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Are there optimal global configurations of labour market flexibility and security?

Tackling the “flexicurity” oxymoron

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1. Introduction

This paper analyses which *type*s of labour market flexibility and security combinations - "flexicurity" - are advantageous and *who* benefits. The concept of flexicurity moves beyond labour market "rigidity" discussions to analyse optimal configurations, or legal *regimes*, of labour legislation and social protection for labour market efficiency and socio-economic well-being.

Global flexicurity regimes among nation states are delineated by a cluster analysis of three indices: (1) *Employment Protection Legislation (EPL)*:[5] laws covering dismissals of permanent workers and the contract modalities of temporary workers; (2) *Collective Relations Legislation (CRL):* indicating collective bargaining procedures and union strength; and (3) *social protection:* legislation covering unemployment, health and pensions. These three continuous variables together outline the degree of legal security workers are afforded in their countries.

In the long and rich discourse under headings such as "Euro-sclerosis" or labour market "rigidities", though drawing mainly on OECD data, postulations abound about adverse labour market and other macroeconomic effects of these three types of security. Moving beyond the simplistic Europe-USA dichotomy, this paper establishes a more fine-graded assessment of institutional regulations and socio-economic outcomes. The first contribution of this paper is to extend the discussion *geographically* by establishing different clusters along a security-flexibility continuum. The second contribution is to broaden the discourse *substantively* to uncover possible synergies or trade-offs between indicators of societal well-being; the focus on labour law configurations and corresponding *labour market inclusion/exclusion* indicators (total and youth, male versus female unemployment rates) as well as *social justice* (Gini coefficient and poverty rates) and *economic performance* (GDP growth) measures.

2. Literature discussion

"Flexicurity" here denotes an optimal configuration of labour market flexibility and social security (Keller and Seifert, 2002). The first part of the literature review outlines the context of the "flexicurity" discussion, then delineates the genesis and prior applications of the term and lastly explains the value-added of this paper, taking a more global approach by pointing to the shortcomings of OECD-based discussions. The second part discusses each of the cited "labour market rigidities" in greater depth and proposes their operationalization.

2.1 "Flexicurity": Genesis and connotations

Conceptually, the flexicurity debate can be grouped with the current third way discussion spawned by Esping-Andersen's "three worlds of welfare capitalism" (Esping-Andersen, 1990). The "third" way pertains to a golden middle way between a hypothetical "European" and "US" model that has dominated much of the labour market rigidity discussion.

Often ignoring disparities between European countries and across US states, these two "ways" of regulating labour have been compared and contrasted on a few indicators and then (mis)used for general postulations. According to neo-liberals, European labour

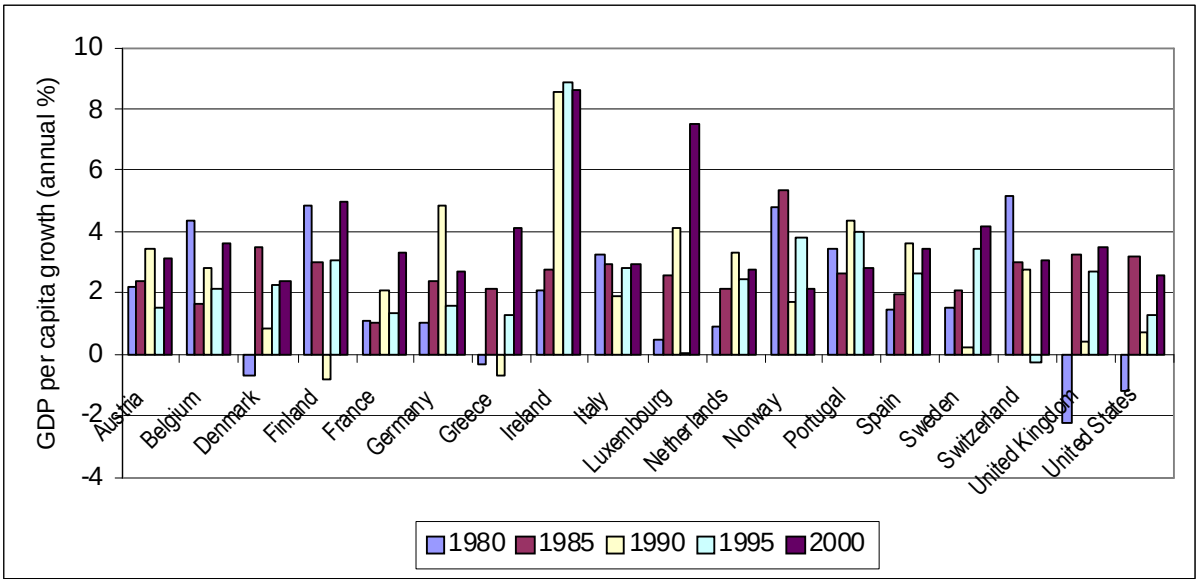
[5] Employment protection legislation (EPL) is also referred to varyingly as employment (*tenure) security* or job security (ILO, 2004).

markets are crippled by Euro-sclerosis, a disease brought forth by affording workers too much dismissal protection and bargaining power and leading to high unemployment rates. In contrast, the US labour market, unencumbered by too much labour protection, boasts an "employment miracle", declining unemployment rates despite a growing population and rising labour force participation rates, especially among women. The labour market rigidity discussion gained full momentum in the late 1980s and early 1990s after the ever more fervent demands to import the US model to European and developing countries.

