



EMPLOYMENT PROTECTION: CONCEPTS AND MEASUREMENT

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Introduction

Employment protection (EP) is one of the institutions that is of decisive importance in determining how labour markets function. It places constraints on the individual behaviour of market participants. It takes the form of laws, ordinances and legal precedents together with norms and customs. The scientific analysis of EP is concerned firstly with its origin and evolution and secondly with its effects.

Whilst these two areas of analysis have received a great deal of attention, EP itself has been mostly neglected. It must, however, be investigated in depth if one is to find an explanation for its origins and its effects. Assessing EP requires that it be clearly defined and delimited. What is more, it is necessary to formulate a theoretical concept that can serve as a basis for understanding it. Furthermore, it must be investigated empirically. Qualitative information must be transformed into quantitative information. And finally, it may prove to be necessary to aggregate individual indicators to a composite indicator.

Definitions

The term EP refers both to regulations concerning hiring as well as firing. In the first instance, the relevant regulations concern the conditions under which temporary contracts (fixed-term contracts and temporary agency work) may be concluded, which offer the possibility of circumventing the provisions of protection against dismissal within a regular employment

relationship. Regulations with respect to dismissal concern both the individual termination of a regular employment relationship and collective dismissals. The protection of regularly employed workers against dismissal represents a restriction on employers, who are no longer free to give notice to their employees without justification. This restriction has been attained through two types of sanctions: the obligation to continue the employment relationship despite notice having been given or severance pay. The prior condition for the general protection against wrongful dismissal to be effective is that an employment relationship should in fact exist, i.e. that someone is in a position of dependent gainful employment. And finally, there are certain conditions that must be fulfilled if collective dismissal is to be legally justified.

The character of EP is affected by the nature of the legal system. This influence is quite distinct, depending on whether the legal system is based on English common law or whether it is based on civil (or statutory) law. Common law is characterised by the importance of decisions made by juries, by independent judges and the emphasis on judicial discretion as opposed to the dominance of codified law. The system of common law evolved originally in England and was adapted by other English speaking countries. Civil law is characterised by a less independent judiciary and gives a greater role to codified substantive and procedural rules. It evolved out of Roman law and has been incorporated into the civil codes of France and Germany and adopted by many countries on the European continent and by Japan (Botero et al. 2003, 7–9; Deakin et al. 2007).

Measurement

Assessing EP in depth is difficult. The arrangements that exist as a result of constitutional provisions, legal measures or collective agreements are complex and the documentation of their implementation is incomplete. The complexity becomes apparent when for example the OECD (2004) employs not less than eight indicators of protection against dismissal of employees with regular employment contracts: notifica-

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tion procedure; delay involved before notice can be given; length of notice period; severance pay; definition of unfair dismissal; length of trial period; compensation following unfair dismissal; and possibilities of obtaining reinstatement after unfair dismissal. In order to identify the provisions applicable in this area it is necessary to analyse very carefully the laws, ordinances and wage agreements. But this is only the first step; one must also take into the account how these provisions are implemented and enforced. And this is up to courts, arbitration boards and the public administration in general. Courts of law, for example, interpret how the law is to be applied, decide on the reinstatement of employees in the event of wrongful dismissal, and determine the amount of severance pay, etc. Furthermore, it is of interest to know what proportion of employees take legal action in a court of law to make good their right to seek protection against wrongful dismissal; it is equally interesting to know how often such legal action is successful. There is a similar need for information about the decisions of arbitration boards and the public administration. Administrative records represent an important source of information with respect to the implementation and enforcement of EP (Bertola et al. 1999 and 2000).

The assessment of EP in all its complexity involves the summing-up and interpretation of laws, ordinances and court decisions by experts. An example of what is meant by summing-up and interpretation is provided by the OECD's description of EP regulations (OECD 2004, background material for chapter 2). As a rule, assessments are made by assigning scores. Scores may be assigned along a metric scale or may be based on rank. Since EP is typically multidimensional, the task of reducing it to quantitative indices is not simple. And if the indicators are aggregated to a composite indicator the problem of weighting arises (Freudenberg 2003).

If assessing EP in one country is a problem, then obtaining data for international comparisons is all the more difficult. The assessment of EP in different countries can be carried out centrally, e.g. by a supranational organisation, or decentrally by experts in each country. In both cases assessment problems arise (Ochel 2005).

