

Labour Regulation Over Time: New Leximetric Evidence

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Abstract

We present findings from analysis of a longitudinal index of labour laws, the CBR-LRI, which has been extended to cover 63 countries for the period from the early 1990s to the present day. We find that, during this period, laws protecting workers in part-time work, fixed-term employment and agency work became significantly more protective in all regions. Employment protection laws became slightly more protective although there was little overall change. Europe has seen declines in protection since the onset of the financial crisis in 2008 but this trend has not been replicated elsewhere. Time-series econometric analysis using exploratory, non-stationary panel data methods shows that the economic effects of employment protection laws are not negative, and may sometimes be positive. They are also relatively small when set against wider economic trends.

1. Introduction

The economic effects of labour regulation continue to be widely debated. The view that worker-protective labour laws have mostly negative economic consequences has recently influenced the ‘structural reforms’ initiated in debtor states in the Eurozone, for example. However, the Eurozone case is in many respects atypical of the way that the debate has been going. Theory no longer maintains that labour laws necessarily operate to distort market outcomes. In 2015 the World Bank’s *Doing Business Report*, in a reversal of its earlier position that ‘laws intended to protect workers often harm them’ (World Bank, 2008), noted that employment regulations are ‘undoubtedly necessary’ and ‘benefit both workers and firms’; labour laws could have a negative impact of competitiveness and growth not simply where they were ‘excessive’ but also where they were ‘insufficient’ (World Bank, 2015: 231). This shift in perspective reflects a growing theoretical consensus to the effect that labour market institutions are needed to allocate authority and risk within the employment relationship and to provide elements of insurance and income smoothing which would not otherwise be contracted for. If this view is correct, the net welfare effects of employment regulation may be positive depending on the level of protection implied by the laws concerned. The consequences of labour laws may also depend on how regulations interact with a number of other factors influencing social and economic outcomes at country level. The complexity of these effects is reflected in the evolving empirical literature. In 2013 the World Bank, after reviewing recent studies, suggested that estimated effects of labour regulation ‘prove to be

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relatively modest in most cases’ so that ‘overall, labour policies and institutions are neither the major obstacle nor the magic bullet for creating good jobs for development in most countries’ (World Bank, 2013: 258), again marking a shift from the consensus of a few years ago which was that the empirical evidence was generally against protective labour laws having beneficial effects.

In this paper we present new empirical evidence on the impact of labour laws on employment, unemployment, productivity and inequality, using data from the Labour Regulation Index developed at the Centre for Business Research at Cambridge University (CBR-LRI). This dataset provides a unique time series of changes in labour laws across a range of developed and developing countries going back to the early 1970s. Analyses of this dataset have been presented in the past (see Deakin, Lele and Siems, 2007; Deakin and Sarkar, 2008; Deakin, Malmberg and Sarkar, 2014; Deakin, Fenwick and Sarkar, 2014) but only for a few countries. The dataset has now been significantly extended and in this paper we report findings on the economic effects of labour laws in a panel of over 60 countries for the period from the early 1990s to the present day. Our focus is on the laws relating to the regulation of alternative forms of employment contract and to laws relating to employment protection more generally. Section 2 below describes the dataset. Section 3 provides a descriptive account of trends in the data and section 4 sets out the econometric analysis. Section 5 concludes.

2. The CBR-LRI dataset

A major challenge in assessing the relative strength of labour market regulation empirically is to establish a methodology that can effectively and transparently measure phenomena that are not easily or necessarily represented in numerical terms. The problem does not obviously arise for some forms of labour market regulation, such as minimum wage regulation, where numerical data can be relatively easily identified. For many aspects of employment protection law, however, and for many other areas of labour market regulation, an assessment of the relative protective strength of law is necessarily more complex.

Despite the complexity of these issues, the urgency of the need to promote more and better jobs, together with methodological developments in the analysis of cross-country time-series data have increased interest in the measurement and prediction of the effects of labour market regulation (Cazes and Aleksynska, 2014: 1). Where dismissal law is concerned, the interest can in part be traced to the emergence and rise to prominence of the OECD’s Employment Protection Index (in the 1990s) and the World Bank’s Employing Workers Index (in the 2000s). The Employing Workers Index is no longer in use in constructing the overall *Doing Business* score for any given country, but the underlying data are still collected and reported (see World Bank, 2015, p. 231-251).

The OECD’s employment protection indicators represent ‘by far the most comprehensive, regularly updated’ dataset in the field (Aleksynska, 2015: 55). Although widely used, the OECD index also has certain methodological limitations from the point of view of its ability to support cross-country time-series analysis. The OECD methodology has changed over time (OECD, 2013). Data were initially gathered at five year intervals, and only more recently has there been annual updating. The coding methodology has also changed, moving from initial reliance on surveys completed by governments, to reliance on firm-level surveys supplemented by secondary sources. From 2013 there has been increased use of primary sources including collective agreements. New indicators have been added from time to time, and the treatment of collective dismissals has changed throughout the period. In addition, the scores to particular indicators have been changed at certain points (for an overview and assessment of changes made to the OECD index, see Adams and Deakin, 2015).

The CBR-LRI dataset which we report here was developed in order to facilitate analysis of the effects of legal regulation and of changes to legal regulation over time. The index is constructed to present a measure of the relative strength of labour market regulation, in other words, the relative level of protection for workers, across different countries. The index has a total of 40 variables, grouped into five sub-indices. A score is allocated to each individual variable in a range from 0 (little or no protection) to 1 (high protection). The five sub-indices cover, respectively, the regulation of alternative employment contracts (self-employment, part-time work, fixed-term employment and temporary agency work); working time (daily and weekly working time limits and rules governing overtime); dismissal (procedural and substantive rules on termination of employment); employee representation (rules on collective bargaining, the closed shop and codetermination); and industrial action (the extent of legal support for the right to strike, including rules on secondary and political strikes). These five sub-indices broadly follow the categories developed by Botero et al. (2004) whose analysis, however, lacked a time-series dimension. Moreover, the individual indicators and the coding algorithm used in the CBR-LRI differ from those of Botero et al. in significant respects (for more detail see Deakin, Lele and Siems, 2007, and Adams and Deakin, 2015; the full set of algorithms and, by way of illustration, their application to France, are set out in Appendix 2, below). The current paper draws on an expanded version of the initial dataset first presented by Deakin, Lele and Siems (2007). The expanded version contains data for 63 countries, including all EU, and OECD countries, as well as selected African, Asian and Latin American countries not otherwise captured.¹

3. Trends in regulation over time as revealed by the CBR-LRI dataset

3.1 Trends in the regulation of different forms of work

The CBR-LRI sub-index on the regulation of alternative employment contracts is composed of variables that relate to the degree of freedom which employers have under the law to choose among different forms of employment (DFEs).

Table 1 DFE variable selection

1 The law, as opposed to the contracting parties, determines the legal status of the worker.	2 Part-time workers have the right to equal treatment with full-time workers.
3 Part-time workers have equal or proportionate dismissal rights to full-time workers.	4 Fixed-term contracts are allowed only for work of limited duration.
5 Fixed-term workers have the right to equal treatment with permanent workers.	6 Maximum duration of fixed-term contracts.
7 Agency work is prohibited or strictly controlled.	8 Agency workers have the right to equal treatment with permanent workers of the user undertaking.

¹ Algeria, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Estonia, Ethiopia, Finland, France, Germany, Ghana, Greece, Iceland, India, Ireland, Israel, Italy, Ivory Coast, Japan, Kenya, Korea, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States of America.

Figure 1 shows the overall average of the eight variables, globally and for different regions and groups of countries. Figure 1A presents the global average, together with the average in different regions; Figure 1B presents the global average together with the average in countries grouped by economic and/or political criteria. The overall average level of formal legal protection has risen steadily since the early 1990s, and there have been gradual rises in the strength of legal regulation over the long term in all regions and groups of countries. Figure 1A shows that there is a certain degree of variation in the relative protective strength of legal regulation of forms of employment across different regions of the world and that the extent of change has been different, depending on the region. The highest rates of increase were for the EU, and for the group of EU and developed economies. The averages for selected African and Asian countries are in both cases lower than the global average at both the beginning and the end of the period, with Asian countries showing the lowest growth in the average strength of legal regulation.

Figure 1B shows that the average levels of protection at the start of the period for former Eastern Bloc, G20 and OECD countries were virtually identical, while the average level for the BRICST (Brazil, Russia, India, China, South Africa and Turkey) was slightly lower than elsewhere. In all cases, the average level has risen. The BRICST average level has maintained more or less the same distance from the global average. On the other hand, the other groups of countries have diverged from their more or less common starting point: the G20 average is now below the global average, while the average for OECD countries is above the global average, although not by so much as the average for former Eastern Bloc countries.

Figure 1A

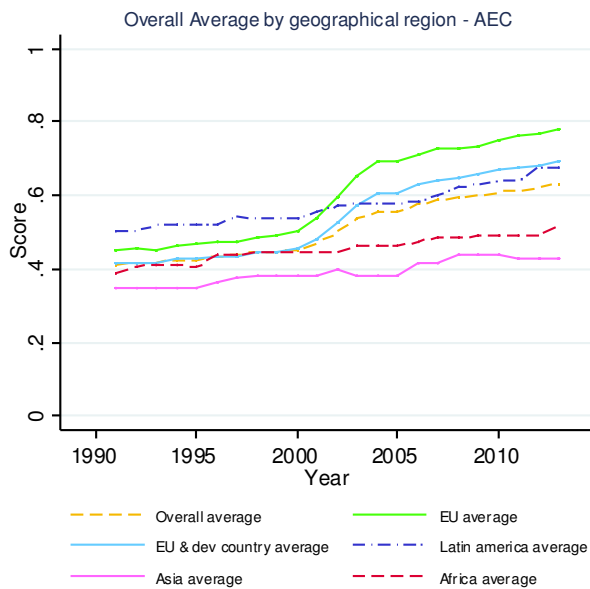


Figure 1B

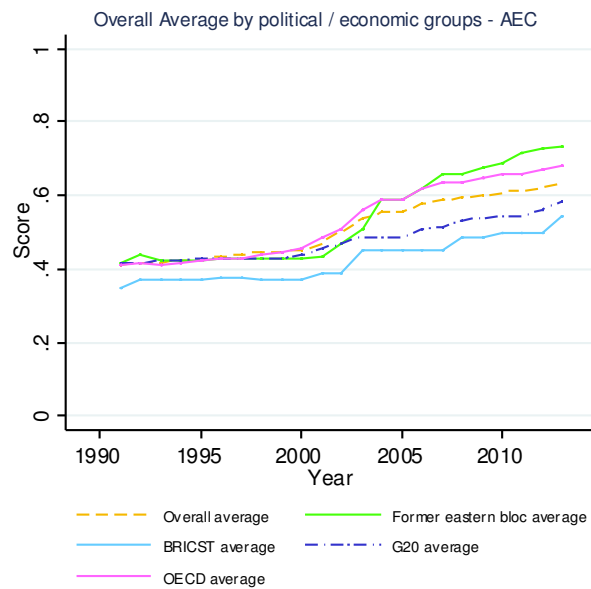


Figure 2 disaggregates the scores according to individual variables. The most substantial rises have been on the variables representing laws requiring equal treatment or non-discrimination between those employed on part-time, fixed-term and agency work, respectively, and those with full-time, permanent or 'regular' employment contracts.

Figure 2

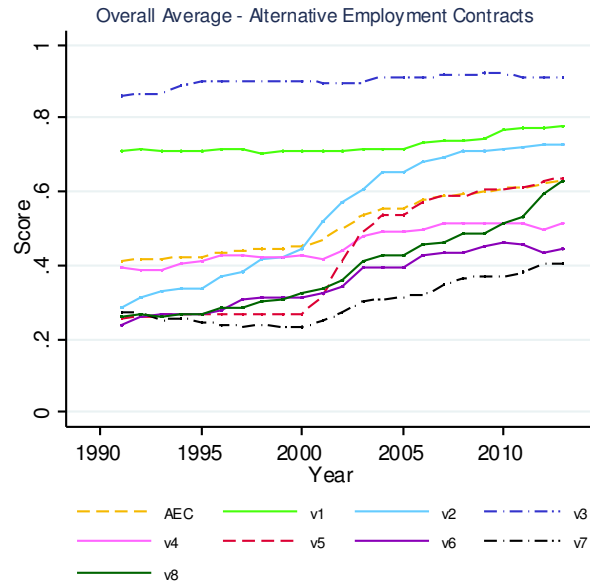


Figure 3 shows the overall average, together with disaggregation according to the individual variables, for Europe. It illustrates the extensive rise in protection in respect of equality of treatment, a result of the implementation of EU Directives on part-time work (1997), fixed-term employment (1999), and agency work (2008).²

² Council Directive 97/81/EC of 15 December 1997 concerning the Framework Agreement on part-time work concluded by UNICE, CEEP and the ETUC; Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work concluded by ETUC, UNICE and CEEP; and Directive 2008/104/EC of the European Parliament and of the Council of 19 November 2008 on temporary agency work.

