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**Emanuele FERRAGINA**
OSC, LIEPP
emanuele.ferragina@sciencespo.fr

**Federico Danilo FILETTI**
OSC, LIEPP
federico.filetti@sciencespo.fr

# *Eppur si muove*: labour market protection varieties and trajectories of change across 21 high-income countries and three decades[1,2]

Emanuele Ferragina (OSC-LIEPP)
Federico Danilo Filetti (OSC-LIEPP)

**Abstract**

*We compare labour market protection varieties and evaluate systematically trajectories of change across 21 high-income countries over three decades. Our measures – Principal Component Analysis and a new multidimensional indicator – deal with the average production worker assumption and allow us to assess countries' trajectories of change in relation to, and independently from, classic varieties. We find that in 1990 labour market protection varieties retrace mostly Esping-Andersen's worlds of welfare, and in 2015 the distinction between social democratic and Christian democratic regimes vanishes, while Mediterranean and liberal countries are grouped respectively more tightly. Moreover, despite the persistent difference between Coordinated (CMEs) and Liberal Market Economies (LMEs) in their labour market protection levels, a large majority of CMEs became more similar to LMEs, after their pursuit of liberalization and dualization trajectories. At the opposite, a handful of CMEs experienced an increase in labour market protection following flexicurity, de-dualization and higher protection trajectories. To help conceptualise the space where countries move, worlds of welfare, varieties of capitalism and the ideal typical trajectories developed in the literature are used to interpret labour market liberalization patterns; however, the trajectories we identify do not always conform to classic varieties and appear more varied than previously suggested.*

## Introduction

*Varieties of Capitalism* (VoC) and the *Three Worlds of Welfare Capitalism* (WoW) are classical frameworks[3] employed in political economy and social policy to compare, interpret and describe institutional varieties (Esping-Andersen, 1990; Estevez–Abe et al., 2001; Hall and Soskice, 2001). Several streams of literature highlighted how processes of change in the labour market – e.g. deregulation, re-commodification, activation, dualization and the advent of new social risks – have contributed to blur cross-national differences upon which these frameworks are based. More recent work carries forward some of their insights, identifying three trajectories of labour market liberalization rooted in classic varieties (Thelen, 2012; 2014).

Rather than assuming these trajectories are automatically rooted in classic varieties, our article presents a measurement of labour market protection that distinguishes levels of protection for permanent and temporary contracts, and evaluates systematically the trajectories of change across 21 high-income countries. We provide a holistic picture of labour market protection which analyses four institutional domains: employment protection, unemployment protection, income maintenance, and activation. Moreover, we consider changes in the workforce composition – unemployment rates, and share of permanent, temporary and involuntary part-time contracts – to move beyond the Average Production Worker (APW) assumption that is taken for granted in VoC and WoW. We employ a technique able to handle the multi-dimensional measurement of labour market protection, Principal Component Analysis (PCA), and develop a composite score which captures the characteristics and depth of labour market protection change across countries.

Our research questions proceed as follows: are VoC and WoW appropriate frameworks to compare each country's labour market protection in a context of widespread change? How can we characterise country's trajectories? To what degree do these trajectories reproduce classic varieties?

The remainder of the paper proceeds as follows. We first place our research questions within the literature and then describe our methodological approach. We conclude by discussing our findings and their implications.

### I.      Understanding varieties and trajectories of change

VoC and WoW classified high-income countries and compared cross-national differences in labour market protection (among other policy domains). However, both frameworks are insufficiently sensitive to population heterogeneity and, over time, change. There is a tension between the static notion of variety and the exploration of institutional change (Daly and Ferragina, 2018; Ferragina and Seeleib-Keiser, 2011). Although important contributions have bridged static and dynamic ways of looking at labour market evolution, we lack a systematic account that merges the two aspects in a large quantitative comparative study.[4]

VoC classified high-income countries in Coordinated (CMEs) and Liberal (LMEs) Market Economies, and connected the national competitive advantage to the prevalent mode of

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[3] For an integration of these typologies, see Schröder (2009).
[4] For an historical analysis based on a common theoretical framework and a series of case studies, see the seminal work by Streeck and Thelen (2005).

coordination between firms and various institutions (Hall and Soskice, 2001; Thelen, 2012). Accordingly, market forces did not lead countries to convergence, rather the interplay between firms and institutions produced two different varieties of capitalism: in CMEs there is a high degree of cooperation between firms and institutions, while in LMEs we observe low power-sharing relations and a lack of coordination between firms and institutional actors. Estevez-Abe et al. (2001) connected VoC to labour market protection reflecting on the skills formation process. This process, they argue, contributes to the national competitive advantage in the long-run, as employees' decision of skills investment relates to levels of labour market protection (employment, unemployment and wage protection). In CMEs, where firms base mostly their competitive advantage on the presence of (industry/firm) specific skills, workers require higher employment and/or unemployment protection to safeguard their investment in specific skills. In contrast, in LMEs, where firms base mostly their economic competitive advantage on general skills, employment and unemployment protection are less generous. In sum, the interaction between the national competitive advantage, that is the coordination between firms and institutions and individual incentives to invest in certain skills, shape labour market protection.

WoW suggests that welfare states in high-income countries cluster in three varieties – liberal, Christian-democratic and social democratic – grounded in the long-standing outcome of class conflict. Esping-Andersen employed the notion of decommodification – i.e. the capacity of pension, sickness and unemployment benefits to guarantee individuals and families with "a socially acceptable standard of living independently of market participation" (Esping-Andersen, 1990: 37) – and the ability of welfare states to reduce social stratification as measures of welfare state generosity. In the social democratic world universalism is prevalent and countries within it are characterised by a high decommodification capacity and low social stratification. In the Christian democratic world social insurance is prevalent and countries within it are characterised by a medium decommodification capacity and high social stratification. In the liberal world social assistance is prevalent and countries within it are characterised by a low decommodification capacity and high social stratification. This typology has been debated, criticised, re-assessed and extended over time (for a review, Art and Gelissen, 2002; Ferragina and Seeleib-Keiser, 2011; for an empirical assessment, Scruggs and Allan, 2006; for a feminist critique, Lewis, 1992; for a geographical extension, Castles and Mitchell, 1992). For the sake of our analysis – which also includes Greece, Spain and Portugal – we note that scholars theorised the existence of a Mediterranean cluster (Ferrera, 1996; Leibfried, 1992) distinguished from the Christian democratic world because of lower social protection levels, persistent clientelism and inadequate income assistance.

VoC and WoW assume that labour market protection – mainly through the analysis of skills formation and decommodification notions – is homogenous across the population, and measure it for the APW only (Clasen and Siegel, 2007). Another debated assumption is that cross-country differences are stable over time (on the issue of immobility in VoC, see Bruff and Horn, 2012; Crouch, 2005; Hanckè et al., 2013; Schneider and Paunescu, 2012; Hall and Thelen, 2008 for a response to this critique; see Hay and Wincott, 2012 for WoW). However, these two assumptions do not make sufficient account for the shift from the male-breadwinner to a variety of adult worker models (Daly, 2011); or the advent of a service-based economy (Jessop, 1993); or welfare state change in the form of recalibration and retrenchment (Hay and Wincott, 2012; Hemerijck, 2013; Pierson, 1994; 1996; Starke, 2006); or the growing divide between labour market 'insiders' and 'outsiders' (Emmenegger et al., 2012; Palier and Thelen,

2010; Rueda, 2005) and the rise of new social risks (NSRs) (Bonoli, 2005; Taylor-Gooby, 2004). Scholars suggested also that over the last decades labour market protection underwent a process of reform through deregulation (Harvey 2005), re-commodification (Neyer and Seeleib-Kaiser, 1995), recalibration of unemployment benefits and income maintenance schemes (Seeleib-Kaiser, 2002), and the shift from compensatory to active forms of protection (Bonoli, 2010). In CMEs, this process accelerated since the early 1990s – while it was already underway in LMEs in the 1980s – and, according to certain commentators, boosted a contingent convergence[5] (Hay, 2004).

Thelen (2012, 2014) bridged institutional varieties and accounts of change, and identified three typical trajectories of labour market liberalization rooted in classic institutional varieties. She argued that liberal countries (e.g. the US) followed a 'deregulation' strategy, which consisted in a classic form of liberalization that reduced social protection, dismantled the extent of residual coordination capacity between employers and the governments, and weakened trade unions. Christian democratic countries (e.g. Germany) followed a 'dualization' strategy, which entails the maintenance of strong protection and coordination levels for the core of the workforce and the unloading of liberalization costs onto the shoulders of labour market outsiders. Finally, social democratic countries (e.g. Denmark) followed an 'embedded flexibilization' strategy, which led to an adaptation to liberalization based on "supply side solidarity" and the collectivization of "risk by focusing resources on enabling society's most vulnerable to get and keep a job" (Thelen 2014: 15).

To complement these insights, we move beyond the APW assumption to analyse labour market protection varieties and whether they have changed over three decades to weaken the intertemporal validity of VoC and WoW. Moreover, we investigate through a multidimensional indicator the intensity and characteristics of labour market protection trajectories of change across countries, but do not assume that these trajectories are rooted in classical institutional varieties.