However, the strict dichotomy between *the* unsuccessful European and *the* successful US model is erroneous; the *performance assessment depends* crucially on three factors:

First, *which indicators* are employed: Typically, the most commonly used measure for the comparison is the total unemployment rate. However, as Howell (2005) argues this measure poorly describes the state of worker welfare levels or labour market efficiency. If other measures of welfare than the total unemployment rate are employed, such as GDP growth, the US scores neither consistently higher nor even the highest at any given point in time (see Figure 1: Comparing performance on GDP per capita growth). This point highlights the normative aspect in the choice of the comparative parameters. For instance, if the point of comparison were working poor, the US may rank lowest.

Figure 1: Comparing performance on GDP per capita growth



Second, *which countries* are compared: even if, for the sake of argument, we use the total unemployment rate as the sole comparison, the US does not consistently score highest?[6] The unemployment rate of continental European States such as Italy, France,

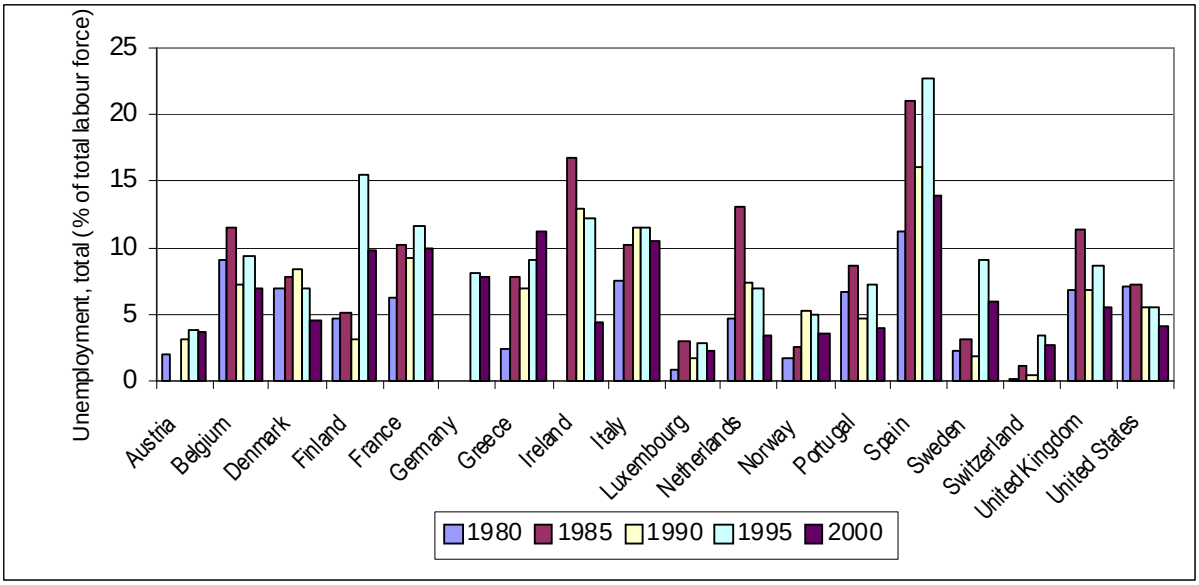
[6] The greatest difference between Europe and the US lies in long-term unemployment rates. However, this may be due to measurement differences. Long-term unemployment refers to the number of people with continuous periods of unemployment extending for a year or longer as a percentage of the total unemployed. Source: ILO, Key indicators of the labour market database. Critics point out that this is due to *registered*, and *not real*, unemployment. Longer unemployment compensation periods in Europe lead to more reported unemployment, as workers need to be registered as looking for work to receive benefits. While unemployment registration incentives undoubtedly influence the direct comparability of numbers, there is little doubt that the real unemployment rate in the USA is in fact considerably lower.

Germany and Spain hovered near or over the 10 per cent mark but Austria, Norway or Luxembourg's performance was on par with that of the US.[7]

Third, *which reference period* is used: again, even if, for the sake of argument, only the continental European States are examined, many faired better in the 1970s than the US and were on the upward trend in the new millennium. The neo-liberal counter argument is that the sclerotic structure of the European welfare system could not recover from the oil shock therefore pre-1973 is not a valid reference period. Again, if we assume this to be true and only compare the time periods 1980 to 2000, the answer as to whether France or the US scores better on unemployment, depends on whether 1980 or 2000 are compared (see Figure 2).