Figure 3

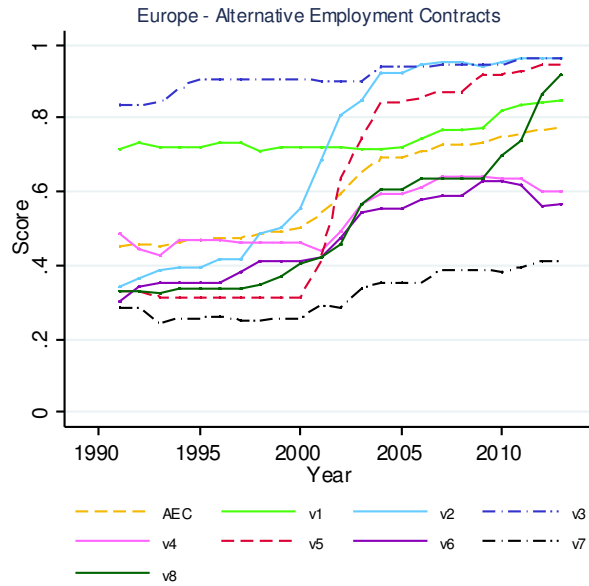
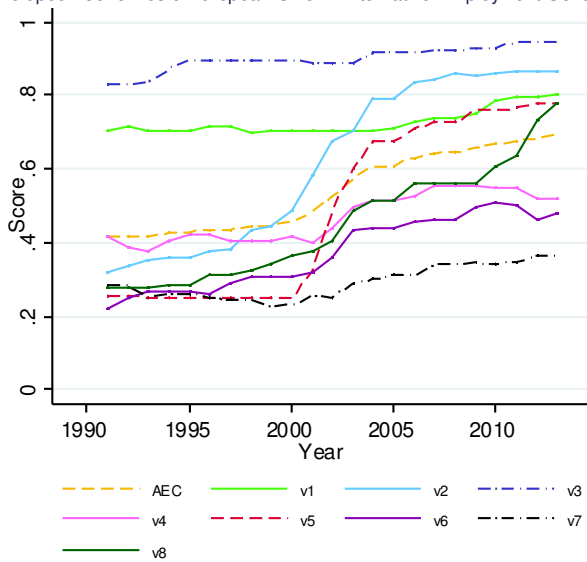


Figure 4 shows the overall average, together with disaggregation according to the individual variables, for the European Union and developed economies. Figure 5 shows the same data for OECD countries. Both figures show very similar pictures to those for the world as a whole, and for Europe.

Figures 4 and 5

Developed Economies & European Union - Alternative Employment Contracts



OECD - Alternative Employment Contracts

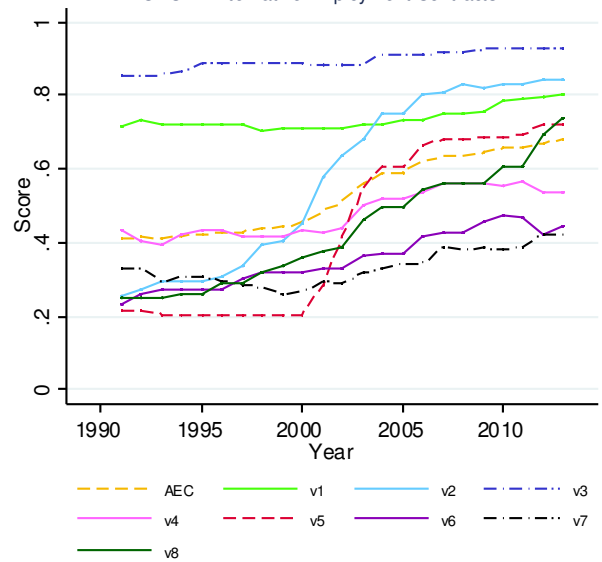
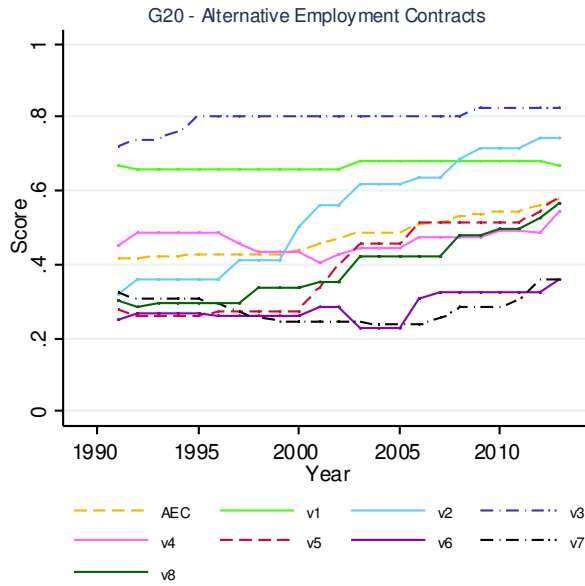


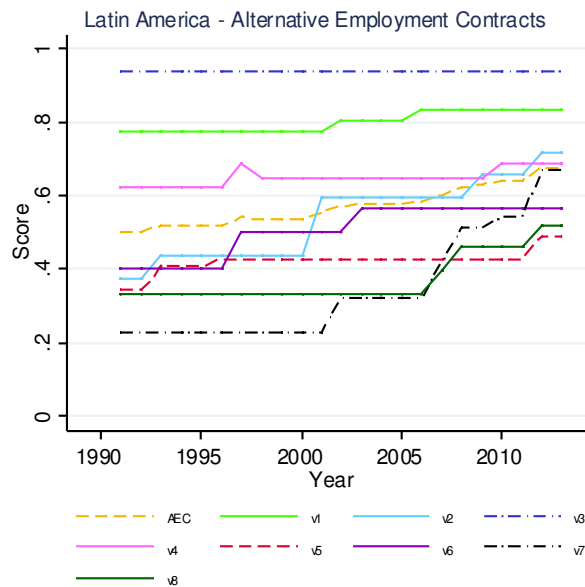
Figure 6 shows the overall average together with disaggregation according to the individual variables, for G20 countries. The picture for this group of countries is similar to those for Europe, EU and developed economies, and OECD countries. Nevertheless, the inclusion of non-EU and less developed countries is evident from the somewhat less significant rises in the relative strength of legal protection.

Figure 6



For Latin America, Figure 7 shows an increase in the overall average, starting from the early 1990s. The increase in the overall average is again driven by increases on the variables relating to equal treatment. Since 2005 there has been quite a marked increase in the level of regulation of agency work.

Figure 7



The picture for former Eastern Bloc countries is illustrated in Figure 8. It shows some of the more substantial increases in the relative strength of legal regulation for the overall average. Again, the disaggregation according to individual variables shows clear increases in the level of protection for part-time, fixed-term and agency work, especially in respect of equal treatment, as well as an increase in regulation of agency work.

Figure 8

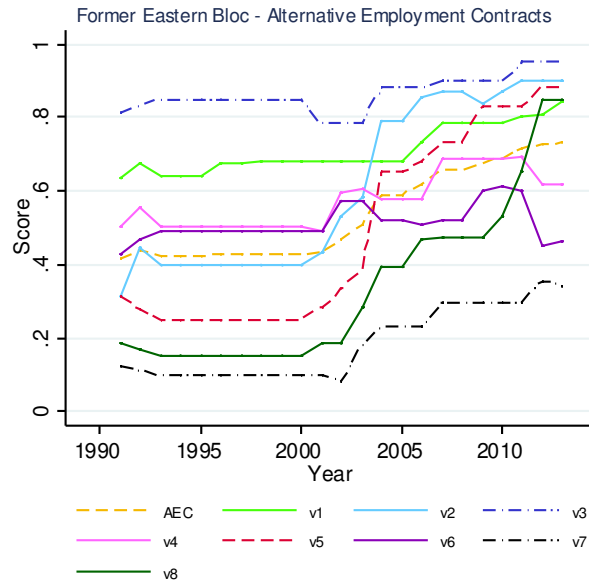


Figure 9 shows the overall average, together with disaggregation according to its individual variables, for selected countries in Africa. Figure 10 shows the same data for a small selection of countries in Asia. In both cases, the data show increases on the variables relating to part-time, fixed-term and agency work. In both cases the data also show a relatively lower level of protection on the overall sub-index, and for most of the individual variables, than for other regions, or for the world more generally.

Figures 9 and 10



3.2 Trends in employment protection legislation

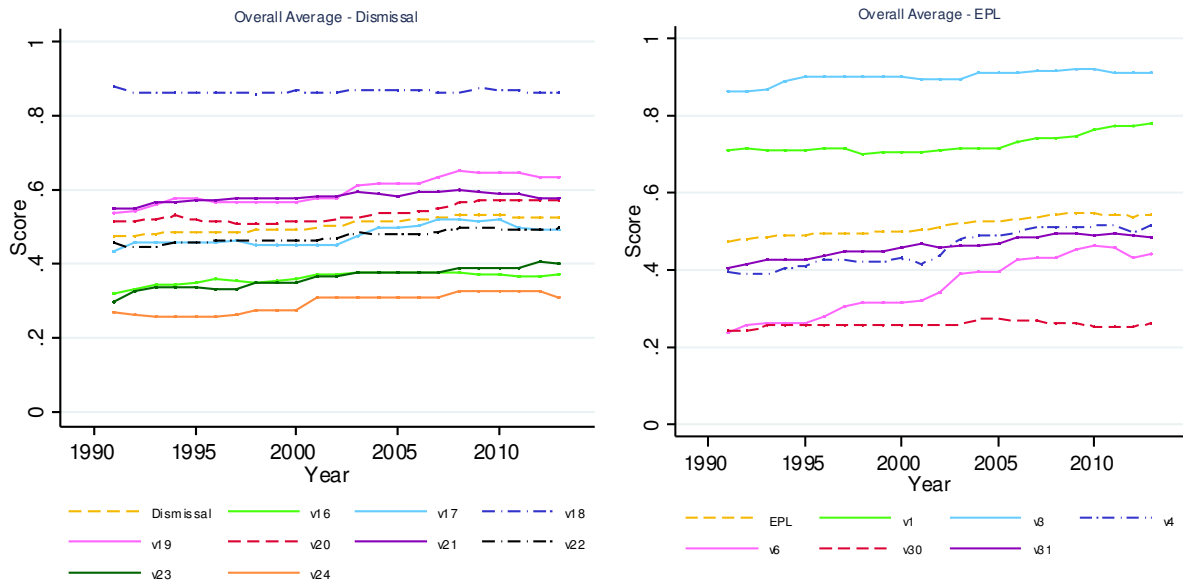
EPL is usually understood as dealing with some or all of the following topics: protection against dismissal from employment (both procedural and substantive); compensation requirements in the event of dismissal from employment; and regulation of the use of fixed term contracts. As noted above, there are several variables concerning regulation of fixed-term contracts of employment, as well as variables relating to determination of employment status (variable 1) and the rights of part-time workers to have access to legal protection (variable 3), in the CBR-LRI. A further nine variables are contained in the CBR-LRI sub-index on regulation of dismissal which covers procedural and substantive constraints on dismissal, redundancy selection and payment, and related regulation. Within the CBR-LRI sub-index for employee representation there are also two variables relating to legal regulation of co-determination at the workplace. They are included in the present selection of variables relevant to EPL in light of the fact that in some systems, co-determination mechanisms can have a role in dismissal procedures, especially as concerns collective dismissals. Table 2 lists the 15 variables that are used in the following analysis of EPL.

Table 2 EPL variable selection

1 The law, as opposed to the contracting parties, determines the legal status of the worker.	3 Part-time workers have equal or proportionate dismissal rights to full-time workers.
4 Fixed-term contracts are allowed only for work of limited duration.	6 Maximum duration of fixed term contracts.
16 Legally mandated notice period (all dismissals).	17 Legally mandated redundancy compensation.
18 Minimum qualifying period of service for normal case of unjust dismissal.	19 Law imposes procedural constraints on dismissal.
20 Law imposes substantive constraints on dismissal.	21 Reinstatement normal remedy for unfair dismissal.
22 Notification of dismissal.	23 Redundancy selection.
24 Priority in re-employment.	
30 Codetermination: board membership.	31 Codetermination and information/consultation of workers.