## II.    Data and methods

### II.1. Data

Our measure of labour market protection includes employment protection, unemployment protection, income maintenance, activation, and accounts for changes in the workforce composition. These dimensions repose simultaneously on VoC, WoW and concepts developed in the literature to describe labour market protection change, i.e., 'deregulation', 're-commodification', the shift from compensatory to active policies, 'new social risks' and 'dualization'.

First, during the 1990s the notion that deregulated markets adjust better to economic fluctuations and contribute to increasing employment levels became widespread in continental Europe (OECD, 1994). This fostered reform processes aimed at decreasing employees' protection against layoff, and fostered the decentralisation of wage bargaining systems (Esping-Andersen and Regini, 2000). We capture employment protection using the

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[5] See also Baccaro and Howell 2017.

Employment Protection Legislation (EPL) index for permanent and temporary contracts, the percentage of workers covered by collective bargaining agreements and union density.

Second, decommodification is a classical measure of welfare state generosity and unemployment protection. Its reverse, re-commodification (Neyer and Seeleib-Kaiser, 1995), suggests that reforms are making people more dependent on labour market participation than in the past, especially those who are unemployed and/or with low-income levels. We measure the level of unemployment protection with unemployment benefit replacement rates (as a share of the APW's previous wage), public spending for unemployment benefits and severance pay. We suggest that decommodification relates also to income maintenance, which is targeted to people who might not be eligible for unemployment benefits like the APW (e.g. atypical workers, long-term unemployed, people below the poverty line). We capture income maintenance with the adequacy of guaranteed minimum income benefits and public spending for income maintenance schemes.

Third, high-income countries witnessed a shift from compensatory to active forms of labour market protection (Bonoli 2010; van Vliet and Koster, 2011). Hence, we include a measure of public spending for Active Labour Market Programmes (ALMPs).

Fourth, taking stock of the critique to the APW assumption developed within NSRs and dualization literatures (Bonoli, 2005; Emmenegger et al., 2012; Taylor-Gooby, 2004), we integrate institutional dimensions and outcome indicators (the unemployment rates, the share of workers holding a permanent or temporary contract, and the share of workers involuntarily employed with a part-time contract – a proxy for bad quality jobs) to account for changes in the workforce composition since the 1990. Other scholars have employed outcome indicators in the regime debate (Ferragina et al., 2015). Table 1 lists all indicators and data sources.[6]

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[6] Missing data are imputed using the value of the closest year (Table 3A).

**Table 1. Description of the dimensions and indicators**

| Indicators | Source |
|---|---|
| **Employment Protection** | |
| 1 | Employment protection index for permanent contracts | OECD |
| 2 | Employment protection index for temporary contracts | OECD |
| 3 | Union density | OECD |
| 4 | Percentage of the workforce protected by a collective bargaining agreement | OECD |
| **Unemployment Protection** | |
| 5 | Unemployment benefit (average replacement rate of single and families) | Scruggs |
| 6 | Unemployment benefit spending (unemployment compensation/severance pay) | OECD |
| **Income Maintenance** | |
| 7 | Minimum income (average replacement rate of single and families) | OECD |
| 8 | Minimum income spending as a % of the GDP | OECD |
| **Activation** | |
| 9 | Active labour market policy spending as a % of the GDP | OECD |
| **Workforce Composition** | |
| 10 | Unemployment rate | OECD |
| 11 | Percentage of the workforce holding a permanent contract (dependent employment) | OECD |
| 12 | Percentage of the workforce holding a temporary contract (dependent employment) | OECD |
| 13 | Workers holding an involuntary part-time contract as a % of total employment | OECD |

Note: OECD = OECD (2019a, 2019b); Scruggs = Scruggs et al. (2017).

## II.2. Methods

We employ PCA because it is suited to handle our multidimensional measurement of labour market protection (Jollife, 2002; Ferragina et al., 2013). In order to investigate the inter-temporal validity of classic varieties and observe if countries depart from their cluster, we make the assumption *a priori* that countries belong to WoW typologies. Hence, Denmark, Finland, Norway and Sweden are assigned to the social democratic group; Austria, Belgium, France, Germany, the Netherlands and Switzerland to the Christian democratic group; Greece, Italy, Portugal and Spain to the Mediterranean group; and Australia, Canada, Ireland, Japan[7], New Zealand, the UK and the US to the liberal group.

PCA creates uncorrelated dimensions, the Principal Components (PCs), that are linear combinations of the indicators employed for the analyses. The PC are sorted in descending order according to the share of information they explain. The first PC provides more information than the second PC, and the portion of information decreases with each successive PC until it becomes negligible. Our bi-plots are based on the first two PCs. Each indicator contributes to the definition of the two axes of our bi-plots (the two first PCs) according to a correlation index that ranges from -1 to +1. Countries with high (positive or negative) values for the indicators that are strongly correlated with the two PCs are positioned at the extremities of the bi-plot, while those with values close to the average of the distribution are placed nearby

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[7] Japan is a hybrid case (Christian-Democratic/Liberal, see Esping-Andersen, 1997). However, following Estevez-Abe et al., we consider Japan among the CMEs in the subsequent analysis although classifying it among the liberals in terms of labour market protection.

the origin. The interpretation of the Cartesian space is based on a holistic reading of our indicators[8] and helps us to evaluate the heuristic power of previous theorizations.

We constructed also a composite score to evaluate labour market protection variation because country's movements within the PCAs do not represent the exact amount of change in deregulation, re-commodification, activation, and labour market outcomes. This is because the definition of the axes and spaces changes slightly over time. Hence, our composite score helps us to evaluate the depth and characteristics of countries' trajectories independently from classic varieties. We focus on CMEs only because LMEs changed significantly their labour market protection – undertaking a liberalization trajectory – before the 1990 composite score. They display negligible movements between the 1990 and 2015 in comparison to CMEs.

We measured and characterised countries' trajectories in four steps.

First, we calculated for each indicator the distance – measured as the number of relative standard deviations – between the country values in 1990 and 2015 and the value of the US in 1990. We employed labour market protection in the US as benchmark, because it was among the first countries that liberalised labour market protection and, for this reason, it displayed the lowest level of protection in 1990. This benchmark allows us to standardise the variation of different indicators.

Second, we calculated the difference between each relative distance in 2015 and in 1990, obtaining a series of sub-scores. If the variation of the relative distance is positive, the country observed an increase in the labour market protection dimension in 2015. Conversely, if the country displays a negative score, the generosity of the labour market protection dimension diminished. These two steps can be formalised as follows:

$$Sub\text{-}score_{c,i} = \frac{X_{c,i,2015} - X_{US,i,1990}}{X_{US,i,1990}} - \frac{X_{c,i,1990} - X_{US,i,1990}}{X_{US,i,1990}}$$

Where $X$ is the value of the country $c$, for the indicator $i$ in 1990 or 2015.

Since our dimensions[9] include multiple indicators, we averaged the values for the indicators contained in each dimension to calculate the sub-scores (Table 5). However, when defining the trajectories, we considered also every indicator (Table 6A). For example, comparing the change in the EPL for permanent and temporary workers allows us to distinguish between liberalization and dualization. We then constructed the sub-scores for our outcome indicators computing the relative deviation for each indicator between 1990 and 2015 according to the formula:

$$Sub\text{-}score_{c,i} = \frac{X_{c,i,2015} - X_{c,i,1990}}{X_{c,i,1990}}$$

Where X is the value of the country $c$ for the indicator $i$ in 1990 and 2015. A negative score depicts an overall deterioration of labour market outcomes (e.g. a reduction in the share of permanent contracts and an increase in the share of temporary and involuntary part-time contracts, and unemployed), while a positive score describes an improvement.

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[8] Figure 1A backs up our description.
[9] With the exception of activation.

Third, we averaged the sub-scores to compute the composite score:

*Labour market protection change score$_c$* $= \frac{\sum Sub-score_{c,d}}{5}$

Where *c* is the country and *d* the labour market protection dimension.

Fourth, we defined a series of trajectories in accordance with the different scores and expanding previous literature.

## III. Scrutinizing institutional varieties across space and time

The horizontal axis of our PCAs[10] is structured around the positive correlation between employment protection, unemployment protection, activation, the percentage of temporary contracts[11] and the first PC (Table 2). The horizontal axis echoes VoC: CMEs – which display the highest levels of employment protection, unemployment protection, activation and the highest share of temporary workers – are located at the right-hand side of the bi-plot, while LMEs – with lower values for these dimensions – stand on the left-hand side. The vertical axis is structured around the positive correlations between income maintenance, activation and the second PC[12] (Table 2). Therefore, countries with higher levels of solidarity, better-financed activation programmes and labour market outcomes (especially in 2015) tend to be close to the top, while those with lower levels of solidarity, cheaper activation programmes, and more deteriorated labour market outcomes are nearer the bottom. The vertical axis echoes WoW, distinguishing different levels of protection across countries. Overall, the bi-plot is similar to the space Thelen (2014:7) devised ideally to connect VoC with the liberalization processes. In the first quadrant we find countries with high levels of coordination and solidarity; in the second, those with low levels of coordination and high solidarity; in the third, those with low levels of coordination and low solidarity; and in the fourth, those with low levels of solidarity and high levels of coordination (Figure. 1).

