by the female population, thus partly refuting H_{1b}. Furthermore, a positive effect of privileging for the whole population and men and women alike (though stronger for the latter – see also table A7 in the online supplement) reconfirms H_{2e}. Introducing interactions (see table A8 in the supplement) reveals that the negative effect of standard-setting

Figure 6. Fixed effects models: Effects of the three functions of employment law on temporary part-time employment – Coefficients and interactions

Notes: N = 448 country-years/22 countries; fixed effects estimators.

Source: Authors' calculations based on data from the Worlds of Labour Dataset, CBR-LRI, EU-LFS, OECD.stat, SAMIP and LIS.

decreases when privileging increases – something that can be observed for men and women alike (for the latter, see right panel of figure 6). This again makes it clear that privileging undermines the impact of strong employment standards for the entire working population, resulting in strong exclusive effects. It caters to a group of (male) employees who enjoy the full protection of the SER while supporting many others – often women – in highly precarious positions, such as temporary part-time employment (supporting H_{2f}).

6. Conclusion

This article has sought to shed light on the questions of whether and how the development of different functions of individual employment law influence de facto labour market segmentation in Europe, and whether there are gender differences. To answer these questions, we aligned our approach of legal segmentation to existing theories and assumptions made by mainstream economics, the insider–outsider theory and the contesting assumptions made by the institutional segmentation theory. By differentiating between standard-setting, privileging and equalizing as distinct functions of employment regulation related to the SER, we have been able to show different effects on overall employment and de facto segmentation, namely in the share of men and women in different forms of employment – ranging from standard to non-standard employment.

On this basis, we can reject the thesis that strong standard-setting has a negative effect on the general employment level, although we have found a negative impact on female employment. This finding supports the general hypothesis that the privileging function – especially in combination with high labour standards – encourages permanent full-time work for male workers while increasing the share of women in NSERs and non-employment, thus marginalizing and excluding them. Accordingly, the respective combination of legal segmentation supports de facto labour market segmentation. In this context, the strong effects on female temporary part-time employment seem to be highly relevant – and provide evidence that legal segmentation in Europe still supports a male breadwinner model, albeit in a modified version, and female part-time employment. Moreover, our hypothesis that the equalizing function has a countervailing effect, increasing the share of women in full-time employment, is not supported. On the contrary, we have found that equalizing increases the share of NSERs among men, probably by making these forms of employment more attractive. This counterintuitive effect of the equalizing function might be explained by the fact that legal regulations are not able to counteract restrictions posed by limited full-time childcare facilities – but may possibly support non-traditional ideas and practice concerning the division of labour within families in the long run.

As regards the political agenda, we have shown that equalizing regulations indeed diminish labour market inequality (although not as expected), while privileging has strong marginalizing effects for women. Hence, legal protection should be as universal as possible. However, (gendered) employment and labour market segmentation have to be seen in a broader context, not only concerning individual employment law, but also collective labour rights, social protection,

and labour market and family policies. Institutionalist segmentation theory stresses that multiple factors lead to a differentiation of employment conditions, such as employers' decisions on production strategies, welfare state institutions and policies, institutions enabling female employment, values concerning the reconciliation of work and family, and the norm-based preferences of individuals.[19] Accordingly, political reforms have to take a holistic approach in order to tackle (gendered) labour market inequalities. This approach should, however, not neglect to make employment law more inclusive.

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[19] For an overview of different factions within this theory to explain gendered divisions of the labour market, see Grimshaw et al. (2017).

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