Figure 11 shows the overall average for dismissal law and for EPL more generally, together with disaggregation according to individual variables. There is little change either in the overall averages or in relation to particular variables. At the global level there were modest increases in regulation of redundancy compensation and procedural requirements relating to dismissal (variables 17 and 19) from the early 2000s. There was a similar increase in the strength of regulation around substantive requirements relating to dismissal (variable 20). There is a distinct, if not major, decline after 2008 in the strength of regulation around redundancy compensation (variable 17), redundancy selection (variable 23), and priority in re-employment (variable 24).

Figure 11



Figures 12-18 show the same trends for individual regions. The picture for Europe (Figure 12) is largely consistent with the global picture shown in Figure 11 but also shows declines after 2008 for certain variables, reflecting the response to the financial crisis. The trends for Latin America, Asia and Africa do not show this recent decline.

Figure 12

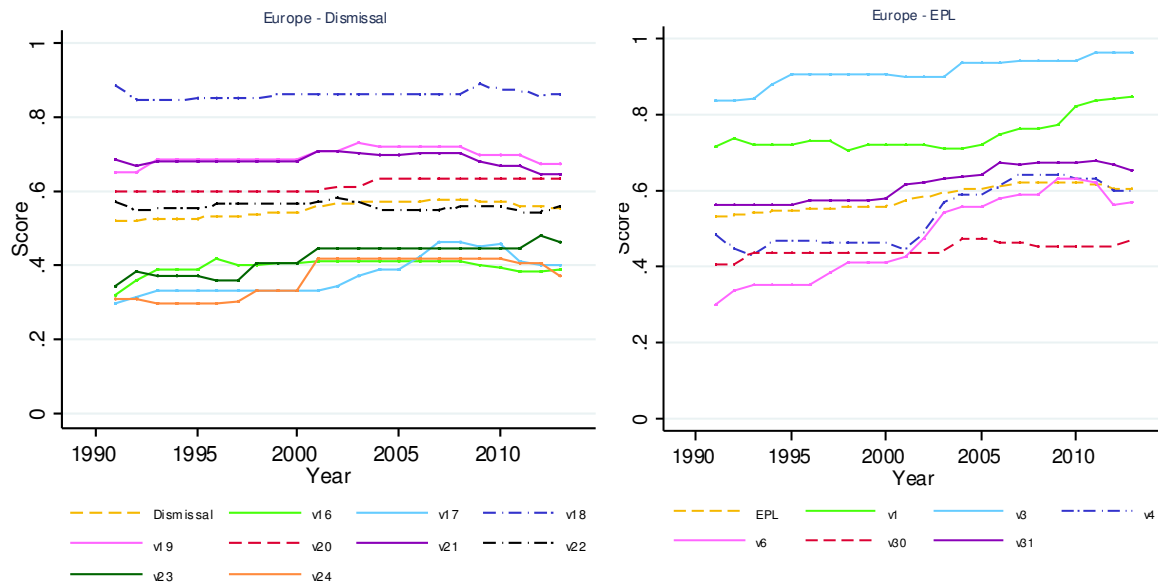


Figure 13

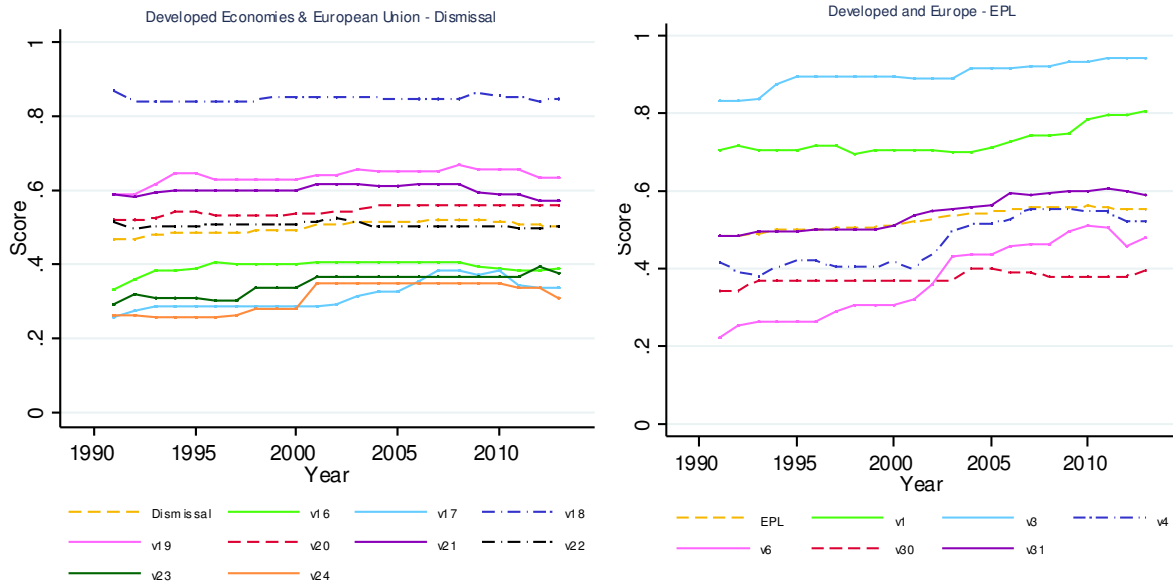


Figure 14

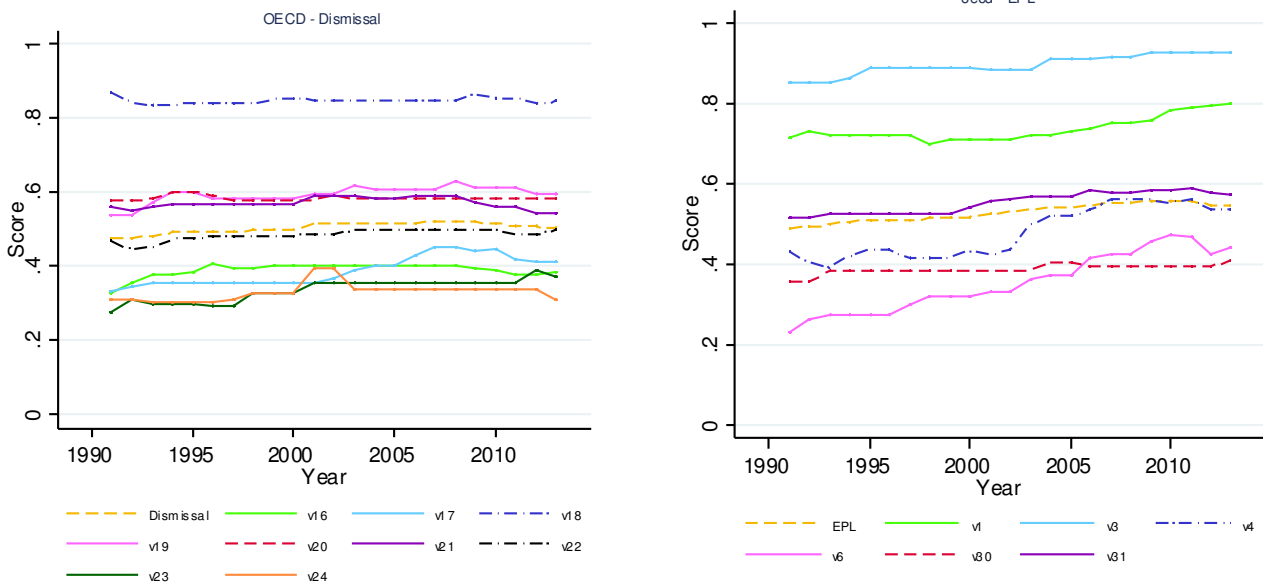


Figure 15

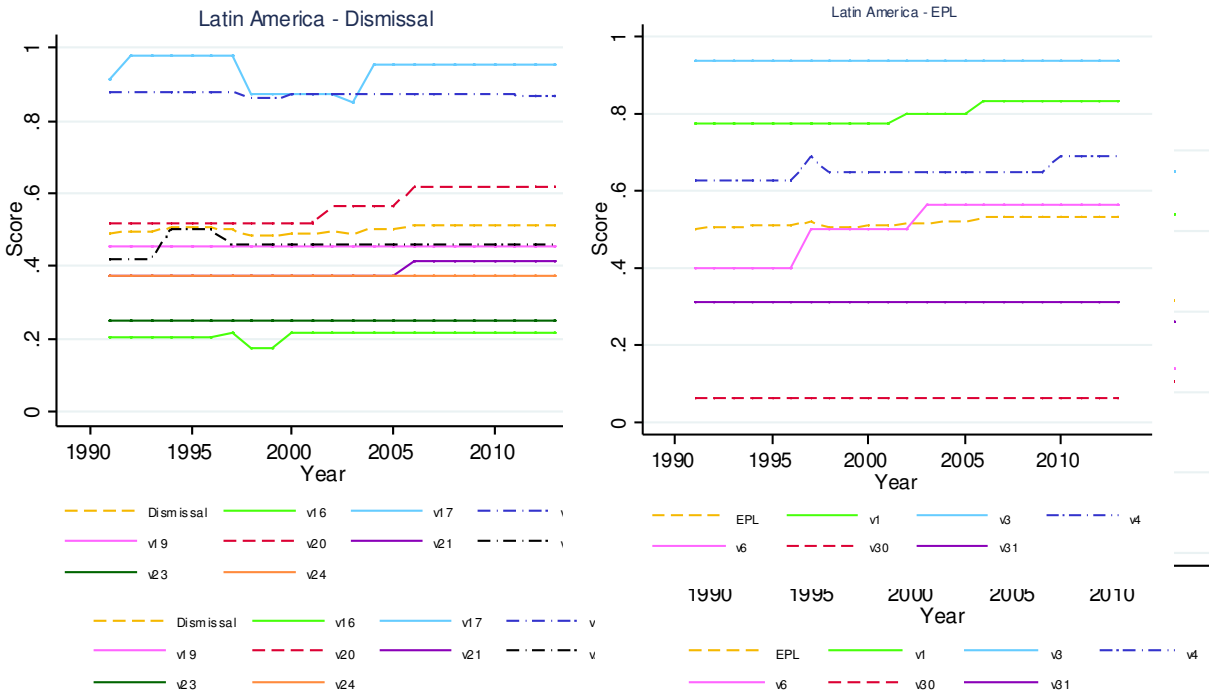


Figure 16

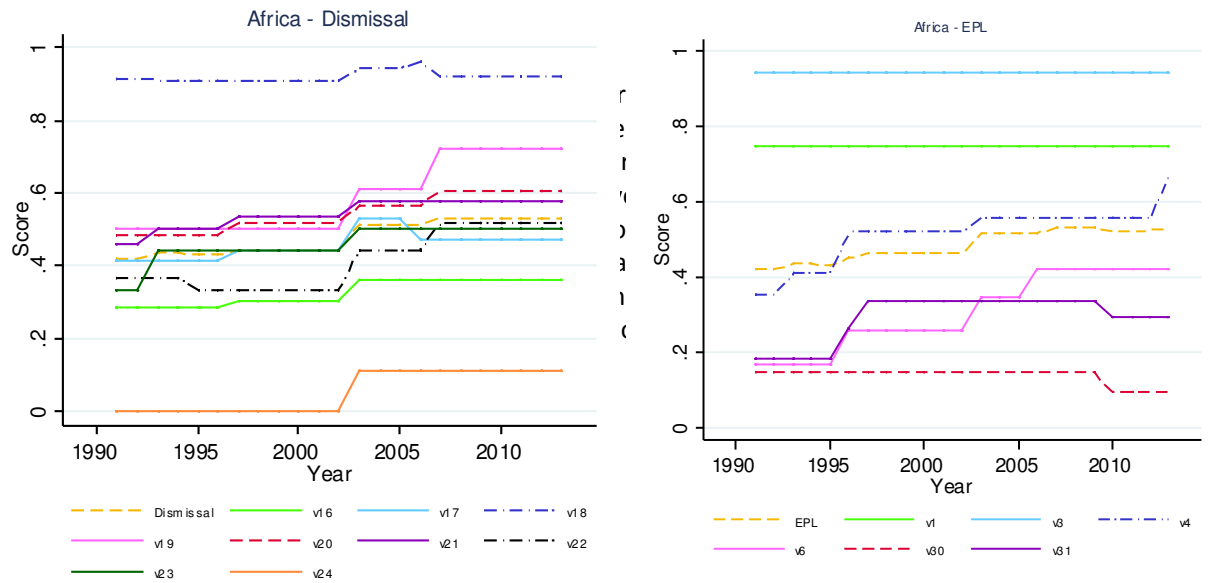


Figure 17

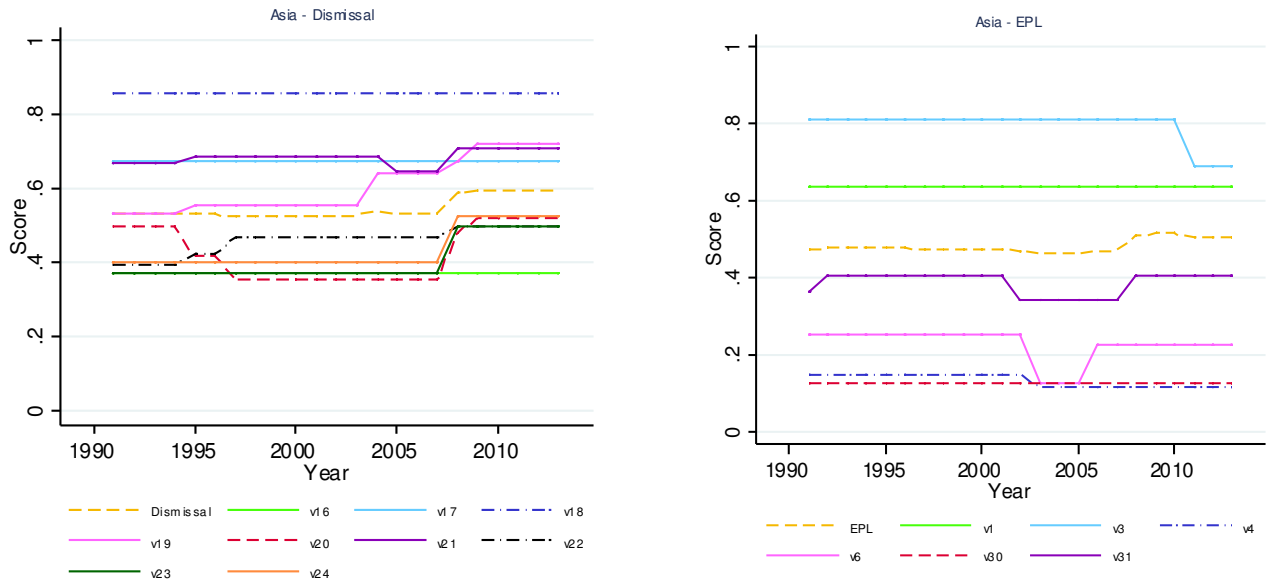
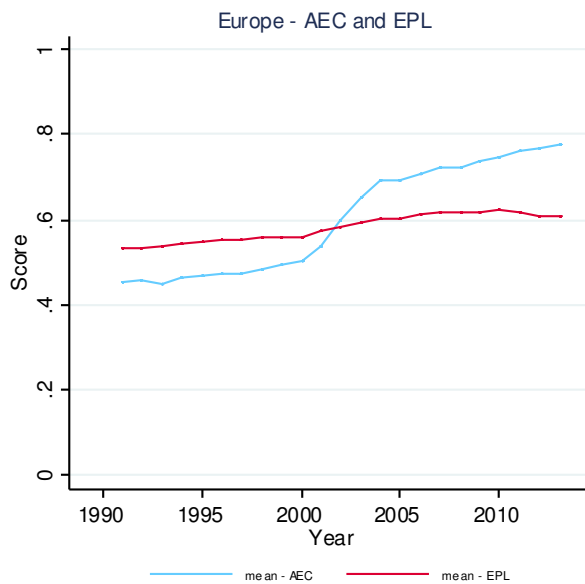


Figure 18 sums up and compares overall trends in the DFE and EPL scores for Europe. This demonstrates the more significant rising trend in the DFE score by comparison to the relatively stable trend in EPL. It also illustrates the decline in the EPL score since the onset of the financial crisis.

Figure 18



4. Econometric analysis

The literature on the economic effects of labour regulation illustrates that much depends on the chosen model and its underlying assumptions; they will significantly affect the conclusions that can be drawn about the relationship of legal regulation to economic outcomes. From a macroeconomic perspective, the much-cited work of Lazear (1990) considers the effect of EPL on the labour market and concludes that, in theory, severance payments do not have any effect in a competitive labour market. Lazear argues that a higher severance payment will be incorporated by both parties (employers and employees). The effect cancels out through the willingness of employees to forgo part of their salary, while knowing their fixed probability of keeping their job in subsequent periods and their severance payment in case of dismissal. Labour markets being however imperfect in reality, Lazear's empirical findings do show negative effects of severance payments on unemployment rates, hours worked, employment rate, and labour force participation. Other authors have revised the data (see Addison and Grosso, 1996), as well as the estimation techniques (see Addison, Teixeira, and Grosso, 2000). Montenegro and Pagés (2003) are among the authors whose findings suggest that EPL leads to fewer employment opportunities for certain groups, particularly women and young workers. But overall, the results of empirical analysis have been mixed. The inconsistent findings are conditioned by variation in key aspects including panel size, number of independent variables, econometric techniques, and indicators of EPL.

In our empirical analysis, we examine both legal regulation of both DFEs and EPL. We consider the relationship of labour regulation to labour force participation, employment-to-population ratio, the self-employment rate, the share of labour income, and the unemployment rate. We use the rate of coverage for unemployment insurance provided by the ILO (2015) as an additional covariate in the unemployment relationship. We also consider the relationship between the strength of legal regulation and productivity, measured as output per worker. To explore the effects of legal regulation on inequality, we use estimated Gini coefficients presented in the ILO *World Employment and Social Outlook 2015* (ILO, 2015b). In this context we also consider the relationship of legal regulation that is protective of workers and the Human Development Index. We use data from Freedom House to proxy for general acceptance and regard for the legal system or the rule of law.

The relatively large set of countries, observed over a long time period, facilitates a number of different empirical estimation strategies. At the same time, the present analysis can at most indicate the direction in which the potential effects of legal regulation might go. This first use of the expanded CBR-LRI dataset can do little more than offer preliminary insights concerning possible estimation strategies, and their implication for the estimated effect of legal regulation that is protective of workers.

Table 3 gives an overview of the different econometric models used to examine the relationship between legal regulation and labour market performance outcomes. Further details are contained in Appendix 1.³ Table 3 shows how, in many cases, legal regulation is estimated to have no significant impact, positive or negative, on labour market performance outcomes. These results may be influenced by various factors, ranging from the specification of the equation to the estimation technique. In a first step, a fixed effect regression is considered, then dynamic panel estimations are performed and finally, non-stationary panel analysis is attempted. The fixed effect model estimates the least amount of significant impacts. In the case of dynamic panel analysis, legal regulation of DFE does not enter the model significantly, whereas EPL is already estimated to have significant effects on various labour market performance outcomes. However, the dynamic panel estimation illustrates

³ Tables A.1-A.11 set out estimation details as well as auxiliary regressions which were performed for comparison (see Appendix 1 for more details).

the importance of the lagged outcome variables, which are highly persistent and in most cases possibly non-stationary.