The information used for international comparisons should be comparable. Problems of validity may arise, when EP has evolved in different contexts: for example in a society with a common law tradition as opposed to the civil law tradition of continental

European countries. In this case a uniform concept and similar indicators do not adequately reflect EP. The strictness of EP in the Anglo-American countries cannot be registered with the use of indicators that are primarily geared to codified laws. And vice versa, it would not be suitable to examine the dismissal protection regulations of continental European countries using indicators that are primarily based on legal precedents (court decisions). One approach to overcoming this problem is to replace the identity of concepts and indicators by the functional equivalence of concepts and indicators (Kenworthy and Kittel 2003, 22). Measurement concepts are equivalent to the degree to which "[the] results provided by [them, W.O.] reliably describe with (nearly) the same validity particular phenomena in different social systems" (Przeworski and Teune 1970, 108).

If one goes beyond cross-section comparisons and attempts a panel analysis, then the concept employed in analysing EP must be adjusted to take into account its evolution in the course of time. Basic changes in the regulatory framework must be considered as well as the emergence of new forms of employment relationships such as fixed-term contracts or temporary agency work.

Data sets

One approach to quantifying the strictness of EP in inter-country comparisons is to use surveys. Such surveys were carried out for the first time in 1985. The International Association of Employers commissioned surveys in 14 countries designed to assess the severity of rules restraining the termination of employment contracts. In the same year, the Commission of the European Union conducted a survey of entrepreneurs in 9 EU countries. In this survey the respondents were asked to assess the employment effect of shorter periods of notice of dismissal, of simpler legal procedures, and of a reduction in redundancy payments (Emerson [1988]) reviews the results of these surveys). Bertola (1990) based his rankings of ten industrial countries on the information obtained from these surveys. At the present time, organisations such as Watson Wyatt Data Services and the World Economic Forum carry out surveys.

Whilst the surveys mentioned above request information about the general assessment of the strictness of EP, others based their assessment on indicators (Table 1). Lazear (1990) considered only two obsta-

cles to firing workers: weeks of notice and severance pay. Grubb and Wells (1993) and the OECD Job Study (1994) considered eight indicators referring to obstacles to dismissal of employees with regular contracts (indicators one to eight in Table 2). They also consider the possibilities of circumventing general EP by means of fixed-term contracts and temporary work agency employment. Regulatory efforts in these two areas are represented by a further six indicators (indicators nine to fourteen in Table 2). In the OECD's Employment Outlook 1999 and 2004 these studies have been broadened by the inclusion of indicators bearing on collective dismissal (indicators fifteen to eighteen in Table 2). The descriptions of these 18 indicators are based on a variety of national sources as well as multi-country surveys by Watson Wyatt Data Services, Incomes Data Services and the European Commission. OECD governments provided additional information based on a request for information from the OECD Secretariat (OECD 1999, 90).

In order to obtain a time series for the period 1960 to 1996, Blanchard and Wolfers (2000) collated the OECD data for the late 1980s and 1990s with data from Lazear (1990). They combined data of a very dif-

ferent quality. Whereas the OECD indicator is based on many EP dimensions Lazear used just two indicators as a proxy for EP. Nickell et al. (2005) later on interpolated the Blanchard and Wolfers series (with data for every five years) in order to obtain annual data, and William Nickell updated them in 2006.

Another major source for EP data are the Doing Business Reports of the International Finance Corporation of the World Bank Group. It has been publishing its Employing Workers Indicator since 2004. The theoretical framework and methodology is based on Botero et al. (2004).

The datasets presented up to now are generated by cross-sectional approaches. They refer to some data points and afterwards have been interpolated in order to produce time series. Recently attempts have been made to generate "true" time series with annual data by analyzing reforms of EP. Brandt et al. (2005) reassessed the recommendations of the OECD Jobs Strategy and provides a detailed description of EP reforms over the 1994-2004 period. Allard (2005) reviews changes of EP documented by ILO's International Encyclopedia for Labor Law and Industrial Relations. Based on the OECD methodology she offers country scores for 1950-2003 at the aggregate level. Amable et al. (2007) use the Social Reforms Database of the Fondazione Rodolfo Debenetti and run regressions with the help of these data to predict the evolution of the strictness of EP between 1980 and 2004. The Centre of Business Research (CBR) in Cambridge measures legal change over time (influenced by either common law or civil law regulatory styles) and constructs a longitudinal labour regulation index (Deakin et al. 2007).