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[10] In 1990, the first PC explains 29.38% of the total variance and the second PC 18.90% (48.28% in total); in 2015 the first PC explains 35.60% of total variance while the second PC 19.59% (55.19 in total).

[11] In particular, a positive correlation with EPL, coverage of collective bargaining agreements, unemployment benefit replacement rate and ALMP spending.

[12] However, the interpretation is less straightforward than for the horizontal axis. This is because the correlations between the second PC and some dimensions of Labour Market Protection has changed in intensity and direction overtime. In particular, unemployment protection is strongly and positively correlated to the second PC in 1990 but not in 2015; employment protection (union density and coverage of collective bargaining agreements in particular) is strongly and positively correlated to the second PC in 2015 but not in 1990; and the correlation with some indicators of the workforce composition changes polarity (Table 2).

**Table 2. Correlations between indicators, Principal Component 1 (PC1) and Principal Component 2 (PC2) in 1990 and 2015**

| Indicators | PC1 | | PC2 | |
|---|---|---|---|---|
| | 1990 | 2015 | 1990 | 2015 |
| **Employment protection** | | | | |
| Employment protection index for permanent contracts | **0.83** | **0.80** | -0.20 | 0.15 |
| Employment protection index for temporary contracts | **0.67** | **0.69** | **-0.31** | -0.09 |
| Union density | 0.09 | 0.17 | 0.23 | **0.71** |
| Percentage of the workforce protected by a collective bargaining agreement | **0.66** | **0.78** | -0.03 | **0.43** |
| **Unemployment protection** | | | | |
| Unemployment benefit replacement rate | **0.68** | **0.75** | 0.37 | 0.07 |
| Unemployment benefit spending as a % of the GDP | 0.26 | **0.63** | **0.65** | 0.01 |
| **Income maintenance** | | | | |
| Minimum income replacement rate | -0.13 | -0.09 | **0.75** | **0.56** |
| Minimum income spending as a % of the GDP | -0.05 | 0.04 | **0.57** | **0.38** |
| **Activation** | | | | |
| Active labour market policy spending as a % of the GDP | **0.47** | **0.48** | **0.56** | **0.73** |
| **Workforce Composition** | | | | |
| Unemployment rate | 0.19 | 0.54 | 0.18 | **-0.57** |
| Percentage of the workforce holding a permanent contract | **-0.83** | **-0.80** | 0.04 | 0.25 |
| Percentage of the workforce holding a temporary contract | **0.83** | **0.80** | -0.04 | -0.25 |
| Workers holding an involuntary part-time contract as a % of total employment | -0.22 | 0.30 | **0.68** | **-0.61** |
| **Explained variance (%)** | | 29.38 | 35.60 | 18.90 | 19.59 |
| **Explained variance (cumulative - %)** | | 29.38 | 35.60 | 48.28 | 55.19 |

Note: In **bold** the indicators more (positively or negatively) correlated with PC1 and PC2 in 1990 and 2015. Cumulative variances are computed for each year (1990 and 2015).

Source: Authors' elaboration from OECD (2019a, 2019b), Scruggs et al. (2017).

**Figure 1. Definition of axes and spaces**
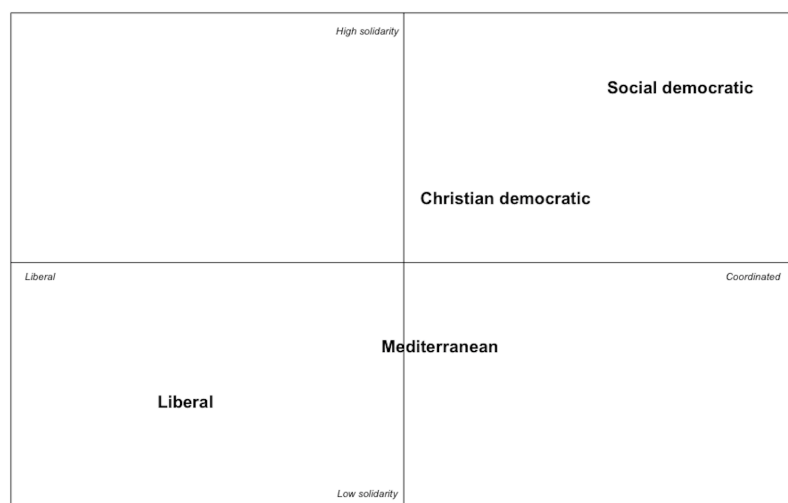


Note: Authors' elaboration.

### III.1. Clusters in the 1990

Social democratic countries – positioned in the first quadrant (with the exception of Finland) – had a strong labour market protection in all dimensions (Figure 2; Table 3) with high levels of solidarity and coordination.

Finland and Sweden were close to the horizontal axis, while Denmark and Norway were placed near the vertical axis. The position of Finland and Sweden is due to the strong employment protection for permanent contracts[13] and high shares of temporary workers; Sweden had also higher scores than the social democratic average for employment protection, unemployment protection and activation. Denmark had the highest level of income maintenance and, like Norway, was close to the Christian democratic average for most other indicators.

**Figure 2. Varieties of Labour Market Protection (1990-2015)**

**1990**
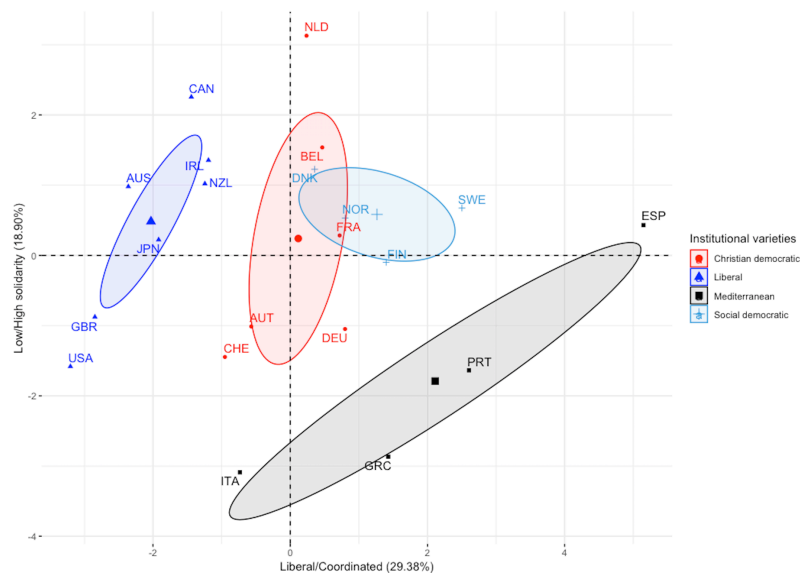


**2015**
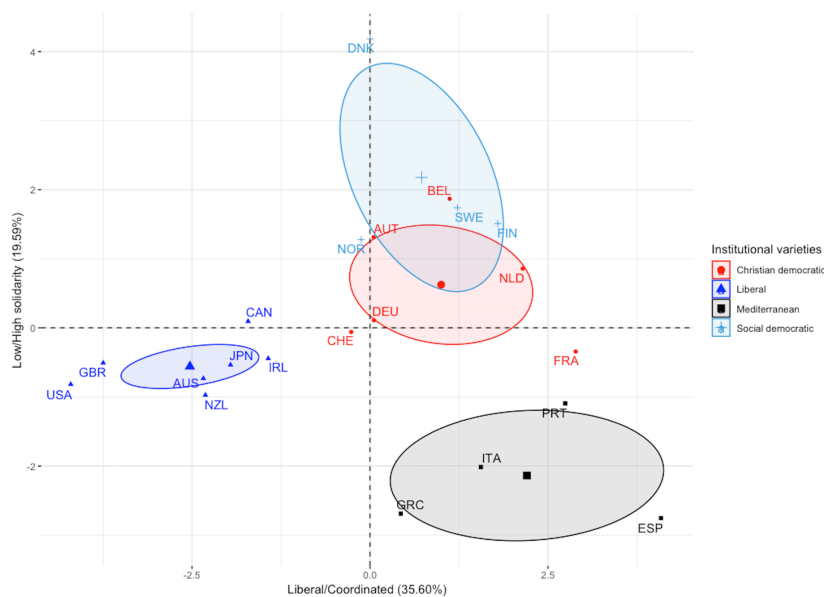


Source: Authors' elaboration from OECD (2019a, 2019b), Scruggs et al. (2017).

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[13] And also for temporary contracts in Sweden.