One way of addressing potential unit root issues in the labour market outcomes is through exploratory non-stationary panel analysis (see Pesaran et al., 1990). We focus on a Pooled Mean Group estimator which allows for country-specific short-term effects, but constrains long term effects to be equal across countries.⁴ The Pooled Mean Group estimator is in principle the most appropriate to our analysis, as it is plausible that legal regulation of worker protection might have different effects in the long-run than in the short-run. In the event of shocks causing deviations from the long-run relationship, non-stationary panel analysis estimates the percentage of the deviation, which is corrected after one year through the so-called error correction term. The error correction term should lie between -1 and 0, with values close to -1 indicating fast adjustments, and low values indicating slow adjustments to deviations.

Table 3 Summary of econometric findings

Dependent variables	Time dimension	LRI	OLS	Fixed effects model	GMM 1	GMM 3	PMG LT	PMG SR
Self-employment rate	1991 – 2013	DFE	.	-	.	.	-	.
		EPL	.	.	-	.	-	.
Labour productivity per worker	1991 – 2013	DFE	.	.	.	.	.	.
		EPL	.	.	-	.	+	.
Employment to population ratio	1991 – 2013	DFE	.	.	.	.	+	.
		EPL	.	.	+	+	+	-
Labour force participation	1991 – 2013	DFE	+	+	.	.	.	.
		EPL	.	+	.	+	+	-
labour share	1991 - 2013 (unbalanced)	DFE	.	.	.	.	+	-
		EPL	.	.	+	.	+	.
Unemployment rate	1991 – 2013	DFE	.	.	.	.	-	.
		EPL	.	.	.	.	-	.
Market Gini	1991, 2000, 2013	DFE	.	.	.	.	.	.
		EPL	.	.	.	.	.	.
Net Gini	2005, 2011	DFE	.	.	.	.	.	.
		EPL	.	.	.	.	.	.
Human Development Index	2005 – 2013	DFE	.	.	.	.	.	.
		EPL	.	.	.	.	.	.

⁴ To tackle the non-stationarity issue, we also carried out regression analysis using first-differences. This revealed no significant change in the results.

We estimate that relatively stronger legal regulation of DFE and EPL is negatively linked to the self-employment rate in the long-run (Tables A.1, A.2 and A.5). The estimate is highly significant, but of small magnitude in the PMG model, meaning that on average, we expect a 1 per cent increase in legal regulation of DFE to decrease the self-employment rate by 0.0486 per cent. The effect of EPL remains small even though it is nearly twice the effect of legal regulation of DFE (0.0945 per cent). The error correction term for both legal regulation of DFE and for EPL is around -0.15, suggesting an adjustment of 15 per cent in the first year of a deviation from the long-term relationship. This could imply that as the relative strength of legal regulation increases, more workers are likely to be engaged in dependent employment, that is, that self-employment becomes less attractive relative to wage employment, including DFE. This is consistent with experimental research modelling the choice of employment form under different assumptions concerning the framework of labour regulation (Bartling et al., 2014). No significant short-run effects are estimated, indicating that the change in the relative incidence of employment and self-employment does not take place in the short-run.

As shown in Tables A.1, A.2 and A.6, relatively stronger legal regulation is estimated to be positively and significantly associated with productivity, as measured through output per worker, although only in the case of stronger EPL. Increasing legal regulation of DFE is not significantly estimated to have an impact on productivity per worker. On average, worker productivity is found to rise strongly in the PMG model (0.6412 per cent) with an increase in the relative strength of EPL of 1 per cent in the long-run, but no significant short-run effects are estimated. The small correction term (-0.0402) indicates that adjustments to deviations from the long-run relationship are slow.

An increase in legal regulation of DFE and EPL is associated with a positive long-run link to the employment to population ratio each case (see Tables A.1, A.2 and A.4). The estimated coefficient of EPL is nearly twice the estimated coefficient of legal regulation of DFE. On average, we find using the PMG model that a 1 per cent increase in the relative strength of legal regulation of DFE leads to an increase in the employment to population ratio of 0.2589 per cent, and a similar increase in the relative strength of EPL to lead to an increase of 0.4591 per cent. Negative short-run effects are estimated for an increase in EPL, while none are estimated for legal regulation of DFE. The error correction term is small in both cases, pointing towards a slow adjustment after deviations from the long-run relationship.

Increasing legal regulation of DFE is not estimated to have a significant impact on labour force participation. As shown in Tables A.1, A.2 and A.3, relatively stronger EPL is however estimated have a significant and positive long-run relationship with labour force participation. This association is however a small one, with on average, a 1 per cent increase in EPL leading to an estimated 0.0422 per cent increase in long-run labour force participation in the PMG model. The short-run effects however, are estimated to be negative, even though only significant at the 10 per cent level. The error correction term for EPL is around -0.2, suggesting an adjustment of 20 per cent in the first year of a deviation from the long-term relationship.

Increases in the relative strength of legal regulation of DFE and of EPL are both positively associated with the unadjusted labour share in the long-run (Table A.1, A.2 and A.7). The estimated coefficient of legal regulation of DFE is, however, surprisingly high. On average, a 1 per cent increase in the relative strength of legal regulation of DFE is estimated to lead to a 2.0764 per cent increase in the unadjusted labour share in the PMG model. A negative short-run effect of 0.1104 per cent is also estimated. The estimated error correction term is very small, indicating a slow adjustment to deviations in the long-run relationship. The coefficient for EPL is significant but very small (0.0561 per cent) and the estimated error correction term suggests an adjustment of around 30 per cent to deviations of the long-run relationship after the first year.

For the investigation of a link between unemployment rate and legal regulation of worker

protection, we first estimate as with the previous variables. As shown in Tables A.1, A.2 and A.8, increasing the relative strength of legal regulation of DFE and EPL is estimated to reduce the unemployment rate in the long-run. The coefficients are of similar magnitude, with on average, a 1 per cent increase in legal regulation of DFE leading to a decrease in the unemployment rate of 0.1418 per cent, and of EPL to a fall of 0.1753 per cent in the long-run in the PMG model. No short-run effects are estimated and both error correction terms are around 10 per cent.