Table 1
Sources of data on employment protection for international comparisons

Lazear (1990)
Grubb and Wells (1993)
OECD Job Study (1994)
OECD, Employment Outlook (1999 and 2004)
Blanchard and Wolfers (2000)
Nickell et al. (2005)
William Nickell, LSE database
Botero et al. (2004)
World Bank, Doing Business
Brandt et al. (2005)
Allard (2005)
Amable et al. (2007)
CBR, Cambridge (Deakin et al. 2007)
Comparable information on EP is also supplied by the reports and databases of the Frazer Institute, the Heritage Foundation, the International Institute for Management Development, Lausanne, Watson Wyatt Data Services and the World Economic Forum.
Individual researchers have made important contributions on the concept and measurement of EP. See the references in OECD (2004), ch. 2 and 3.

Source: Own compilation.

The OECD measure of employment protection

EP is assessed by the OECD Employment Outlook 1999 and 2004 for the late 1980s, the late 1990s and 2003. By means of 18 single indicators, EP of regular workers against individual dismissal, the specific requirements for collective dismissals and the regulation of temporary forms of employment are summarised.

In order to allow for meaningful comparisons, a four-step procedure has been developed for constructing cardinal summary indicators of strictness of EP. The 18 indicators are initially expressed in units of time (e.g. months of notice), as a cardinal number (e.g.

Table 2

Employment protection legislation summary indicator at four successive levels of aggregation^{a)} and weighting scheme

Level 4 Scale 0-6	Level 3 Scale 0-6	Level 2 Scale 0-6	Level 1 Scale 0-6	
Overall summary indicator	Regular contracts (5/12)	Procedural inconveniences (1/3)	1. Notification procedures (1/2) 2. Delay to start a notice (1/2)	
		Notice and severance pay for no-fault individual dismissals (1/3)	3. Notice period after 9 months (1/7) 4 years (1/7) 20 years (1/7)	
			4. Severance pay after 9 months (4/21) 4 years (4/21) 20 years (4/21)	
			5. Definition of unfair dismissal (1/4) 6. Trial period (1/4) 7. Compensation (1/4) 8. Reinstatement (1/4)	
		Temporary contracts (5/12)	Fixed-term contracts (1/2)	9. Valid cases for use of fixed-term contracts (1/2) 10. Maximum number of successive contracts (1/4) 11. Maximum cumulated duration (1/4)
			Temporary work agency (TWA) employment (1/2)	12. Types of work for which TWA employment is legal (1/2) 13. Restrictions on number of renewals (1/4) 14. Maximum cumulated duration (1/4)
	Collective dismissals (2/12)		15. Definition of collective dismissal (1/4) 16. Additional notification requirements (1/4) 17. Additional delays involved (1/4) 18. Other special costs to employers (1/4)	

^{a)} Version 2.

Source: OECD (2004, 106).

maximum number of successive fixed-term contracts allowed), or as a score on an ordinal scale (0 to 2, 3, 4 or simply yes/no). These first-level measures are accounted for in comparable units and then converted into cardinal scores ranging from 0 to 6. This scoring algorithm is somewhat arbitrary (OECD 1999, Table 2.B.1 and OECD 2004, Table 2.A.1.1). The three remaining steps consist in forming successive weighted averages, thus constructing three sets of summary indicators that correspond to successively more aggregated measures of strictness of EP (OECD 1999, Annex 2 B; OECD 2004, Annex 2.A.1 and Table 2).

The OECD summary indicators of the strictness of EP rank the United States, Canada, the United Kingdom, Ireland and New Zealand as the OECD member countries providing in 2003 the least EP. The results of the OECD survey indicate that the strictest protection against dismissal is to be found in three southern European countries: Greece, Spain and Portugal and in the threshold countries Mexico and Turkey (Table 3).