## Table 3. Indicators 1990

| Country | EPL Permanent | EPL Temporary | Union density | Collective bargaining | UB Replacement rate | UB Spending | MI Replacement rate | MI Spending | ALMP Spending | Unemployment rate | % Permanent | % Temporary | % Involuntary part-time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Social democratic** | | | | | | | | | | | | | |
| Denmark | 2.18 | 3.13 | 0.75 | 0.83 | 0.70 | 0 | 0.50 | 0.81 | 0.73 | 0.08 | 0.89 | 0.11 | 0.03 |
| Finland | 2.79 | 1.25 | 0.73 | 0.83 | 0.65 | 0.59 | 0.32 | 0.20 | 0.83 | 0.03 | 0.82 | 0.18 | 0.02 |
| Norway | 2.33 | 3.13 | 0.59 | 0.70 | 0.70 | 1.04 | 0.25 | 0.48 | 0.88 | 0.05 | 0.87 | 0.13 | 0.03 |
| Sweden | 2.80 | 4.08 | 0.82 | 0.91 | 0.86 | 0.74 | 0.25 | 0.31 | 1.55 | 0.02 | 0.85 | 0.15 | 0.02 |
| **Mean** | **2.53** | **2.90** | **0.72** | **0.82** | **0.73** | **0.59** | **0.33** | **0.45** | **1.00** | **0.05** | **0.86** | **0.14** | **0.03** |
| **Christian democratic** | | | | | | | | | | | | | |
| Austria | 2.75 | 1.31 | 0.47 | 0.98 | 0.60 | 0.73 | 0.30 | 0.12 | 0.31 | 0.04 | 0.94 | 0.06 | 0.01 |
| Belgium | 1.85 | 4.63 | 0.54 | 0.96 | 0.70 | 2.12 | 0.38 | 0.34 | 1.07 | 0.07 | 0.95 | 0.05 | 0.03 |
| France | 2.34 | 3.06 | 0.10 | 0.95 | 0.74 | 1.18 | 0.24 | 0.14 | 0.71 | 0.09 | 0.90 | 0.11 | 0.05 |
| Germany | 2.58 | 3.25 | 0.31 | 0.85 | 0.66 | 0.79 | 0.24 | 0.06 | 0.86 | 0.05 | 0.90 | 0.11 | 0.01 |
| Netherlands | 3.04 | 1.38 | 0.25 | 0.72 | 0.77 | 2.36 | 0.43 | 0.71 | 1.19 | 0.07 | 0.92 | 0.08 | 0.06 |
| Switzerland | 1.60 | 1.13 | 0.23 | 0.48 | 0.76 | 0.11 | 0.30 | 0.12 | 0.20 | 0.02 | 0.89 | 0.11 | 0 |
| **Mean** | **2.36** | **2.46** | **0.32** | **0.82** | **0.70** | **1.21** | **0.31** | **0.25** | **0.72** | **0.06** | **0.92** | **0.09** | **0.03** |
| **Mediterranean** | | | | | | | | | | | | | |
| Greece | 2.80 | 4.75 | 0.34 | 0.85 | 0.52 | 0.39 | 0.01 | - | 0.18 | 0.07 | 0.84 | 0.17 | 0.01 |
| Italy | 2.76 | 4.88 | 0.39 | 0.80 | 0.24 | 0.35 | 0 | 0 | 0.22 | 0.11 | 0.95 | 0.05 | 0.02 |
| Portugal | 4.83 | 3.38 | 0.29 | 0.78 | 0.77 | 0.25 | 0.29 | 0 | 0.46 | 0.05 | 0.82 | 0.18 | 0.01 |
| Spain | 3.55 | 3.75 | 0.13 | 0.87 | 0.90 | 3.05 | 0.28 | 0 | 0.76 | 0.16 | 0.70 | 0.30 | 0.01 |
| **Mean** | **3.49** | **4.19** | **0.29** | **0.83** | **0.61** | **1.01** | **0.14** | **0** | **0.41** | **0.10** | **0.83** | **0.18** | **0.01** |
| **Liberal** | | | | | | | | | | | | | |
| Australia | 1.17 | 0.88 | 0.45 | 0.77 | 0.48 | 1.10 | 0.45 | 0.07 | 0.21 | 0.07 | 0.95 | 0.05 | 0.05 |
| Canada | 0.92 | 0.25 | 0.34 | 0.38 | 0.65 | 1.85 | 0.29 | 1.68 | 0.48 | 0.08 | 0.89 | 0.11 | 0.03 |
| Ireland | 1.44 | 0.25 | 0.51 | 0.44 | 0.47 | 2.08 | 0.34 | 0.15 | 1.03 | 0.14 | 0.92 | 0.09 | 0.02 |
| Japan | 1.70 | 1.69 | 0.25 | 0.26 | 0.56 | 0.31 | 0.43 | 0.1 | 0.32 | 0.02 | 0.89 | 0.11 | 0.05 |
| New Zealand | 1.24 | 0.38 | 0.50 | 0.67 | 0.53 | 1.83 | 0.38 | 0.08 | 0.26 | 0.08 | - | - | 0.05 |
| United Kingdom | 1.10 | 0.25 | 0.40 | 0.47 | 0.28 | 0.66 | 0.30 | 0 | 0.51 | 0.07 | 0.95 | 0.05 | 0.01 |
| United States | 0.26 | 0.25 | 0.14 | 0.18 | 0.59 | 0.42 | 0.15 | 0.08 | 0.21 | 0.06 | 0.95 | 0.05 | 0.01 |
| **Mean** | **1.12** | **0.57** | **0.37** | **0.45** | **0.51** | **1.18** | **0.33** | **0.31** | **0.43** | **0.07** | **0.92** | **0.08** | **0.03** |
| **Total** | | | | | | | | | | | | | |
| **Mean** | **2.19** | **2.24** | **0.41** | **0.70** | **0.63** | **1.04** | **0.29** | **0.27** | **0.62** | **0.07** | **0.89** | **0.11** | **0.02** |

Legend: EPL Permanent = Employment protection index for permanent contracts; EPL Temporary = Employment protection index for temporary contracts; Union density = Union density; Collective bargaining = Percentage of the workforce protected by a collective bargaining agreement; UB Replacement rate = Unemployment benefit (average replacement rate of single and families); UB Spending = Unemployment benefit spending (unemployment compensation/severance pay); MI Replacement rate = Minimum income (average replacement rate of single and families); MI Spending = Minimum income spending as a % of the GDP; ALMP Spending = Active labour market policy spending as a % of the GDP; Unemployment rate = Unemployment rate; % Permanent = Percentage of the workforce holding a permanent contract; % Temporary = Percentage of the workforce holding a temporary contract; % involuntary part-time = Workers holding an involuntary part-time contract.

Source: OECD (2019a, 2019b); Scruggs et al. (2017).

The Christian democratic cluster was positioned near the origin of the axes.

France, Belgium and Netherlands were in the first quadrant close to the social democratic countries. France was the closest to the origin, with levels of employment protection, unemployment protection and activation higher or similar to the Christian democratic average; it had also the most deteriorated labour market outcomes within the cluster. Belgium, positioned in the middle of the quadrant, had a stronger employment protection (mostly because of high union density; a heritage of the Ghent system, Van Rie et al. 2011), income maintenance and activation; it had the lowest share of temporary contracts in the cluster. The Netherlands had similar characteristics to Belgium but noticeably had the highest level of income maintenance and share of involuntary part-time contracts in the sample; Goodin (2001) referred to this feature as a 'post-productivist possible utopia' (see also Visser and Hemerijck, 1997).

Switzerland and Austria occupied the third quadrant, and revealed some liberal traits. Switzerland had scores for employment protection, income maintenance, spending for unemployment benefits[14] and activation lower than the cluster average (Armingeon et al., 2004; Obinger, 1999); it had also a low unemployment rate, a low share of permanent and involuntary part-time contracts compared to the other Christian democratic countries. Austria, despite a strong level of employment protection for permanent contracts, had a level of income maintenance and spending for activation lower than the group average. Like liberal countries, Austria had a low unemployment rate, a low share of involuntary part-time contracts, and a high incidence of permanent contracts. Germany, positioned in the fourth quadrant, had strong employment protection, but unemployment protection and income maintenance were below the Christian democratic average.

The Mediterranean cluster was characterized by strong employment protection, low levels of income maintenance, and high unemployment rates (Ferrera, 1996); therefore, high levels of coordination – especially in Spain and Portugal – but low solidarity. Accordingly, Mediterranean countries were scattered at the bottom of the Cartesian space, with the exception of Spain. Spain was placed at the extreme right of the first quadrant, because of a strong employment protection and the highest share of temporary contracts in the sample (Dolado et al., 2002).

Greece and Portugal occupied the middle of the fourth quadrant. However, a comparison between these two countries reveals that Greece had higher EPL for temporary contracts, unionization rate, coverage of collective bargaining agreements and spending for unemployment benefits (cf. Petmesidou, 1996), whereas Portugal had higher EPL for permanent contracts, unemployment benefits and minimum income replacement rates, and spending for activation (cf. Pereirinha, 1996). Moreover, the share of permanent contracts was lower in Portugal, which explains its position closest to the first quadrant in comparison to Greece. Italy was positioned at the bottom of the third quadrant close to the vertical axis, and had less EPL for permanent contracts than the Mediterranean average, the strongest EPL for temporary contracts of the whole sample, and high unionization rates. Italy, as with liberal countries, also had low unemployment protection, a high share of permanent contracts and low spending for activation; its income maintenance dimension, as with all Mediterranean countries, was underdeveloped.

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[14] While unemployment benefits replacement rates are generous.