We then introduce the rate of de jure coverage for unemployment insurance using data from the ILO World Employment and Social Outlook report for 2015 (ILO, 2015b: chapter 2). This inclusion is made since it seems plausible to assume a link between the percentage of the population legally entitled to unemployment coverage, and the effective level of unemployment in a given country. However, as data is available only for three points in time (1990, 2000, and 2013), the possible estimation methods are constrained. As shown in Table A.9, we find that after accounting for unemployment coverage, no significant link is estimated between the unemployment rate and the relative strength of EPL.

We further examine possible links between legal regulation of DFE, and EPL, to net and market income inequality. Making use of these Gini estimates we apply a simple panel two-period fixed effect model with income inequality measures around 2005 and 2011 (see Table A.10). A priori, if stronger legal regulation of worker protection led to more equality, we would expect a possible link to appear in its relationship with market income inequality, before the redistributive effort of the state. However we estimate that legal regulation of DFE and EPL have no significant impact on market income inequality.

Yearly estimates of the Human Development Index are available from 2005 onwards. We investigate the link between legal regulation of DFE and EPL with the HDI in a dynamic panel framework (see Table A.11). We find no significant impact of relatively stronger legal regulation of worker protection on HDI. Note that the three last estimations are not comparable to the estimations using non-stationary panel analysis and do not imply that there is no relationship to the strength of worker protection. The reduced time frame does not allow to disentangle long-run and short-run effects.

5. Conclusion

There is a growing recognition that labour regulation is necessary ‘to protect workers from arbitrary or unfair treatment and to ensure efficient contracting between employers and workers’ (World Bank, 2015, p. 231). Labour laws are not simply imposed on economies from outside, by governments or international labour conventions. The need for regulation is internal to the way labour markets work and is endogenous to the developmental growth paths of countries. Labour laws respond to changing circumstances (Adams and Deakin, 2015).

Quantifying changes in the content of labour law rules over time is an important step in understanding how labour regulation and labour markets coevolve, that is, mutually adjust, over time, to changing economic and political circumstances. However, measuring labour law in a longitudinal or historical setting is not at all a straightforward process from a methodological point of view. Difficult issues of variable selection and definition inevitably arise, along with choices concerning weighting and aggregation. In this paper we have presented first findings from the extended version of the CBR-LRI index, which provides one particular approach to coding labour law rules which, uniquely, makes it possible to track changes in the content of de jure labour regulations over several decades. The CBR-LRI index thereby clarifies certain trends in the development of

labour law over time, which would otherwise be obscured by the sheer detail and complexity of legal regulation in this area.

One of the most important changes in labour markets in recent decades is the rise in non-standard forms of employment, notably part-time work, temporary work and fixed-term employment (ILO, 2015). As we have seen, while the incidences of these forms have increased, countries have also been passing laws protecting workers in non-standard work, in particular by enacting requirements of equal treatment for part-time workers with full-time workers, and for fixed-term and agency workers with permanent and regular workers. This is a global trend although most marked in Europe.

We have also seen that employment protection laws have been very gradually strengthening over time, a trend which is common across countries and regions. In Europe, but not elsewhere, there has been a recent dip in protection following the onset of the financial crisis of 2008, but the changes made are not huge particularly when put in the context of the increase in protection over the preceding decades.

Econometric analysis using panel data and time series techniques is another area in which there have recently been methodological advances which are helpful for understanding the relationship between labour regulation and the labour market. These techniques enable us to study the short-term and long-term effects of legal changes on the economy. The analysis presented in this paper shows that there have been no discernible negative effects of the recent increases in protection for non-standard employment forms. Nor does the gradual increase in employment protection which most countries and regions have experienced over the past two and a half decades appear to be linked to negative economic effects over the long run. Panel data analysis which distinguishes between long-run and short-run effects points to small but positive impacts of employment protection laws on the employment to population ratio, labour productivity, and labour's share of national income. They also suggest that rising employment protection is consistent with falling unemployment, although again the effect is small.

It has not been possible in this paper to present more than a preliminary analysis of findings from the extended version of the CBR-LRI, and much more work will have to be done in order to better understand the fit between labour regulation and labour market outcomes in different countries and regions, to extend the analysis to cover individual sectors, and to take into account the gap between the formal law and the law in practice. Three tentative conclusions, however, may be suggested:

- (i) there is a high degree of regional and global convergence in the formal content of laws governing non-standard employment forms and dismissal protection;
- (ii) the economic effects of employment protection laws are not negative, and may sometimes be positive; and
- (iii) these effects are relatively small when set against wider economic trends.

Appendix 1: Methodological approach to the econometric analysis

Direct cross-country comparisons are not appropriate in our setting, since unobserved country-specificities are likely to play a significant role in shaping the content and strength of national labour regulation. Looking at a panel of countries over time allows for an analysis of relevant relationships while accounting for unobserved time-invariant country-effects.

Classical econometric panel-data analysis has been developed for cases in which the number of individuals (countries) is large and the number of time periods is fixed. The theory proposes various methods to estimate panel regressions where fixed effects and random effects estimations are the usual starting point (Baltagi, 2013).

The choice between random effects and fixed effects models is driven by considerations about the unobserved individual effects. In our case, country specificities are expected to relate to the labour market performance indicators (the dependent variables), meaning that the individual effects are correlated with the CBR-LRI sub-indices (the explanatory variable). This would suggest a fixed effect framework, since the random effect model assumes the individual effects to be random, not correlated with the labour regulation index.

Another important point is the evolution of the dependent variables over time. The labour market performance indicators we use here vary only slowly over time, suggesting that the value taken in the previous period is of importance for the determination of the value for the current period. Including this in our model means working with a dynamic framework. If adequate, the dynamic framework might significantly change the estimation results, since OLS and fixed effects estimations are biased in a dynamic setting (Baltagi, 2013). An interesting feature of OLS and fixed effects estimations is that their different biases go in opposite directions, and so can be used to determine the range of the lagged dependent variable. An adequate dynamic model estimate should therefore lie between the fixed effects (negative bias) and the OLS (positive bias) estimate. Note that the negative bias of the fixed effect estimates is of order $(1/T)$ and therefore becomes negligible for datasets with a long time dimension (see Nickel, 1981). However, as shown by Judson and Owen (1999), this bias is still considerable for panels of sizes comparable to our data.

The estimation technique we use for dynamic panels is system GMM as presented by Arellano and Bover (1995) and Blundell and Bond (1998), using first differences as well as levels of the dependent and explanatory variables to address endogeneity issues. Different parameters can be adjusted to reduce the number of instruments and to correct for inefficient standard errors (see Baltagi 2013 and Roodman 2009). Various tests are provided to assess if the underlying assumptions are violated. The test for the absence of first order serial correlation should be rejected since the residuals in first difference follow an MA(1) process with unit root if the original residuals are independent and identically distributed. Testing for absence of second order correlation should not be rejected.

In all regressions we introduce additional covariates to account for the economic situation (GDP growth) and the size of the working-age population in the country, as well as dummy variables to capture yearly effects. We also introduce the Freedom House indicator, which estimates the extent of political and civil rights in given country. Note however that the contribution of this indicator is limited to countries where the political and civil rights change over the sample period. As mentioned above, all time-invariant effects are cancelled out through the use of the dynamic framework. Average educational attainment could be used as a variable giving an indication of the basic skills of the average workforce. This may be pursued in future research.

Another way to take advantage of panels with long time dimensions is through non-stationary panel analysis as presented in Pesaran et al. (1999). Longer time series are now available and the

assumptions of fixed and small T, and N going to infinity, are no longer always appropriate. Pesaran et al. argue that standard pooled estimators such as fixed effects are not adequate to estimate dynamic panels, because of their potentially large bias in case of heterogeneous parameters across countries and serially correlated regressors.

Two main estimators are presented by Pesaran et al. (1999) and compared to a dynamic fixed effect framework. In the dynamic fixed effect framework (DFE), short-run and long-run effects are assumed to be homogenous across countries. The Pooled Mean Group (PMG) estimator still assumes that that in the long-run the relationship between the estimated variables is homogenous across countries, whereas the short-run effects are allowed to be country-specific. The Mean Group estimator (MG) estimates country-specific effects for the long-run and short-run relationship. It is clear that the more heterogeneity is allowed in the estimation, the longer the necessary time dimension. The estimators have properties which make it possible to use a Hausman test to assess which is the most appropriate estimator given the data. In our case, the time dimension we are using is too short to attempt an MG estimator.⁵ We therefore estimate PMG and DFE and perform a Hausman test. The test always rejects the hypothesis of homogenous short-run effects, pointing towards the Pooled Mean Group estimator as the appropriate one. Further tests on cointegration and unit-roots are performed as part of the analysis.

The labour market performance outcomes we use are taken from the Key Indicators of the Labour Market compiled by the International Labour Office. Since not all indicators are reported yearly by all countries, missing variables are imputed through some kind of model. To assess the impact of these missing variables on our model, all estimations were rerun using only reported values. The loss of observations is small compared to the sample size and the impact on the estimated coefficients negligible. However, some countries are excluded from the analysis because a minimum of 10 reported observations per country is set as requirement. Also, non-stationary panel analysis can only be performed taking into account all available observations. Therefore, we use the reported and estimated outcome variables in our estimations.

⁵ Although the CBR-LRI goes back to 1970 for most of the countries in the dataset, this not the case with most of the economic outcome variables that we are using, so in order to present a consistent picture across the different outcome variables, a shorter period, from 1991 to the present day, is used.

Table A.1 Pooled mean group estimation with different forms of employment

	Labour force participation	Employment to population	Self-employment	Productivity per worker	Labour share	Unemployment rate
Long run						
DFE	0.0104	0.2589***	-0.0486***	0.1657	2.0764***	-0.1418***
GDP growth	0.0019***	0.0438***	-0.0040***	0.1682***	0.0021*	-0.0292***
Population	-0.0007***	0.0007**	-0.0116***	0.0057***	-0.0046***	-0.0009***
Freedom House	-0.0100***	-0.0311**	-0.0261***	-0.1444***	-0.0489***	-0.0147**
Short run						
Error correction	-0.1874***	-0.0469***	-0.1639***	-0.0349***	-0.0677***	-0.0978***
Δ DFE	0.0038	-0.0113	0.0883	-0.0181	-0.1104**	-0.0014
Δ GDP growth	-0.0003***	-0.0007***	0.0007***	0.0008**	-0.0016***	0.0010***
Δ Population	-0.0825	-0.1196	0.016	0.0701	-0.141	0.0472
Δ Freedom House	0.0012	0.0011	0.0013	-0.0002	0.0004	-0.0014
Constant	0.1214***	0.0191***	0.0757***	0.3224***	-0.0028	0.0267***
Observations	1381	1381	1381	1381	963	1381

Table A.2 Pooled mean group estimation with employment protection legislation

	Labour force participation	Employment to population	Self-employment	Productivity per worker	Labour share	Unemployment rate
Long run						
EPL	0.0422***	0.4591***	-0.0945***	0.6412**	0.0561***	-0.1753***
GDP growth	0.0017***	0.0325***	-0.0032***	0.1466***	-0.0022***	-0.0242***
Population	0.0002*	0.0004*	-0.0124***	0.0053***	-0.0002***	-0.0069***
Freedom House	-0.0064***	-0.0214**	-0.0055**	-0.1285***	0.0079***	-0.0223***
Short run						
Error correction	-0.1994***	-0.0611***	-0.1752***	-0.0402***	-0.3227***	-0.1095***
Δ EPL	-0.0861*	-0.1430*	0.0019	0.2008	-0.0649	0.0235
Δ GDP growth	-0.0003***	-0.0007***	0.0006***	0.0008**	-0.0008***	0.0009***
Δ Population	-0.0944	-0.0894	0.0292	0.0908	-0.1884	0.008
Δ Freedom House	0.0012	0.0013	0.0002	-0.0003	-0.0002	-0.0012
Constant	0.1178***	0.0203***	0.0817***	0.3606***	0.1551***	0.0440***
Observations	1381	1381	1381	1381	963	1381