The indicator of the strictness of EP developed by the OECD is in all likelihood one of the best indicators that is available at the moment for the purpose of making international comparisons in this area. Important areas of regulation are taken into account. The choice of 18 indicators goes far to take adequately into account the complexity of the problem. Nevertheless, the OECD's approach does have some weaknesses:

- The OECD focuses on laws and ordinances bearing on protection against wrongful dismissal, but

Table 3

OECD summary indicators of the strictness of employment protection legislation, 2003^{a)}

Country	Score ^{b)}	Country	Score ^{b)}	Country	Score ^{b)}
United States	0.7	Czech Republic	1.9	Norway	2.6
Canada	1.1	Korea	2.0	Sweden	2.6
United Kingdom	1.1	Slovak Republic	2.0	France	2.9
Ireland	1.3	Finland	2.1	Greece	2.9
New Zealand	1.3	Poland	2.1	Spain	3.1
Austria	1.5	Austria	2.2	Mexico	3.2
Switzerland	1.6	Netherlands	2.3	Portugal	3.5
Hungary	1.7	Italy	2.4	Turkey	3.5
Denmark	1.8	Belgium	2.5		
Japan	1.8	Germany	2.5		

^{a)} Summary indicator for regular and temporary employment and collective dismissals. - ^{b)} Higher scores represent stricter regulation.

Source: OECD (2004, 117).

devotes little attention to other areas such as the system of social security which also may provide protection against loss of employment. One such mechanism is the system of experience rating in the United States where an employer's social security contribution depends in part on the firm's lay-off activity. Then too, the interaction of the protection against dismissal with other labour market institutions must be taken into account if the actual level of protection is to be determined. As Belot and van Ours (2000) have shown, such interactions may reinforce or undermine the level of protection.

- The OECD's measure of EP is mainly based on legislative provisions. Protection against dismissal, that is, a part of wage agreements or of individual employment contracts (e.g. provisions for severance pay) is neglected.
- Differences in the form of legal rules are not codified. The extent to which they are formally binding or capable of modification by the parties ("default rules") is not recorded.
- Similarly, the question to what extent the EP legislation is actually enforced receives too little attention. Up till now there has not been an adequate response to Bertola et al.'s (1999) plea for the enforcement of EP to be taken into account. The implementation of regulatory measures that are based on legal dispositions is primarily in the hands of labour tribunals. They interpret the law and hand down decisions on the cases brought before them. The stringency of the EP actually afforded to workers depends to a great extent on these decisions. The importance of labour tribunals, however, varies greatly from one country to another. Sometimes disputes are resolved by arbitration boards. It is difficult to collect systematic information on judicial and other resolution of labour disputes (e.g., on the number of cases in litigation, how long they are pending and how they are resolved), and work in this area has only just begun.
- The OECD provides no information on the proportion of employees that are covered by EP. It thus does not take into account that legal provisions, wage agreements, court decisions etc. exist which preclude giving regular notice of dismissal to certain clearly defined categories of employees (e.g. older employees, or those who have worked in the production unit for a certain period). On the other hand, it does not take into account that the application of EP may depend on the production unit being larger than a minimum size and/or that

there may be provisions requiring a waiting period; persons economically active in a production unit that have the formal legal status of self-employed (e.g., a sub-contractor) but are deemed to be dependent employees or workers in the informal sector may not be covered by the EP provisions either (Rebhahn 2003, 190–94).

- The OECD does not document the specific sources of its indicators and does not explain their coding. Furthermore, converting the first-level indicators of EP legislation into cardinal scores and the assignment of weights is somewhat arbitrary (Addison and Teixeira 2001, 10–14). "The assignment of scores and weights adds a subjective dimension to the EPL strictness scores that is additional to the judgements already embodied in the...descriptive indicators" (OECD 1999, 117). The extent to which the OECD has empirically analysed the interrelationship among the first-level indicators is not clear.
- The OECD indicator for EP only covers the late 1980s, the late 1990s and 2003. In order to be able to carry out panel analyses, it would be desirable if the OECD provided longer and more complete time series. These time series should, however, not be generated by interpolation, but should be based on an analysis of the pace and direction of EP reforms providing annual data for the strictness of EP.
- Theoretical studies emphasise the analogy between EP regulation and a tax borne by the employer on employment adjustment. The cost implications of the various regulatory provisions for employees are not measured by the OECD. These costs include severance payments, costs of litigation, and costs arising from legally proscribed periods of notice, social plans, and continued payment of remuneration for employees enjoying protection. Furthermore, there are costs that are borne by society in general such as unemployment benefits (Jahn 2004, 11). Information on the costs involved in hiring and firing for businesses are, however, provided by other organisations such as the World Bank Group (2008).