Liberal countries occupied the second and third quadrants (Australia, Canada, Ireland, Japan, New Zealand in the second; UK and US in the third). Low employment protection and a high share of permanent contracts are common features of this cluster, and this confirms that these countries liberalised their labour market protection prior to our 1990 measurement. Countries positioned in the third quadrant had a lower unemployment protection, income maintenance and activation spending than those placed in the second.

Australia, positioned at the far left of the second quadrant, had the highest share of permanent contracts in the sample, and had employment protection and income maintenance higher than the liberal average (Castles, 1996); its unemployment protection and activation spending were below the liberal average. Canada, at the top of the second quadrant, had low levels of employment protection, a smaller share of permanent contracts than the liberal average (Cooke and Zeytinoglu, 2004); it had high unemployment protection, income assistance and activation spending. Ireland, positioned in the middle of the second quadrant, had strong EPL for permanent contracts and union density, but low EPL for temporary workers and non-inclusive collective bargaining agreements. Due to high unemployment rates, spending for unemployment benefits for Canada was almost twice that of the liberal average, even if replacement rates were below the liberal average; the minimum income replacement rate was above the liberal average and spending was two times lower. New Zealand had similar levels of employment protection and unemployment protection to Ireland, and a similar minimum income replacement too, but had lower spending than Ireland for income assistance and activation policies. Japan, positioned in the middle of the second quadrant, had the highest EPL among liberal countries, but lower unionization rates and less inclusive collective bargaining agreements. Replacement rates for unemployment benefits and minimum income were higher than the liberal average, but the associated spending was lower (also spending for activation). The low unemployment rate was accompanied by a low share of permanent contracts.

The UK and the US occupy the extreme left of the third quadrant, and had the lowest levels of solidarity and coordination in the sample. The UK is positioned above the US, and had slightly higher protection levels than the US in all dimensions; moreover, it displayed a higher share of involuntary part-time contracts.

### III.2. Inter-temporal change of clusters (1990-2015)

The varieties of labour market protection have changed significantly during the last three decades (Figure 2; Table 4). By 2015, social and Christian democratic countries have grouped mostly in the first quadrant; liberal and Mediterranean countries have grouped more closely together and occupy the third and fourth quadrants respectively. The social and Christian democratic clusters overlap, but Denmark is an exception, for it occupies the top of the vertical axis due to the most developed flexicurity strategy among high-income countries. Belgium, Sweden, Finland and the Netherlands are positioned in the middle of the first quadrant, and not far from them and close to the vertical axis are Norway and Austria. Austria, Switzerland[15] and Germany have moved towards the centre of the bi-plot, compared to their position in 1990. The most important change within the Mediterranean cluster is the deterioration of

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[15] Placed in third quadrant because of persistent liberal traits.

labour market outcomes[16], with an increase of the unemployment rate (especially in Greece and Spain) and the share of involuntary part-time contracts (especially in Italy). Spain, Italy and France, that joined the Mediterranean cluster because of poor labour market outcomes, are positioned closer to Greece and Portugal than in 1990. All Liberal countries – Australia, Canada, Ireland, Japan and New Zealand – now cluster in the same space[17] with the US and UK. These countries continued to deregulate employment protection marginally – with a decline of union density and collective bargaining agreements, and witness a deterioration of labour market outcomes (with an increase in the share of temporary and involuntary part-time contracts).

## Table 4. Indicators 2015

| Country | EPL Permanent | EPL Temporary | Union density | Collective bargaining | UB Replacement rate | UB Spending | MI Replacement rate | MI Spending | ALMP Spending | Unemployment rate | % Permanent | % Temporary | % Involuntary part-time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Social democratic** | | | | | | | | | | | | | |
| Denmark | 2.20 | 1.38 | 0.69 | 0.84 | 0.57 | 0 | 0.51 | 0.91 | 2.05 | 0.06 | 0.91 | 0.09 | 0.04 |
| Finland | 2.17 | 1.56 | 0.67 | 0.89 | 0.61 | 2.37 | 0.28 | 0.41 | 1.00 | 0.09 | 0.85 | 0.15 | 0.04 |
| Norway | 2.33 | 3.00 | 0.53 | 0.67 | 0.69 | 0.45 | 0.21 | 0.31 | 0.52 | 0.04 | 0.92 | 0.08 | 0.01 |
| Sweden | 2.61 | 0.81 | 0.67 | 0.90 | 0.62 | 0.33 | 0.20 | 0.26 | 1.27 | 0.07 | 0.83 | 0.17 | 0.03 |
| **Mean** | **2.33** | **1.69** | **0.64** | **0.83** | **0.62** | **0.79** | **0.30** | **0.47** | **1.21** | **0.08** | **0.88** | **0.12** | **0.03** |
| **Christian democratic** | | | | | | | | | | | | | |
| Austria | 2.37 | 1.31 | 0.27 | 0.98 | 0.64 | 1.04 | 0.36 | 0.33 | 0.73 | 0.06 | 0.91 | 0.09 | 0.03 |
| Belgium | 1.89 | 2.38 | 0.54 | 0.96 | 0.70 | 2.59 | 0.38 | 0.37 | 0.72 | 0.09 | 0.91 | 0.09 | 0.02 |
| France | 2.39 | 3.63 | 0.08 | 0.99 | 0.70 | 1.60 | 0.30 | 0.57 | 1.00 | 0.10 | 0.83 | 0.17 | 0.08 |
| Germany | 2.68 | 1.13 | 0.18 | 0.57 | 0.66 | 0.88 | 0.27 | 0.18 | 0.63 | 0.05 | 0.87 | 0.13 | 0.04 |
| Netherlands | 2.82 | 0.94 | 0.18 | 0.79 | 0.79 | 1.46 | 0.42 | 1.02 | 0.78 | 0.07 | 0.80 | 0.20 | 0.04 |
| Switzerland | 1.56 | 1.13 | 0.16 | 0.49 | 0.79 | 0.81 | 0.24 | 0.38 | 0.58 | 0.05 | 0.86 | 0.14 | 0.03 |
| **Mean** | **2.29** | **1.75** | **0.23** | **0.80** | **0.71** | **1.39** | **0.33** | **0.48** | **0.74** | **0.07** | **0.86** | **0.14** | **0.04** |
| **Mediterranean** | | | | | | | | | | | | | |
| Greece | 2.12 | 2.25 | 0.25 | 0.40 | 0.58 | 0.45 | 0.04 | - | 0.25 | 0.25 | 0.88 | 0.12 | 0.07 |
| Italy | 2.68 | 2.00 | 0.36 | 0.80 | 0.61 | 0.91 | 0 | 0.02 | 0.51 | 0.12 | 0.86 | 0.14 | 0.12 |
| Portugal | 3.19 | 1.81 | 0.16 | 0.72 | 0.77 | 0.98 | 0.25 | 0.16 | 0.55 | 0.12 | 0.78 | 0.22 | 0.05 |
| Spain | 2.05 | 2.56 | 0.14 | 0.77 | 0.79 | 2.02 | 0.27 | 0.13 | 0.59 | 0.22 | 0.75 | 0.25 | 0.10 |
| **Mean** | **2.51** | **2.16** | **0.23** | **0.67** | **0.69** | **1.09** | **0.14** | **0.10** | **0.48** | **0.18** | **0.82** | **0.18** | **0.08** |
| **Liberal** | | | | | | | | | | | | | |
| Australia | 1.67 | 0.88 | 0.15 | 0.59 | 0.38 | 0.68 | 0.34 | 0.21 | 0.23 | 0.06 | 0.95 | 0.05 | 0.09 |
| Canada | 0.92 | 0.25 | 0.29 | 0.31 | 0.58 | 0.62 | 0.27 | 1.68 | 0.24 | 0.07 | 0.87 | 0.13 | 0.05 |
| Ireland | 1.40 | 0.63 | 0.27 | 0.34 | 0.54 | 1.35 | 0.42 | 0.10 | 0.57 | 0.10 | 0.91 | 0.09 | 0.08 |
| Japan | 1.37 | 0.88 | 0.17 | 0.17 | 0.58 | 0.17 | 0.45 | 0.25 | 0.14 | 0.03 | 0.86 | 0.14 | 0.05 |
| New Zealand | 1.39 | 1.00 | 0.18 | 0.16 | 0.37 | 0.34 | 0.30 | 0.11 | 0.33 | 0.05 | - | - | 0.06 |
| United Kingdom | 1.10 | 0.38 | 0.24 | 0.28 | 0.31 | 0.17 | 0.31 | 0.01 | 0.19 | 0.05 | 0.94 | 0.06 | 0.04 |

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[16] While in the 1990 unemployment and the share of involuntary part-time contracts were positively correlated with the second PC, in 2015 this association is negative. The inversion of the correlation pattern is due mostly to the deterioration of labour market outcomes among these countries.