Table A.3 Other estimated models for labour force participation

Labour force participation rate									
	OLS	FE	System GMM	System GMM		OLS	FE	System GMM	System GMM
LFP_{t-1}	1.2144***	1.0621***	1.1755***	1.2998***		1.2188***	1.0610***	1.2434***	1.3427***
CI(LFP_{t-1})	1.1244,1.3043	1.0083,1.1158	0.9215,1.4296	1.0153,1.5842		1.1294,1.3083	1.0072,1.1148	1.0105,1.4763	1.0936,1.5918
LFP_{t-2}	-0.2210***	-0.1902***	-0.2171*	-0.3393**		-0.2263***	-0.1907***	-0.2851**	-0.3824***
CI(LFP_{t-2})	-0.3107,- 0.1313	-0.2417,- 0.1386	-0.4724,0.0382	-0.6195,- 0.0591		-0.3159,- 0.1366	-0.2422,- 0.1392	-0.5102,- 0.0600	-0.6359,- 0.1290
DFE	0.0024***	0.0005	0.0171**	0.0116	EPL	0.0003	-0.0038	0.0315**	0.0351*
GDP growth	0.0003***	0.0001*	0.0001	0.0001		0.0003***	0.0001*	0.0001	0.0001
Population	-0.0000***	-0.0001***	0	0		-0.0000***	-0.0001***	0	0
Freedom House	-0.0001	0.0007	0.002	0.0003		-0.0001	0.0007	0.0021	0.0005
Constant	0.0037**	0.0806***	0.0097	0.0166		0.0056**	0.0840***	0.0028	0.0044
Observations	1323	1323	1323	1323		1323	1323	1323	1323
F	18344.2317	316.3209				20273.5553	316.4469		
Countries		63	63	63			63	63	63
Instruments			194	96				194	96
ar1			-3.3799	-3.3488				-3.7465	-3.7898
ar2			0.1558	0.7354				0.6017	1.0001
Sargan			157.7103	56.6575				163.1877	62.9026
Hansen			43.4381	38.9092				40.8457	40.464

Table A.4 Other estimated models for employment-to-population ratio

Employment-to-population rate								
	OLS	FE	System GMM	System GMM	OLS	FE	System GMM	System GMM
EMP_{t-1}	1.1820***	1.0742***	1.2762***	1.2338***	1.1833***	1.0743***	1.2755***	1.2482***
CI(EMP_{t-1})	1.1332,1.2307	1.0241,1.1243	1.1125,1.4399	1.0441,1.4235	1.1346,1.2321	1.0243,1.1244	1.1116,1.4393	1.0541,1.4424
EMP_{t-2}	-0.1931***	-0.2088***	-0.3446***	-0.2748***	-0.1955***	-0.2086***	-0.3522***	-0.2799***
CI(EMP_{t-2})	-0.2418,-0.1443	-0.2579,-0.1597	-0.5069,-0.1822	-0.4735,-0.0760	-0.2442,- 0.1468	-0.2577,- 0.1595	-0.4993,- 0.2051	-0.4632,- 0.0965
DFE	0.0021	-0.001	0.0123	0.0062	EPL -0.0005	-0.0018	0.0456**	0.0541*
GDP growth	0.0011***	0.0010***	0.0009***	0.0008***	0.0010***	0.0010***	0.0010***	0.0009***
Population	-0.0000***	-0.0001***	0	0	-0.0000***	-0.0001***	0	0
Freedom House	-0.0004**	0.0009	0.002	0.0016	-0.0004**	0.0009	0.0022	0.001
Constant	0.0054**	0.0772***	0.0196	0.0082	0.0076***	0.0773***	0.007	-0.0199
Observations	1323	1323	1323	1323	1323	1323	1323	1323
F	4117.3767	260.2377			4109.7717	260.2278		
Countries		63	63	63		63	63	63
Instruments			194	96			194	96
ar1			-4.192	-3.9354				
ar2			0.7202	0.357				
Sargan			162.6895	62.2379				
Hansen			38.8716	36.5844				

Table A.5 Other estimated models for self-employment rate

Self-employment rate									
	OLS	FE	System GMM	System GMM		OLS	FE	System GMM	System GMM
SE_{t-1}	0.9940***	0.8728***	0.9809***	0.9858***		0.9940***	0.8772***	0.9676***	0.9803***
CI(SE_{t-1})	0.9896,0.9985	0.8468,0.8987	0.9423,1.0196	0.9446,1.0269		0.9895,0.9985	0.8515,0.9030	0.9187,1.0165	0.9221,1.0384
DFE	-0.0002	-0.0103***	-0.0066	-0.0057	EPL	0.0003	-0.0139	-0.0454**	-0.0465
GDP growth	-0.0003**	-0.0002**	-0.0001	-0.0001		-0.0003**	-0.0002**	-0.0002	-0.0001
Population	0	-0.0001***	0	0		0	-0.0001***	0	0
Freedom House	0.0003	0.0003	0.0015	0.001		0.0003	0.0002	0.0009	0.0005
Constant	0.0003	0.0448***	0.0075	0.0046		0	0.0444***	0.0308**	0.0263
Observations	1384	1384	1384	1384		1384	1384	1384	1384
F	51314.5664	288.2697				40924.1586	287.0034		
Countries		63	63	63			63	63	63
Instruments			196	98				196	98
ar1			-3.7205	-3.7346				-3.7286	-3.7198
ar2			0.3088	0.3055				0.2943	0.2738
Sargan			166.11	66.8625				171.0871	60.7329
Hansen			33.3124	40.8431				31.1516	41.4295

Table A.6 Other estimated models for labour productivity per worker

Labour productivity per worker									
	OLS	FE	System GMM	System GMM		OLS	FE	System GMM	System GMM
PRD _{t-1}	1.0916***	1.0085***	0.8978***	0.8719***		1.0911***	1.0084***	0.8834***	0.8749***
CI(PRD _{t-1})	1.0151,1.1682	0.9727,1.0442	0.8117,0.9840	0.7849,0.9589		1.0143,1.1680	0.9726,1.0442	0.8074,0.9594	0.7783,0.9714
PRD _{t-2}	-0.0941**	-0.0683***	0.1052**	0.1329***		-0.0935**	-0.0670***	0.1201***	0.1324***
CI(PRD _{t-2})	-0.1721,-0.0162	-0.1040,-0.0325	0.0229,0.1875	0.0464,0.2195		-0.1717,-0.0152	-0.1027,-0.0314	0.0485,0.1917	0.0360,0.2288
DFE	-0.0006	0.0103	-0.038	-0.043	EPL	0.0087	0.0198	-0.1000*	-0.0784
GDP growth	0.0055***	0.0060***	0.0073***	0.0075***		0.0056***	0.0060***	0.0073***	0.0075***
Population	0.0000***	0.0003***	0.0001**	0.0001		0.0000***	0.0002***	0.0001**	0.0001**
Freedom House	-0.0050***	-0.001	-0.0123*	-0.0092		-0.0049***	-0.0009	-0.012	-0.0132*
Constant	0.0285	0.5709***	0.0173	-0.0101		0.0211	0.5553***	0.0422	-0.0054
Observations	1323	1323	1323	1323		1323	1323	1323	1323
F	189370.2759	2712.4536				191469.6078	2711.1455		
Countries		63	63	63			63	63	63
Instruments			194	96				194	96
ar1			-3.6374	-3.3923				-3.7221	-3.3431
ar2			-2.0942	-2.2194				-2.1529	-2.1758
Sargan			286.8723	112.0043				298.8376	105.5441
Hansen			41.4976	40.0128				34.6027	41.1405

Table A.7 Other estimated models for labour share

Labour share									
	OLS	FE	System GMM	System GMM		OLS	FE	System GMM	System GMM
LS_{t-1}	0.9895***	0.7565***	0.8182***	0.9424***		0.9886***	0.7562***	0.7133***	0.8596***
CI(LS_{t-1})	0.9778,1.0013	0.7163,0.7966	0.5813,1.0552	0.8117,1.0732		0.9756,1.0016	0.7160,0.7963	0.4785,0.9482	0.6957,1.0235
DFE	0.0009	0.0051	0.0091	-0.0243	EPL	-0.0023	-0.0137	0.1082***	-0.025
GDP growth	0	-0.0001	-0.0011*	-0.0015***		0	-0.0001	-0.0014***	-0.0012***
Population	0	0	0	0		0	-0.0001*	0	0
Freedom House	0.0085	0.1197***	0.1029	0.0572*		0.0111*	0.1314***	0.1017	0.0983**
Constant	-0.0004	0.0015	-0.0096	-0.0041		-0.0005	0.0014	-0.01	-0.0064
Observations	992	992	992	992		992	992	992	992
F	4085.7644	64.2763				4095.3691	64.304		
Countries		53	53	53			53	53	53
Instruments			213	98				213	98
ar1			-3.3586	-3.3246				-2.9044	-3.0961
ar2			-0.8346	-0.929				-0.8494	-0.8663
Sargan			269.4357	131.9297				277.0503	130.2991
Hansen			27.117	29.3399				21.1755	29.4694

Table A.8 Other estimated models for unemployment rate

Unemployment Rate								
	OLS	FE	System GMM	System GMM	OLS	FE	System GMM	System GMM
U_{t-1}	1.1342***	1.0668***	1.2117***	1.1610***	1.1340***	1.0666***	1.2082***	1.1536***
CI(U_{t-1})	1.0127,1.2557	1.0190,1.1146	1.0940,1.3293	0.9840,1.3380	1.0126,1.2554	1.0188,1.1144	1.0882,1.3282	0.9748,1.3325
U_{t-2}	-0.1793***	-0.2244***	-0.3342***	-0.2351***	-0.1794***	-0.2252***	-0.3348***	-0.2657***
CI(U_{t-2})	-0.2961,-0.0626	-0.2736,-0.1752	-0.4454,-0.2231	-0.3780,-0.0922	-0.2964,- 0.0624	-0.2745,- 0.1760	-0.4521,- 0.2176	-0.4206,- 0.1108
DFE	0	0.0013	-0.0127	-0.0035	EPL 0.0009	-0.005	-0.0247	-0.029
GDP growth	-0.0013***	-0.0015***	-0.0013***	-0.0014***	-0.0013***	-0.0015***	-0.0013***	-0.0012***
Population	0.0000*	0	0	0	0.0000*	0	0	0
Freedom House	0.0043***	0.0147***	0.0303***	0.0251**	0.0037**	0.0185***	0.0408***	0.0423*
Constant	0.0006**	-0.0004	-0.0011	-0.0024	0.0006***	-0.0005	-0.0026	-0.0028
Observations	1323	1323	1323	1323	1323	1323	1323	1323
F	994.8078	189.9527			884.0062	189.9985		
Countries		63	63	63		63	63	63
Instruments			194	96			194	96
ar1			-3.9956	-3.5844			-3.9651	-3.5513
ar2			0.8216	0.1567			0.8263	0.3023
Sargan			187.6506	72.7984			201.2475	69.2158
Hansen			41.2249	42.1618			41.1403	43.1966

Table A.9 Other estimated models for unemployment rate

	Unemployment rate				
	OLS	FE		OLS	FE
LS_{t-1}	0.6352***	-0.7239***		0.6319***	-0.7177***
$CI(LS_{t-1})$	0.4966,0.7739	-1.0220,- 0.4259		0.4931,0.7708	-1.0139,- 0.4215
DFE	0.0019	0.0054	EPL	0.0129	-0.0407
Unemployment coverage	0	-0.0002		0	-0.0002
GDP growth	-0.0053***	-0.0040***		-0.0052***	-0.0042***
Population	0	0		0	0
Freedom House	0.0005	0.0054		0.0005	0.0043
Constant	0.0489***	0.1543***		0.0433**	0.1794***
Observations	126	126		126	126
F	18.6939	6.4672		18.7816	6.5524
Countries		63			63

Table A.10 Other estimated models for Gini index

	market Gini		net Gini	
	FE	FE	FE	FE
DFE	-0.0607		-0.0588	
EPL		-0.0536		-0.0845
GDP growth	-0.0078***	0.0014	0.0003	-0.0068***
Population	0.0004	-0.0003	-0.0003	0.0005
Constant	0.6289***	0.4102***	0.4255***	0.6263***
Freedom House	-0.0308	-0.0213	-0.0217	-0.0312
Observations	70	70	70	70
F	3.3473	1.6983	2.4712	2.7228
Countries	35	35	35	35

Table A.11 Other estimated models for Human Development Index

Human Development Index									
	OLS	FE	System GMM	System GMM		OLS	FE	System GMM	System GMM
HDI _{t-1}	0.9901***	0.8207***	0.9589***	0.9629***		0.9902***	0.8202***	0.9619***	0.9623***
CI(HDI _{t-1})	0.9823,0.9979	0.7802,0.8612	0.9297,0.9881	0.9320,0.9938		0.9824,0.9980	0.7795,0.8609	0.9304,0.9933	0.9297,0.9948
DFE	0.0014*	-0.0004	0.0047	0.0032	EPL	0.0007	0.0016	0.0007	-0.0022
GDP growth	0.0003***	0.0004***	0.0003**	0.0003***		0.0003***	0.0004***	0.0003***	0.0003**
Population	0.0000*	0	0	0		0	0	0	0
Freedom House	-0.0001	0.0012	-0.0019	-0.0014		-0.0002	0.0012	-0.0014	-0.0015
Constant	0.0105***	0.1359***	0.0360**	0.0329**		0.0110***	0.1353***	0.0353**	0.0367**
Observations	496	496	496	496		496	496	496	496
F	57127.2333	472.7766				47363.7996	472.827		
Countries		62	62	62			62	62	62
Instruments			172	165				172	165
ar1			-2.5241	-2.5354				-2.5462	-2.5343
ar2			-0.6548	-0.6883				-0.6679	-0.6574
Sargan			186.6517	180.1984				190.1382	180.8968
Hansen			52.2245	51.5111				52.9139	50.816

Appendix 2. Coding algorithms and data for France.