The employing workers indicators of *Doing Business*

The assessment of the strictness of EP by the OECD is mainly based on legislative provisions and neglects the enforcement of the legislation. The World Bank's *Doing Business* tries to include both components. The

methodology for its employing workers indicators was developed in Botero et al. (2004). They apply the legal origin hypothesis to labour law. This hypothesis claims that national regulatory styles are influenced by the origins of legal systems, namely the English common law or the civil law of continental Europe. In order to document and analyse EP adequately in countries with different legal origins, the assessment has to include laws and public regulations, contracts and juries' decisions as well as their implementation. This objective can be achieved if the assessment is carried out by local experts who evaluate all components of the strictness of EP in their country.

The data on employing workers in *Doing Business* is based on surveys that are completed by local lawyers and public officials. To ensure comparability across countries the lawyers have to make the following assumptions when answering the questions. The worker is a 42-year-old, non-executive, full-time male employee with 20 years of tenure. He earns a salary plus benefits equal to the country's average wage. He resides in the largest business city and is not a member of a labour union. The business he works for is a limited liability company, is domestically owned, operates in the manufacturing sector, has 201 employees, is law-abiding, but does not grant workers more benefits than mandated by law or collective bargaining agreement.

The questionnaire refers to three institutional fields: difficulty of hiring, rigidity of hours and difficulty of firing and several components within each field.

Firing costs are also taken into account (Table 4). The questionnaire does not include all of the topics proposed by Botero et al. (2004).

The answers are most commonly recorded by binary coding. For each of the fields the scores of the components (0 or 1) are averaged and scaled to 100. Each of the three subindices thus takes values between 0 and 100, with higher values indicating more rigid regulation. By averaging the three subindices, the index of rigidity of employment is generated (World Bank Group 2004).

Compared to the OECD indicators the *Doing Business* indicators have the advantage of including more countries and making use of local experts. On the other hand they are confronted with as many methodological objections as the OECD approach:

- One major limitation is the recourse to purely hypothetical cases. The Employing Workers Index is based on strong assumptions about the workers and the enterprises in order to make international comparisons possible. The chosen cases are, however, not at all representative for the labour force and the size of firms of the different countries (Du Marais 2006). It would be useful if the World Bank would provide more general information (Davies and Kruse 2007).
- Another limitation relates to the enforcement procedures. From one country to the other there are different degrees and ways of how national administrations and labour courts determine the en-

Table 4

The Doing Business employing workers indicator

Rigidity of employment			Firing cost (weeks of salary)
Difficulty of hiring (0-100)	Rigidity of hours (0-100)	Difficulty of firing (0-100)	
1 Use of fixed-term contracts	4 Night work restrictions	9 Use of redundancy	Cost of advance notice requirements, severance payments and redundancy penalties
2 Maximum duration of fixed-term contracts	5 Weekend work restrictions	10 Third party notification for redundancy (individual/collective)	
3 Ratio of the minimum wage to the average value added per worker (for new hiring)	6 Days of rest	11 Third party approval for redundancy (individual/collective)	
	7 Workweek duration	12 Reassignment or re-training requirement before redundancy	
	8 Paid annual vacation days	13 Priority rules for redundancies	
		14 Priority rules for re-employment	

Source: *Doing Business*; <http://www.doingbusiness.org/methodologysurveys/employingworkers.aspx>