[17] Canada is in the second quadrant but bordering the third one and close to the other Liberal countries.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| United States | 0.26 | 0.25 | 0.11 | 0.12 | 0.58 | 0.20 | 0.14 | 0.34 | 0.11 | 0.05 | 0.96 | 0.04 | 0.02 |
| **Mean** | **1.16** | **0.61** | **0.20** | **0.28** | **0.48** | **0.51** | **0.32** | **0.39** | **0.26** | **0.06** | **0.92** | **0.09** | **0.05** |
| **Total** | | | | | | | | | | | | | |
| **Mean** | **1.96** | **1.44** | **0.30** | **0.61** | **0.61** | **0.92** | **0.28** | **0.39** | **0.62** | **0.09** | **0.87** | **0.13** | **0.05** |

Legend: see Table 3

Source: OECD (2019a, 2019b); Scruggs et al. (2017).

## IV. Country's trajectories

Overall the composite score portrays a shift towards liberalization in CMEs between 1990 and 2015 (Table 5; Table 2A). However, there are important cross-national differences in the intensity and trajectory of change.

CMEs are closer to the US in 2015 than 1990, largely because they deregulated their employment protection. EPL declined in most countries, a drop that is three times higher for temporary contracts. The decline of collective bargaining agreements and the decrease in union density is less severe than EPL, although – especially in the case of union density – highly generalised. In addition, labour market outcomes worsened almost everywhere because the share of unemployment, temporary and (especially) involuntary part-time contracts have increased; in contrast, unemployment protection, income maintenance and activation have been slightly expanded. However, all that glitters is not gold. The scores for unemployment protection and income maintenance are positive because spending has increased, while replacement rates have remained stable. Hence, generosity levels did not averagely expand, but rather the deterioration of labour outcomes have translated into higher spending levels. But if we exclude Denmark – an outlier with a significant spending increase – activation spending averagely has declined across CMEs.

**Table 5. Labour Market Protection Change (LMPC) Score**

| Country | Employment protection | Unemployment protection | Income maintenance | Activa-tion | Workforce composition | LMPC score | Trajectory |
|---|---|---|---|---|---|---|---|
| Sweden | **-3.73** | **-0.70** | **-0.52** | **-1.37** | **-0.89** | **-1.44** | Liberalization |
| Spain | **-2.78** | **-1.34** | 0.79 | **-0.81** | **-1.82** | **-1.19** | Liberalization |
| Greece | **-3.95** | 0.12 | 0.21 | 0.37 | **-1.68** | **-0.99** | Liberalization |
| Germany | **-2.66** | 0.10 | 0.89 | **-1.10** | **-1.12** | **-0.78** | Dualization |
| Norway | **-0.27** | **-0.73** | **-1.28** | **-1.74** | 0.31 | **-0.74** | Liberalization |
| Belgium | **-2.20** | 0.57 | 0.23 | **-1.71** | **-0.17** | **-0.65** | Dualization |
| Italy | **-3.01** | 0.99 | 0.11 | 1.39 | **-1.84** | **-0.47** | Dualization |
| Portugal | **-3.48** | 0.88 | 0.94 | 0.43 | **-1.10** | **-0.47** | Liberalization |
| Netherlands | **-0.67** | **-1.07** | 2.11 | **-2.04** | **-0.36** | **-0.41** | Liberalization |
| Japan | **-1.40** | **-0.15** | 1.12 | **-0.84** | **-0.20** | **-0.29** | Liberalization |
| Switzerland | **-0.10** | 0.87 | 1.54 | 1.86 | **-2.64** | 0.31 | Flexicurity |
| Austria | **-0.72** | 0.40 | 1.61 | 2.01 | **-0.87** | 0.49 | De-dualization |
| Finland | **-0.32** | 2.12 | 1.30 | 0.83 | **-0.79** | 0.63 | De-dualization |
| Denmark | **-1.82** | **-0.11** | 0.70 | 6.35 | 0.02 | 1.03 | Flexicurity |
| France | 0.62 | 0.47 | 3.12 | 1.41 | **-0.34** | 1.06 | Higher Protec-tion |
| **Mean** | **-1.77** | 0.16 | 0.86 | 0.34 | **-0.90** | **-0.26** | |

Note: in **bold** the indicators displaying negative (sub-)scores. Values for the four labour market protection dimensions are expressed as number of standard deviations from the value of the United States in 1990; values for the workforce composition are expressed as the relative deviation of each country from 1990; Data for minimum income spending for Greece is missing, the LMPC score for the Income maintenance dimension is computed on the replacement rate only.

Source: Authors' elaboration from OECD (2019a, 2019b), Scruggs et al. (2017).

We observe five trajectories of change in labour market protection, characterised by negative (liberalization and dualization) and positive (flexicurity, de-dualization, higher protection) composite scores. Ten CMEs followed liberalization and dualization trajectories. In these countries labour market protection in 2015 was lower than in 1990. The three other trajectories – flexicurity, de-dualization and higher protection – concerned only five CMEs, these countries strengthened their labour market protection during the last three decades (Table 5).

A liberalization trajectory entails a deregulation in employment protection and a reduction in protection due to a decline of some other dimension. We employ the notion of liberalization instead of deregulation (Thelen, 2014), because we observe a deeper process of change than the simple reduction of EPL. A dualization trajectory indicates a deregulation of temporary contracts stronger than the deregulation for permanent contracts. Dualization is associated also with an increase of temporary and involuntary part-time contracts (Rueda, 2005). A flexicurity trajectory encompasses a deregulation of employment protection, stability for unemployment protection and income maintenance; or when these two dimensions are in decline, a symmetric increase in spending for activation can be seen. We do not use the notion of 'embedded flexicurity' (Thelen, 2014) because the flexicurity trajectory can be applied also to a country that does not belong to the social democratic tradition. To account for the observed increase in labour market protection, we add two new trajectories to the three previously defined in the literature – de-dualization (the opposite to dualization) and higher protection (the opposite to liberalization). A De-dualization trajectory is similar to flexicurity but the reduction in EPL is stronger for permanent than temporary contracts. A higher protection trajectory, entails a re-regulation of employment protection, an increase of decommodification and higher spending for activation.

Sweden, Spain, Greece, Norway, Portugal, Netherlands and Japan followed a liberalization trajectory. Among them, we can identify two slightly different liberalization modalities. Spain, Portugal and Norway underwent a linear liberalization trajectory that took place without substantial difference for temporary and permanent contracts (confirming previous analyses for Spain, Picot and Tassinari, 2017 and Prosser, 2016). In Portugal and Spain, liberalization intervened in previously highly dualized labour market context (Cárdenas and Villanueva, Forthcoming; Cardoso and Branco, 2018). Portugal decreased employment protection, and expanded unemployment protection and activation spending. Spain witnessed a decrease in all labour market protection dimensions[18], and especially employment protection (with a decline of coverage for collective bargaining agreements). Although to a lesser extent than Portugal and Spain, Norway pursued a classic liberalization trajectory. Moreover, differently from all other countries in the sample – and with Denmark – experienced an improvement of labour market outcomes.

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[18] With the exception of income maintenance.

Sweden, Greece, Netherlands and Japan followed a liberalization trajectory with a tendency towards dualization[19]. Sweden, underwent a generalized retrenchment of labour market protection (cf. Anderson, 2001; Lindbom, 2001). Our data indicate a light deregulation of EPL for permanent contracts, a reduction of unemployment protection, income maintenance and activation accompanied by harsh deregulation of temporary contracts (the highest decrease in the sample). Sweden is the CME that liberalised the most, confirming a decline in its coordinating capacity and social solidarity (cf. Fleckenstein and Lee, 2017). The Great Recession and subsequent austerity measures boosted the Greek liberalization trajectory (Matsaganis, 2012; Prosser, 2016). The deregulation of EPL is the deepest of all CMEs, and is driven mostly by a reduction of the employment protection for temporary contracts. Greece experienced also a steep increase of unemployment rate and share of involuntary part-time contracts. In apparent countertendency to the liberalization trajectory, we observe also an increase in unemployment protection, income maintenance and activation, tough in reality, this moderate increase is due to the low levels (close to zero) of protection displayed by the country in the 1990. Labour market protection remains very weak overall (Matsaganis, 2018). In the Netherlands liberalization took place through a reduction of all labour market protection dimensions, with the exception of income maintenance. We witness a deregulation of temporary contracts and also their exceptional numerical increase (the second highest in the sample after Italy). In Japan the liberalization trajectory hit mostly labour market outsiders in a context of worsening labour market outcomes (cf. Coe et al., 2011). The liberalization trajectory is underpinned by a deregulation of EPL, a decentralization of wage bargaining agreements, and a reduction of unemployment protection and spending for activation policies.

Germany, Italy and Belgium followed a dualization trajectory. This trajectory is punctuated by a strong deregulation of EPL for temporary contracts coupled with a slight increase (Belgium and Germany) or decrease (Italy) of protection for permanent contracts. Unemployment protection and income maintenance have increased slightly [20] (mostly because of a spending increase related to worsening labour market outcomes). Spending on activation policies decreased both in Germany and Belgium, yet it increased in Italy. However, spending for activation in Italy remains much lower than in the other two countries. Our findings confirm that Germany is a prototypical case of dualization (Eichhorst and Marx, 2011; Emmenegger et al., 2012; Seeleib-Keiser and Fleckenstein, 2007; Thelen, 2014) and that Italy followed a similar path (Berton et al., 2012; Emmenegger, 2014). However, it is important to note that our analysis does not capture the 2015 labour market reform (the so-called 'Jobs Act') that according to some scholars transformed dualization into liberalization (Ferragina and Arrigoni, Forthcoming).