Variable	Algorithm	Score	Explanation
A. Alternative employment contracts		Example	
1. The law, as opposed to the contracting parties, determines the legal status of the worker	<ul style="list-style-type: none"> • Equals 0 if the parties are free to stipulate that the relationship is one of self-employment as opposed to employee status; 0.5 if the law allows the issue of status to be determined by the nature of the contract made by the parties (as in the case of the English common law 'mutuality of obligation' test); and 1 if the law mandates employee status on the parties if certain specified criteria are met (such as form of payment, duration of hiring, etc.). • Scope for scores between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	The law defines the circumstances in which a contract of employment is deemed to exist and lists the relationships to which the Labour Code (LC) applies. Case law of the Court of Cassation has consistently taken the view that employment status does not depend on the will of the parties or the designation they give the contract (see e.g. Cass. Soc. 2007-44-759, 19 May 2009).
2. Part-time workers have the right to equal treatment with full-time workers	<ul style="list-style-type: none"> • Equals 1 if the legal system recognises a right to equal treatment for part-time workers (as, for example, in the case of EC Directive 97/81/EC). • Equals 0.5 if the legal system recognises a more limited right to equal treatment for part-time workers (via, e.g., sex discrimination law or a more general right of workers not to be treated arbitrarily in employment). • Equals 0 if neither of the above. • Scope for scores between 0 and 1 to reflect changes in the strength of the law. 	1970: 0.33 1982: 1	LC Arts. L. 3123-10 and L.3123-11 grant equal treatment for working conditions and pay. This right was first established from 1982. Prior to 1982 there was limited protection from the general right not to be treated arbitrarily in employment.
3. Part-time workers have equal or proportionate dismissal rights to full-time workers	<ul style="list-style-type: none"> • Equals 1 if as a matter of law part-time workers enjoy proportionate rights to full-time workers in respect of dismissal protection (notice periods, severance pay and unjust dismissal protection). • Equals 0 otherwise. • Scope for further gradation 0 and 1 to reflect changes in the strength of the law. 	1970: 1	No distinction is made between part-time and full-time workers for the purposes of dismissal law.

4. Fixed-term contracts are allowed only for work of limited duration.	<ul style="list-style-type: none"> • Equals 1 if the law imposes a substantive constraint on the conclusion of a fixed-term contract, by, for example, allowing temporary hirings only for jobs which are temporary by nature, training, seasonal work, replacement of workers on maternity or sick leave, or other specified reasons. • Equals 0 otherwise. • Scope for gradation between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0 1982: 1 1985: 0.75 1986: 0.5 1990: 1</p>	<p>LC Arts. L. 122-1 et seq., dating from 1982 in this form, provided that a fixed-term contract could only be entered into for a precise and defined task, and an exhaustive list of circumstances was set out. This approach was relaxed progressively between 1985 and 1986: rather than setting out an exhaustive list, the law allowed fixed term contracts for a defined task, provided that the job was not a continuing one. 1990 Act No. 90-613 reintroduced the exhaustive list approach. See now LC Art. L. 1242-2.</p>
6. Fixed-term workers have the right to equal treatment with permanent workers	<ul style="list-style-type: none"> • Equals 1 if the legal system recognises a right to equal treatment for fixed-term workers (as, for example, in the case of EC Directive 99/70/EC). • Equals 0.5 if the legal system recognises a more limited right to equal treatment for fixed-term workers (via, e.g., more general right of workers not be treated arbitrarily in employment) • Equals 0 if neither of the above. • Scope for further gradation between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0.33 1979: 1</p>	<p>LC Art. L.122-3-4 (originating in Act No.79-11) provided for equal treatment. See now LC Art. L. 1242.14. Prior to 1979 there was only general protection against arbitrary treatment in employment.</p>
6. Maximum duration of fixed-term contracts	<ul style="list-style-type: none"> • Measures the maximum cumulative duration of fixed-term contracts permitted by law before the employment is deemed to be permanent. The score is normalised from 0 to 1, with higher values indicating a lower permitted duration. The score equals 1 if the maximum limit is less than 1 year and 0 if it is 10 years or more or if there is no legal limit. 	<p>1970: 0 1979: 1 1990: 0.95</p>	<p>LC Art. L.122-1 (Act No.79-11): the normal maximum duration of a fixed-term contract is one year. This was extended to 18 months in 1990. See now LC Art. L. 1242-8.</p>
7. Agency work is prohibited or strictly controlled	<ul style="list-style-type: none"> • Equals 1 if the legal system prohibits the use of agency labour. • Equals 0.5 if it places substantive constraints on its use (in the sense of allowing it only if certain conditions are satisfied, such as a demonstrable need on the part of the employer to meet fluctuations in labour demand). • Equals 0 if neither of the above. • Scope for further gradation between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0.25 1982: 0.75 1985: 0.25 1990: 0.75</p>	<p>In 1945 a general prohibition on the sale of labour services through intermediaries was introduced, but temporary work agencies were not considered illegal and operated widely. In 1969 a collective agreement between Manpower and one of the principal trade unions set out loose conditions for the use of agency work which were then incorporated into the LC (Art. L. 124-2, Law 73-4). Stricter controls were introduced with effect from</p>

<p>8. Agency workers have the right to equal treatment with permanent workers of the user undertaking</p>	<ul style="list-style-type: none"> • Equals 1 if the legal system recognises a right to equal treatment for agency workers, in relation to permanent workers of the user undertaking, in respect of terms and conditions of employment in general • Equals 0.5 or another intermediate score if the legal system recognises a more limited right to equal treatment for agency workers workers (for example, in respect of anti-discrimination law) • Equals 0 if neither of the above. • Scope for further gradation between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0.25 1982: 1</p>	<p>1982 (Ordinance 92-131) loosened again in 1985 Law 85-772), and tightened again in 1990 (Law 90-613).</p> <p>LC Art. 124-4-2, introduced in 1982, first provided for a right of equal treatment for agency workers. See now LC Art. L. 1251-18. The user enterprise is also responsible for the application of certain working time and health and safety laws to agency workers (LC Art. 124-4-6, introduced in 1982, prior to which case law had established a similar rule; see now LC. Arts. L.1251-21, 1251-22, 1251-23.</p>
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B. Regulation of working time

<p>9. Annual leave entitlements</p>	<ul style="list-style-type: none"> • Measures the normal length of annual paid leave guaranteed by law or collective agreement. The same score is given for laws and for collective agreements which are de facto binding on most of the workforce (as in the case of systems which have extension legislation for collective agreements). The score is normalised on a 0-1 scale, with a leave entitlement of 30 days equivalent to a score of 1. 	<p>1970: 0.67 1982: 0.83</p>	<p>A law of 1969 introduced a 4 week annual leave period and with effect from 1973 LC Art. L.223-2 provided for two days holiday per month up to 24 days maximum. Currently Art. L.3141-3, dating in this form from 1982, provides for 2.5 days per month up to 30 days maximum.</p>
<p>10. Public holiday entitlements</p>	<ul style="list-style-type: none"> • Measures the normal number of paid public holidays guaranteed by law or collective agreement. The same score is given for laws and for collective agreements which are de facto binding on most of the workforce (as in the case of systems which have extension legislation for collective agreements). The score is normalised on a 0-1 scale, with an entitlement of 18 days equivalent to a score of 1. 	<p>1973: 0.56 1981: 0.61</p>	<p>LC Art. L.222-1: 10 days. See now LC Art. L.3133-1 (with effect from 1981) 11 days.</p>
<p>11. Overtime premia</p>	<ul style="list-style-type: none"> • Measures the normal premium for overtime working set by law or by collective agreements which are generally applicable. The same score is given for laws and for collective agreements which are de facto binding on most of the workforce (as in the case of systems which have extension legislation for collective agreements). The score equals 1 if 	<p>1970: 0.25</p>	<p>25% for the first 8 hours and 50% thereafter (previously LC Art. L. 221-5; now Art. L. 3121-22).</p>

	the normal premium is double time, 0.5 if it is time and half, and 0 if there is no premium.		
12. Weekend working	<ul style="list-style-type: none"> Measures the normal premium for weekend working set by law or by collective agreements which are generally applicable. The same score is given for laws and for collective agreements which are de facto binding on most of the workforce (as in the case of systems which have extension legislation for collective agreements). The score equals 1 if the normal premium is double time, 0.5 if it is time and half, and 0 if there is no premium. Also score 1 if weekend working is strictly controlled or prohibited. 	1970: 0.1	Currently LC Art. L.3123-3 (previously Art. L. 221-5) prescribes Sundays as the weekly rest day. Art. L.3132-27 prescribes double time.
13. Limits to overtime working	<ul style="list-style-type: none"> Measures the maximum weekly number of overtime hours permitted by law or by collective agreements which are generally applicable. The score equals 1 if there is a maximum duration to weekly working hours, inclusive of overtime, for normal employment; 0.5 if there is a limit but it may be averaged out over a reference period of longer than a week; and 0 if there is no limit on any kind. 	1970:1	Act No.71-1049 amending the Labour Code limited weekly working time to 57 hours or 50 hours averaged over 12 weeks with provision for exemptions with previous authorisation. Ordinance 82-841 set an absolute maximum of 48 hours with limited derogations allowing up to 60 hours. Legislation implementing the Working Time Directive in 1998 also set an upper limit of 60 hours per week. See now LC Art. L. 3121-35.
14. Duration of the normal working week	<ul style="list-style-type: none"> Measures the maximum duration of the normal working week exclusive of overtime. The score is normalised on a 0-1 scale with a limit of 35 hours or less scoring 1 and a limit of 50 hours or more, or no limit, scoring 0. The same score is given for laws and for collective agreements which are de facto binding on most of the workforce (as in the case of systems which have extension legislation for collective agreements). 	1970: 0.67 1982: 0.75 2000: 1 2003: 0.75	The normal working week was 40 hours in 1970, under legislation going back to 1936. In 1982 it was cut to 39 hours (Ordinance 82-41). The loi Aubry I reduced it to 35 hours with effect from 2000 (Law 98-461; LC Art. L. 212-1; LC Art. L. 3121-10) but from 2003 the effective week was 39 hours by virtue of reforms allowing the employer to increase hours to 39 without needing the permission of the labour inspectorate.
15. Maximum daily working time.	<ul style="list-style-type: none"> Measures the maximum number of permitted working hours in a day, taking account of rules governing rest breaks and maximum daily working time limits. The score is normalised on a 0-1 scale with a limit of 8 hours or less scoring 1 and a limit of 18 hours or more scoring 0. 	1970: 0.8	The maximum working day has consistently been set at 10 hours, taking into account breaks and weekly limits. See LC Arts. L-212-1, L. 212-13, L. 220-1; now, LC Art. L-3121-24.

C. Regulation of dismissal

16. Legally mandated notice period (all dismissals)	<ul style="list-style-type: none"> Measures the length of notice, in weeks, that has to be given to a worker with 3 years' employment. Normalise the score so that 0 weeks = 0 and 12 weeks = 1. 	1970: 0.67	2 months: LC Art. L.1234-1, previously Art. L. 122-6.
17. Legally mandated redundancy compensation	<ul style="list-style-type: none"> Measures the amount of redundancy compensation payable to a worker made redundant after 3 years of employment, measured in weeks of pay. Normalise the score so that 0 weeks = 0 and 12 weeks = 1. 	1970: 0.1 2002: 0.2	Legislation from 1967 introduced the principle of dismissal compensation for workers with more than 10 years' employment who were not dismissed for 'very serious' cause. Law 73-860 restated this rule and set compensation at the rate of one tenth of normal monthly salary for each year of employment (Decree 73/808). This was increased to one fifth from 2002 (Decree 2002-785). See now LC R. 1234-2.
18. Minimum qualifying period of service for normal case of unjust dismissal	<ul style="list-style-type: none"> Measures the period of service required before a worker qualifies for general protection against unjust dismissal. Normalise the score so that 3 years or more = 0, 0 months = 1 	1970: 1	Prior to 1973 under the general law of abuse of right, no qualifying period applied, and under the law on unjust dismissal of 1973 (Law 73-68), all employees were entitled to basic procedural protections, with certain additional protections, including the right to compensation, applying to those with over 2 years service, which was reduced to 1 year by Law 2008-596 (Art. L. 122-9; now Art. L. 1234-9).
19. Law imposes procedural constraints on dismissal	<ul style="list-style-type: none"> Equals 1 if a dismissal is necessarily unjust if the employer fails to follow procedural requirements prior to dismissal Equals 0.67 if failure to follow procedural requirements will normally lead to a finding of unjust dismissal. Equals 0.33 if failure to follow procedural requirement is just one factor taken into account in unjust dismissal cases. Equals 0 if there are no procedural requirements for dismissal. Scope for gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0 1973: 1	Law 73-680 Arts. 24l, 24m required for the first time a specific procedure to be followed for dismissal. Act No.75-5 L.122-14 required a written summons, a meeting, an interview and the hearing of the employee's representations. L.122-14-4 required that compensation be paid where these procedures are not followed but a valid reason exists. It provides for reinstatement where there are no valid grounds and an invalid procedure. See now LC Arts. L.1232-2 and L.1232-4. Where no written notification of the reasons for dismissals is given to the employee, the dismissal is held to have been without cause.