Table 5

CBR labour regulation indices

Alternative employment contracts (0-1)	Regulation of working time (0-1)	Regulation of dismissal (0-1)
1 The law, as opposed to the contracting parties, determines the legal status of the worker	9 Annual leave entitlements	16 Legally mandated notice period (all dismissals)
2 Part-time workers have the right to equal treatment with full-time workers	10 Public holiday entitlements	17 Legally mandated redundancy compensation
3 The cost of dismissing part-time workers is equal in proportionate terms to the cost of dismissing full-time workers	11 Overtime premia	18 Minimum qualifying period of service for normal case of unjust dismissal
4 Fixed-term contracts are allowed only for work of limited duration	12 Weekend working	19 Law imposes procedural constraints on dismissal
5 Fixed-term workers have the right to equal treatment with permanent workers	13 Limits to overtime working	20 Law imposes substantive constraints on dismissal
6 Maximum duration of fixed-term contracts	14 Duration of the normal working week	21 Reinstatement normal remedy for unfair dismissal
7 Agency work is prohibited or strictly controlled	15 Maximum daily working time	22 Notification of dismissal
8 Agency workers have the right to equal treatment with permanent workers of the user firm		23 Redundancy selection
		24 Priority in re-employment

Source: <http://www.cbr.cam.ac.uk/research/programme2/project2-20.htm>

forcement of EP. It is doubtful whether enforcement procedures have been adequately captured (Berg and Cazes 2008, 366–67).

- *Doing Business* has created a unique information gathering process based on a network of informants. It is however not clear how reliable the information is. The database is dependent on a small number of informants in many countries. The answers to the questionnaires are subjective. Uncertainty about the regulatory environment is neglected. It is doubtful whether national experts of different countries employ the same standards in assessing EP, etc. (IEG 2008, 52).
- In addition, methodological objections can be raised against the coding method and the weighting. Transforming qualitative and complex information into quantitative variables by binary coding is critical (Berg and Cazes 2008, 370). Attributing equal weight to the components and the three subindices seems to be arbitrary.

The CBR labour regulation index

A major limitation of the OECD and the *Doing Business* approaches is that they are cross-sectional.

They describe law in different countries as it stood at a certain point in time. By interpolating the scores of various data points time series can be generated. But the pace and the direction of legal change is not really captured by this approach. The Centre of Business Research tries to overcome this shortcoming by constructing a longitudinal labour regulation index. This index is based on primary legal sources and an evaluation of changes in labour law in the course of time. The sources are fully set out (Deakin et al. 2007).

The CBR index follows the same functional approach as Botero et al. (2004) which is to assume that laws impose rules which limit the formal freedom of employers and empower employees. It uses similar categories of labour law as Botero et al. and *Doing Business*: alternative employment contracts, the regulation of working time and regulation of dismissal. These three categories consist of 24 individual variables (Table 5; two further categories of the index are excluded here: employee representation and industrial action). The CBR datasets cover the development of labour law in France, Germany, India, the UK and the US over the period 1970–2005.

In spite of some similarities the CBR approach is different from the OECD and the *Doing Business* approaches. CBR does not try to estimate the impact of labour law rules on a representative firm – as *Doing Business* does – but wants to capture in general to which extent regulations protect the interests of workers as opposed to those of employers. In addition, CBR takes account not just of formal law but also of self-regulatory mechanisms, including collective agreements. It aims to reflect the systemic nature of legal rules, that is to say, their structural relationship to other rules in a given national context. Furthermore CBR attempts to capture to what extent rules are mandatory and to what extent they can be modified (default rules). The CBR index avoids making prior assumptions about the impacts of legal rules. It seeks to be a pure measure of the content of the rule (Deakin and Sarkar 2008, 22–27).

The CBR index is based on detailed country level data, covers a larger range of rules than other approaches by taking account of non-legal sources of binding norms and default rules and utilizes a complex coding process. Nevertheless it has some shortcomings. It neglects considering enforcement of EP legislation and the judicial resolution of labour disputes. It does not weight the variables. And it does not provide information on the proportion of employees that are covered by EP.

Summary

Assessing EP is difficult. The arrangements that exist as a result of laws, ordinances, self-regulatory mechanisms and legal precedents are complex. They are affected by the nature of the legal system. The enforcement of EP legislation may be quite different.

Since the seminal study of Lazear in 1990 much progress has been made in understanding and documenting EP. The OECD indicator of the strictness of EP, the *Doing Business* employing workers indicator and the CBR labour regulation index are among the best indicators that are available at the moment for the purpose of making international comparisons. They have different advantages. At the same time they share some common shortcomings. None of them captures in a functionally equivalent way the different characteristics of EP in civil and common law countries. All of them neglect the implementation of EP legislation.

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