Denmark and Switzerland followed a flexicurity trajectory (cf. Andersen, 2012; Fossati, 2018; Thelen, 2014). The Danish flexicurity strategy was put in practice by deregulating EPL for temporary contracts, safeguarding unemployment protection and income maintenance and expanding activation spending at the highest level among OECD countries (Green-Pedersen et al., 2001). Switzerland had an already deregulated EPL in 1990 and increased its active and compensatory forms of labour market protection. If we compare the two countries, we can say that Denmark followed a trajectory grounded in 'embedded flexibility' (Thelen, 2014),

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[19] However, the difference between the reduction of EPL for permanent and temporary contracts is much smaller than that displayed by countries undertaking a dualization trajectory.

[20] Italy still does not provide a national minimum income maintenance scheme (Natili, 2018), although recently a conditional income maintenance program has been introduced.

reforming labour market protection in continuity with the social democratic model; while Switzerland followed a more liberal pathway, starting to expand a previously meagre generosity level. Austria and Finland followed a de-dualization trajectory, deregulating EPL for permanent contracts while maintaining (Austria, see Rathgeb, 2017 on 'smoothed dualization') or increasing (Finland) EPL for temporary contracts. Moreover, unemployment, income maintenance and activation were expanded to counter the deterioration of labour market outcomes. France, despite a further deterioration of labour market outcomes (especially for young people, see Chevalier, 2016), is the only CME which displayed positive sub-scores for all institutional dimensions.

## Discussion and conclusion

The article, based on a multidimensional measurement of labour market protection which includes employment protection, unemployment protection, income maintenance, activation and several labour market outcomes, analyses the inter-temporal validity of VoC and WoW across 21 high-income countries, and investigates the intensity and characteristics of change in labour market protection over three decades.

We find that VoC and WoW are salient frameworks to compare labour market protection across countries, and that Thelen's work helps us to interpret institutional change within this tradition. Our PCAs devise a Cartesian space that follows closely all these theorizations. The horizontal axis distinguishes CMEs and LMEs, while the vertical axis underscores important differences in the levels of labour market protection across social democratic, Christian democratic, Mediterranean and liberal regimes. In addition, the space retraces the conceptual map devised by Thelen to classify countries according to their levels of coordination and solidarity. However, our results illustrate the necessity to consider these frameworks *cum grano salis* as their heuristic power does not imply an invariable ability to capture varieties and change at every point in time.

Our 1990 typology conforms mostly to VoC and WoW. Social democratic countries occupied the first quadrant as a reflection of their high levels of coordination and solidarity. Closer to the origin of the axis, we found the Christian democratic countries which displayed high levels of coordination and solidarity as well (but to a lower extent than social democratic countries). Liberal countries were scattered at the left of the bi-plot, across the second and third quadrants, and exhibited a low coordination level (the UK and US were laggard in terms of solidarity levels). Mediterranean countries occupied a space characterised by high levels of coordination and low solidarity, with important differences between Spain, Italy, Greece and Portugal.

In 2015 the distance between social democratic and Christian democratic clusters, with the exception of Denmark, vanished; Mediterranean (with France included here because of poor labour market outcomes) and liberal countries got closer to each other and now occupy the fourth and third quadrants respectively. Overall, while the distinction between social democratic and Christian democratic countries disappeared (which challenges WoW classification when analysing labour market protection), the similarity between countries within the liberal and Mediterranean clusters became stronger coherently with previous classification frameworks.

However, despite the fact that the overall level of labour market protection continues to differentiate CMEs from LMEs, our findings indicate that a huge majority (10 out of 15) of

CMEs become more similar to LMEs and followed liberalization (Greece, Japan, Netherlands, Norway, Portugal, Spain, Sweden) and dualization (Belgium, Germany, Italy) trajectories. In particular, the process of labour market liberalization is mostly led by a deregulation of EPL, which is especially strong for temporary contracts. In contrast, only five CMEs experienced an increase in labour market protection underpinned by trajectories of flexicurity (Denmark and Switzerland) de-dualization (Austria and Finland) and higher protection (France).

Moreover, while liberal countries underwent a liberalization trajectory before 1990, and some Christian democratic countries (e.g. Belgium, Germany and Italy) followed a dualization trajectory after the 1990 (cf. Thelen 2014), many CMEs did not follow a trajectory rooted in classic varieties. Among Social democratic countries we find highly diversified trajectories: Denmark with flexicurity, Sweden and Norway with liberalization, and Finland with de-dualization. A higher variability exists also among Christian democratic countries: Netherlands that followed a liberalization trajectory, Austria de-dualization and France higher protection. Finally, Mediterranean countries underwent a trajectory of liberalization (with the exception of Italy, but see E). Overall we confirm that the trajectories devised by Thelen, to interpret the varieties of liberalization, are helpful to conceptualise the space of action within which countries moves in terms of labour market protection; they help also to define change in a certain number of countries. However, there are several cases where trajectories of labour market protection and classic varieties do not align strictly, and the number of trajectories appear more varied than previously suggested.

In conclusion, we have shown that VoC and WoW are valid heuristic tools despite widespread processes of change, and that it is important to scrutinise empirically how varieties of labour market protection evolve over time; this is a consideration that can be applied also to other policies. Substantial institutional change can be obscured from sight if we take for granted the immutability of typologies or consider that new trajectories are automatically inscribed within classic varieties. Moreover, despite the persistent distinction between CMEs and LMEs in levels of labour market protection, CMEs are becoming more similar to LMEs. Whether this process in the long run will totally undermine the differences between CMEs and LMEs, as some commentators have argued previously, is for scholars of the future to determine. For the time being, in the face of the stability bias of which both VoC and WoW seem to suffer, we rehearse the words declared allegedly by Galileo during his trial: *Eppur si muove.*

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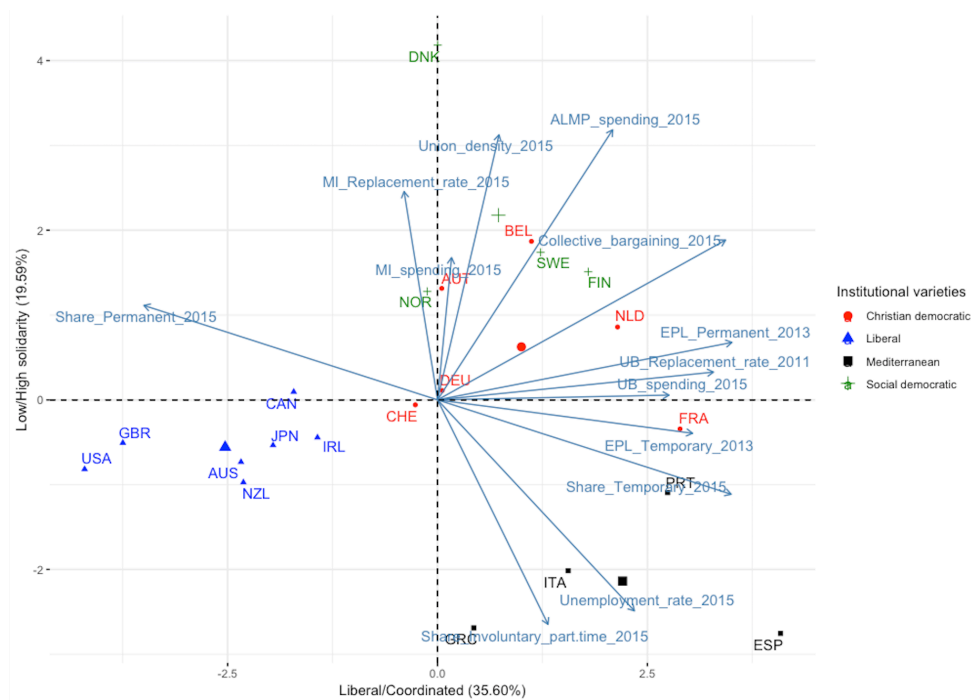
## Appendix Material