<p>20. Law imposes substantive constraints on dismissal</p>	<ul style="list-style-type: none"> • Equals 1 if dismissal is only permissible for serious misconduct or fault of the employee. • Equals 0.67 if dismissal is lawful according to a wider range of legitimate reasons (misconduct, lack of capability, redundancy, etc.). • Equals 0.33 if dismissal is permissible if it is 'just' or 'fair' as defined by case law. • Equals 0 if employment is at will (i.e., no cause dismissal is normally permissible). • Scope for gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0.25 1973: 1</p>	<p>Before 1973 challenges to dismissal were based on the principle of abuse of right under Art. 1780 Civil Code. There was a heavy burden on the employee which was difficult to discharge. The 1973 Act required the employer to show 'real and serious cause': Law 73-680, Arts 24n, 24o; LC Art. L. 122-14-4; see now LC Art. L. 1235-3.</p>
<p>21. Reinstatement normal remedy for unfair dismissal</p>	<ul style="list-style-type: none"> • Equals 1 if reinstatement is the normal remedy for unjust dismissal and is regularly enforced. • Equals 0.67 if reinstatement and compensation are, de iure and de facto, alternative remedies. • Equals 0.33 if compensation is the normal remedy. • Equals 0 if no remedy is available as of right. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0 1973: 0.33</p>	<p>The remedy for abuse of right Civil Code Art. 1780 was damages. Law 73-680 Art. 24p (codified as LC Art. L.122-14-4) provided for reinstatement where the procedure followed was invalid and there was no valid reason for dismissal, but compensation if either party rejected the proposal for reinstatement. L.1235-3 LC currently provides for reinstatement to be proposed by the judge on a discretionary basis. L.1235-3 makes it clear that a dismissal without cause is not void and thus maintains the general principle of compensation for an unlawful dismissal.</p>
<p>22. Notification of dismissal</p>	<ul style="list-style-type: none"> • Equals 1 if by law or binding collective agreement the employer has to obtain the permission of a state body or third body prior to an individual dismissal. • Equals 0.67 if a state body or third party has to be notified prior to the dismissal. • Equals 0.33 if the employer has to give the worker written reasons for the dismissal. • Equals 0 if an oral statement of dismissal to the worker suffices. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0 1973: 0.33 1975: 1 1986: 0.67</p>	<p>Under Law 75-5, the authorisation of a state body was required for economic dismissals, including individuals ones (LC Art. L. 321-7). From 1986, this was replaced by a duty to notify the relevant state body. See now LC Art. L. 1233-115. Act No.75-5, codified as LC Art. L.122-14-1, provided that written reasons had to be given to the employee. See now LC Art. L. 1232-6.</p>

23. Redundancy selection	<ul style="list-style-type: none"> • Equals 1 if by law or binding collective agreement the employer must follow priority rules based on seniority, marital status, number of dependants, etc., prior to dismissing for redundancy. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0 1975: 1 2013: 0.5	Law 75-5 first introduced legally binding selection criteria. See LC Art. L. 321-1-1, now LC Art. L. 1233-5. With effect from 2013, the employer has greater flexibility to implement a social plan unilaterally, bypassing normal processes including selection criteria: Law 2013-504.
24. Priority in re-employment	<ul style="list-style-type: none"> • Equals 1 if by law or binding collective agreement the employer must follow priority rules relating to the re-employment of former workers. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0 1975: 1	A right to priority in re-employment was introduced by Law 75-5. See now LC Art. L.1235-45.
D. Employee representation			
25. Right to unionisation	<ul style="list-style-type: none"> • Measures the protection of the right to form trade unions in the country's constitution. (loosely interpreted in the case of system such as the UK without a codified constitution). • Equals 1 if a right to form trade unions is expressly granted by the constitution. • Equals 0.67 if trade unions are described in the constitution as a matter of public policy or public interest. • Equals 0.33 if trade unions are otherwise mentioned in the constitution or there is a reference to freedom of association which encompasses trade unions. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	The Preamble to the 1946 Constitution refers explicitly to the right of every person to take part in trade union activities to join the union of their choice.
26. Right to collective bargaining	<ul style="list-style-type: none"> • Measures the protection of the right to collective bargaining or the right to enter into collective agreements in the country's constitution (loosely interpreted in the case of system such as the UK without a codified constitution). • Equals 1 if a right to collective bargaining is expressly granted by the constitution. • Equals 0.67 if collective bargaining is described as a matter of public policy or public interest (or mentioned within the 	1970: 0	The constitution does not guarantee collective bargaining rights and case law of the Court of Cassation has established that unions do not have a monopoly of representation rights in the workplace.

	<p>chapter on rights).</p> <ul style="list-style-type: none"> • Equals 0..33 if collective bargaining is otherwise mentioned in the constitution. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 		
27. Duty to bargain	<ul style="list-style-type: none"> • Equals 1 if employers have the legal duty to bargain and/or to reach an agreement with unions, works councils or other organizations of workers. • Equals 0 if employers may lawfully refuse to bargain with workers. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0</p> <p>1982: 1</p>	<p>A duty to bargain was introduced by the Auroux laws of 1982, in the form of a duty conduct negotiations on an annual basis in undertakings with a union presence: LC Art. L.132-27; now, LC Art. L. 2242-1.</p>
28. Extension of collective agreements	<ul style="list-style-type: none"> • Equals 1 if the law extends collective agreements to third parties at the national or sectoral level. Extensions may be automatic, subject to governmental approval, or subject to a conciliation or arbitration procedure. • Equals 0 if collective agreements may not be extended to non-signatory workers or unions, or if collective agreements may be extended only at the plant level. Mandatory administrative extensions of collective agreements are coded as equivalent to mandatory extensions by law. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 1</p>	<p>Measures providing for extension of sector-level agreements date back to 1936, and were strengthened in 1950 and again in 1982 as part of the Auroux Laws: LC Art. L.133-1, now LC Art. L. 2261-19.</p>
29. Closed shops	<ul style="list-style-type: none"> • Equals 1 if the law permits both pre-entry and post-entry closed shops. • Equals 0.50 if pre-entry closed shops are prohibited or rendered ineffective but post-entry closed shops are permitted (subject in some cases to exceptions e.g. for pre-existing employees). • Equals 0 if neither pre-entry nor post-entry closed shops are permitted to operate. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0</p>	<p>Since 1956 (Act 56-146 article 1a) it has been unlawful for an employer to take consideration of trade union membership into account in recruitment and dismissal. LC Art. L. 412-2 LC, now Art. L. 2141-5.</p>
30. Codetermination: board membership	<ul style="list-style-type: none"> • Equals 1 if the law gives unions and/or workers to right to nominate board-level directors in companies of a certain size. 	<p>1982: 0.33</p>	<p>Provisions in the Auroux laws (codified as LC Art. L.432-4 in 1982) entitled representatives of works</p>

	<ul style="list-style-type: none"> • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1986: 0.50 2013: 1</p>	<p>committees to be present at meetings of the board of directors with powers to express opinions and to be consulted. From 1986, legislation provided for employee directors elected by the workforce to be allotted between a quarter and a third of seats on the boards of public limited companies (Commercial Code Art. L. 225-79 et seq.). From 2013 (Law 2013-504) this was obligatory in all companies employing 10,000 employees worldwide or 5,000 in France.</p>
31. Codetermination and information/consultation of workers	<ul style="list-style-type: none"> • Equals 1 if the works councils or enterprise committees have legal powers of co-decision making. • Equals 0.67 if works councils or enterprise committees must be provided by law under certain conditions but do not have the power of co-decision making. • Equals 0.5 if works councils or enterprise committees may be required by law unless the employer can point to alternative or pre-existing alternative arrangements. • Equals 0.33 if the law provides for information and consultation of workers or worker representatives on certain matters but where there is no obligation to maintain a works council or enterprise committee as a standing body. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 0.50 1982: 0.67</p>	<p>French law has provided for workplace representatives since 1936 and enterprise committees since 1945, with the law strengthened in 1966, 1982 (Auroux laws) and 2002 (law on social modernisation, 2002-73). It is generally accepted that enterprise committees in France do not have the extensive codetermination rights of German works councils.</p>
E. Industrial action			
32. Unofficial industrial action	<ul style="list-style-type: none"> • Equals 1 if strikes are not unlawful merely by reason of being unofficial or 'wildcat' strikes. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	<p>1970: 1</p>	<p>There is generally no requirement of union authorisation for industrial action, although unofficial strikes may be subject to controls in the public sector (LC Art. L. 521-2; see now LC Art. L. 2512-2).</p>
33. Political industrial action	<ul style="list-style-type: none"> • Equals 1 if strikes over political (i.e. non work-related) issues are permitted. • Equals 0 otherwise. • Scope for gradations between 0 and 1 to reflect changes in 	<p>1970: 0.5</p>	<p>In principle a political strike is an abuse of right (Court of Cassation decisions of 1956 and 1961) but this will not be the case if the strike is directed against the state as employer or against economic</p>

	the strength of the law.		or social policy decisions that have a bearing on workers' interests.
34. Secondary industrial action	<ul style="list-style-type: none"> • Equals 1 if there are no constraints on secondary or sympathy strike action. • Equals 0.5 if secondary or sympathy action is permitted under certain conditions. • Equals 0 otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0.5	Pure solidarity strikes are not lawful but strikes may be called in support of general worker interests in relation to the protection of jobs, purchasing power or defence of trade union rights (Court of Cassation decision, 1971).
35. Lockouts	<ul style="list-style-type: none"> • Equals 1 if lockouts are not permitted. • Equals 0 if they are. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0.9	There is in principle no right to lock out but case law has recognised some exceptions including in situations where the business closes for economic reasons.
36. Right to industrial action	<ul style="list-style-type: none"> • Measures the protection of the right to industrial action (i.e. strike, go-slow or work-to-rule) in the country's constitution or equivalent • Equals 1 if a right to industrial action is expressly granted by the constitution • Equals 0.67 if strikes are described as a matter of public policy or public interest. • Equals 0.33 if strikes are otherwise mentioned in the constitution. • Equals zero otherwise. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	The Constitution of 1946 protects the individual right to strike.
37. Waiting period prior to industrial action	<ul style="list-style-type: none"> • Equals 1 if by law there is no mandatory waiting period or notification requirement before strikes can occur. • Equals 0 if there is such a requirement. • Scope for gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	There is no waiting period or notice required for strikes, except in the public sector (Court of Cassation case law from the early 1950s onwards).
38. Peace obligation	<ul style="list-style-type: none"> • Equals 1 if a strike is not unlawful merely because there is a collective agreement in force. • Equals 0 if such a strike is unlawful. • Scope for gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	A strike is not unlawful merely on the grounds that a collective agreement is in force (Court of Cassation decision, 1959).

39. Compulsory conciliation or arbitration	<ul style="list-style-type: none"> • Equals 1 if laws do not mandate conciliation procedures or other alternative-dispute-resolution mechanisms (other than binding arbitration) before the strike. • Equals 0 if such procedures are mandated. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 0 1982: 1	Law 1950-205 Ch. 2 Art. 5 made provision for compulsory conciliation. The element of compulsion was removed by the Auroux laws of 1982.
40. Replacement of striking workers	<ul style="list-style-type: none"> • Equals 1 if the law prohibits employers to fire striking workers or to hire replacement labour to maintain the plant in operation during a non-violent and non-political strike. • Equals 0 if they are not so prohibited. • Scope for further gradations between 0 and 1 to reflect changes in the strength of the law. 	1970: 1	The dismissal of an employee for taking part in industrial action is void except in a case of gross misconduct (Law 50-105, LC Art. L. 521-1, now LC Art. L. 2511-1). There are specific restrictions on employing fixed-term contract workers and temporary agency workers during a strike.

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