## Figure 1A: Varieties of Labour Market Protection (1990 and 2015)

## (Countries and indicators biplot)

## 1990
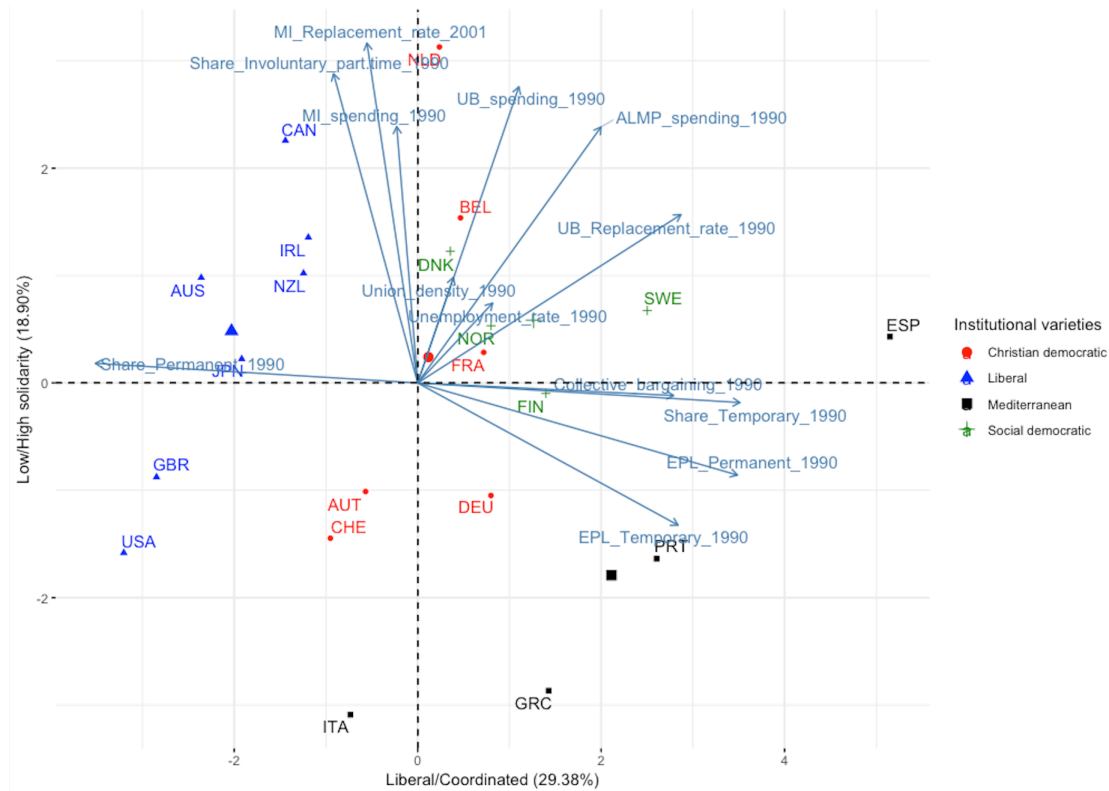


## 2015



Source: Authors' elaboration from OECD (2019a, 2019b), Scruggs et al. (2017).

**Table 1A: Manual imputations**

| Indicators | Data for 1990 - manual imputation | Data for 2015 - manual imputation |
|---|---|---|
| **Employment Protection** | | |
| Employment protection index (regular and temporary workers) | - | All data are from 2013 |
| Union density | Data for United States are taken from Meyer (2004) | Greece (2013), Australia and Ireland (2016). Data for United States are retrieved from Dunn and Walker (2016) |
| Percentage of the workforce protected by a collective bargaining agreement | Finland (1995), Ireland (2000) | Greece (2013), France, Ireland, Norway and Switzerland (2014), Australia and New Zealand (2016) |
| **Unemployment Protection** | | |
| Unemployment benefit (average replacement rate of single and families) | France (1989) | All data except for Switzerland (2010) are from 2011 |
| Unemployment benefit qualification | - | All data except for Japan (2010) are from 2011 |
| Unemployment benefit duration | - | All data except for Japan (2010) are from 2011 |
| Unemployment benefit waiting period | - | All data except for Japan (2010) are from 2011 |
| Unemployment benefit spending (un. compensation/severance pay) | - | - |
| **Income Maintenance** | | |
| Minimum income (average replacement rate of single and families) | All data are from 2001 | - |
| Minimum income spending as a % of the GDP | - | - |
| **Activation** | | |
| Active labour market policy spending as a % of the GDP | - | - |
| **Workforce Composition** | | |
| Unemployment rate | Switzerland (1991), Austria (1994) | - |
| Percentage of the workforce holding a permanent contract | Austria and United States (1995), Norway (1996), Canada and Finland (1997), Sweden (1997), Australia and Switzerland (1998). Data for New Zealand are not available | Japan (2012), United States (2017). Data for New Zealand are not available |
| Percentage of the workforce holding a temporary contract | Austria and the United States (19959, Norway (1996), Canada, Finland and Sweden (1997), Australia and Switzerland (1998). Data for New Zealand are not available | Japan (2012), United States (2017). Data for New Zealand are not available |
| Workers holding an involuntary part-time contract as a % of total employment | Australia and Finland (1991), Switzerland (1991), France (1993), Austria (1995), United States (1998) | - |

## Table 2A: Labour Market Protection Change (LMPC) score for each indicator

| Country | Employment protection | | | | Unemployment protection | | Income maintenance | | Activation | Workforce composition | | | | LMPC score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EPL Permanent | EPL Temporary | Union density | Collective bargaining | UB Replacement rate | UB Spending | MI Replacement rate | MI Spending | ALMP Spending | Unemployment Rate | % Permanent | % Temporary | % Involuntary part-time | |
| Sweden | **-0.74** | **-13.08** | **-1.04** | **-0.05** | **-0.40** | **-0.99** | **-0.38** | **-0.66** | **-1.37** | **3.13** | **-0.03** | **0.18** | **0.23** | **-1.44** |
| Spain | **-5.84** | **-4.75** | 0.04 | **-0.55** | **-0.20** | **-2.49** | **-0.10** | 1.69 | **-0.81** | **0.38** | 0.07 | -0.16 | **7.12** | **-1.19** |
| Greece | **-2.66** | **-10.00** | **-0.67** | **-2.47** | 0.10 | 0.14 | 0.21 | - | 0.37 | **2.56** | 0.06 | -0.28 | **4.51** | **-0.99** |
| Germany | 0.37 | **-8.50** | **-0.97** | **-1.55** | **-0.01** | 0.21 | 0.21 | 1.58 | **-1.10** | -0.04 | **-0.03** | **0.24** | **4.24** | **-0.78** |
| Norway | 0 | **-0.50** | **-0.43** | **-0.16** | **-0.02** | **-1.44** | **-0.28** | **-2.28** | **-1.74** | -0.19 | 0.06 | -0.38 | -0.62 | **-0.74** |
| Belgium | 0.19 | **-9.00** | 0.02 | 0 | 0.01 | 1.13 | 0.03 | 0.43 | **-1.71** | **0.18** | **-0.04** | **0.70** | -0.25 | **-0.65** |
| Italy | **-0.32** | **-11.50** | **-0.21** | 0 | 0.63 | 1.35 | 0 | 0.23 | 1.39 | **0.04** | **-0.09** | **1.69** | **5.53** | **-0.47** |
| Portugal | **-6.42** | **-6.25** | **-0.94** | **-0.32** | 0 | 1.75 | **-0.28** | 2.15 | 0.43 | **1.71** | **-0.04** | **0.20** | **2.47** | **-0.47** |
| Netherlands | **-0.86** | **-1.75** | **-0.49** | 0.41 | 0.04 | **-2.18** | **-0.03** | 4.26 | **-2.04** | -0.07 | **-0.14** | **1.66** | -0.28 | **-0.41** |
| Japan | **-1.30** | **-3.25** | **-0.55** | **-0.48** | 0.04 | **-0.33** | 0.14 | 2.09 | **-0.84** | **0.61** | **-0.03** | **0.29** | -0.12 | **-0.29** |
| Switzerland | 0 | 0 | **-0.49** | 0.07 | 0.05 | 1.69 | **-0.41** | 3.49 | 1.86 | **1.67** | **-0.03** | **0.20** | **8.65** | 0.31 |
| Austria | **-1.48** | 0 | **-1.38** | 0 | 0.07 | 0.73 | 0.41 | 2.81 | 2.01 | **0.64** | **-0.03** | **0.51** | **2.31** | 0.49 |
| Finland | **-2.41** | 1.25 | **-0.45** | 0.35 | **-0.07** | 4.30 | **-0.24** | 2.85 | 0.83 | **2.02** | 0.04 | -0.16 | **1.33** | 0.63 |
| Denmark | 0.06 | **-7.00** | **-0.43** | 0.07 | **-0.22** | 0 | 0.07 | 1.32 | 6.35 | -0.26 | 0.02 | -0.20 | **0.41** | 1.03 |
| France | 0.17 | 2.25 | **-0.14** | 0.20 | **-0.07** | 1.01 | 0.45 | 5.80 | 1.41 | **0.13** | **-0.07** | **0.59** | **0.59** | 1.06 |
| **Mean** | **-1.42** | **-4.81** | **-0.54** | **-0.30** | 0 | 0.33 | **-0.01** | 1.84 | 0.34 | **0.83** | **-0.02** | **0.34** | **2.41** | **-0.26** |

Legend: see Table 3

Note: in **bold** the indicators displaying negative (sub-)scores, and positive sub-scores for unemployment rate, share of temporary and involuntary part-time contracts. Values for the four labour market protection dimensions are expressed as number of standard deviations from the value of the United States in 1990; values for the workforce composition are expressed as the relative deviation of each country from 1990; Data for minimum income spending for Greece is missing, the LMPC score for the Income maintenance dimension is computed on the replacement rate only.

Source: Authors' elaboration from OECD (2019a, 2019b) and Scruggs et al. (2017).

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**Directrice de publication :**
Anne Revillard

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Sofia Cerda Aparicio, Andreana Khristova

Sciences Po - LIEPP
27 rue Saint Guillaume
75007 Paris - France
+33(0)1.45.49.83.61
liepp@sciencespo.fr