In lieu of erroneously postulating the US as the paragon of a flexible model that should be applied to all nations, researchers have begun to look for fruitful ways of combining both "flexibility" and "security". Demands for "flexibility" are typically associated with easing employment protection legislation (EPL) and with shifting the balance in the collective relation regulations in favour of the employer; social protection implies "social protection" in the form of non-wage income, typically unemployment insurance and active labour market policies[8] but conceivably also health or pension benefits.

Figure 2: Comparing performance on unemployment



Any combination of "flexibility" and "security" is called "flexicurity". The genesis of the term is perhaps most closely associated with the Danish model, which combines high unemployment benefits with low dismissal protection (Algan and Cahuc, 2006). The term itself was coined in a debate that gave way to a "law on flexibility and security" in the Netherlands in 1997, which facilitated the use of temporary jobs, while introducing more securities. For instance, temporary agency firms were obliged to offer unlimited contracts

[7] As a side-note on the issue of comparability, it is questionable if judging, e.g., the labour market of Luxembourg and the US, is not comparing apples with oranges. Also, *within* the US, the least generous states do not necessarily report the best labour market efficiency (Wilson, 1987).

[8] Unfortunately, there is no data available globally and comparative on active labour market policies.

to their personnel after 3 years of temping. Despite the high unemployment benefits, Denmark could report high labour market participation rates; a model Madsen (2002) has deemed a paradise—with some snakes.

Conceptually, the idea originated at the Labour Market Department of the Science Centre for Social Research in Berlin (WZB) within research on transitional labor markets. The argument was that in a time of increased labour market volatility because of globalization and new social demands (e.g. for balancing work and family life) new securities for those transiting on the labour market had to be developed (see Schmid, 1995, Auer and Schmid, 1998, Schmid and Gazier, 2002). In this environment Ton Wilthagen, now very influential in European "flexicurity" policies, published his first piece on flexicurity (see Wilthagen, 1998). Concomitantly, the European Commission's forward thinking unit developed ideas on a possible trade-off between employment protection legislation and "generous" unemployment benefits (Buti et al. 1998).

Like most successful models, the Danish model raises questions about its applicability to other contexts. Keller and Seifert (2002) apply the "*flexicurity*" concept to the various forms of atypical employment relationships within the institutional framework of Germany to establish a viable alternative to solely increasing flexibility. Four central and interlinked elements are crucial for a successful "flexicurity mix": transitional labour markets, collective bargaining policy and working time policy, both aimed at safeguarding employment, life-long learning and a basic level of welfare (ibid.).

Safarti and Bonoli (2002) cast the net wider in their consideration of optimal configurations of social protection systems and labour market structures. While outlining employment stability and flexibility in industrialized countries, including the Danish flexicurity model, the developing world is not adequately integrated.

Algan and Cahuc (2006) argue that even among European countries, the efficiency of the Danish flexicurity model cannot be replicated due to cultural differences. In particular, they argue that Continental and Mediterranean European countries cannot successfully implement the Danish Model because their citizens lack the required "public-spiritedness" leading to moral hazard issues regarding social protection mechanisms, particularly public unemployment insurance.

The key question here is not the applicability of the Danish model. It is how to evaluate what Auer et al. (2005) or flexicurity (Auer, 2007) have called "protected mobility", of which the Danish model is but one example. Which countries perform well on labour market and macroeconomic indicators while combining both flexibility and security?

The major impediment of most studies addressing this question is that they focus on a relatively small and, on a global scale, homogeneous number of developed countries when assessing the effects of protective labour legislation on employment (Nickell, 1997, Nicoletta and Scarpetta, 2001, OECD, 1999) or unemployment (Elmeskov, Martin, and Scarpetta, 1998, Siebert, 1997, Blanchard, 1998, Franz, Steiner et al., 1998, in Ochel, 1998, Nickell, 1997). As Heckman and Pagés (2006:63) argue, in most OECD-based literature, the "sample variation in regulations and institutions may be too limited and the level of aggregation too great to capture any effects of regulation on employment". Furthermore, Nickell (1997) argues that the insufficient variation argument holds not only for cross-sectional but also for longitudinal analyses, as labour market institutions in Europe have, roughly speaking, stayed the same since the 1970s.

Though the empirical evidence is informed largely by this small sample of fairly homogeneous Western OECD countries and the baseline of developing countries may be very different from those found in developed countries, the conclusions are applied to developing countries, "many of them coming under strong pressure to deregulate their labor

markets" (Baker et al., 2004: iii). Multinational institutions began promoting deregulation in the 1990s, for example in the OECD´s (1994, 1997) "Implementation of the Jobs Strategy reports" and the IMF´s "Unemployment and Labor Market Institutions: Why Reforms Pay Off". The *first goal* here is thus to provide a broader perspective by integrating developing countries into the analyses.

The *second goal* is to provide an overview of *de facto* combinations of flexible and protective labour legislation. As Baker et al. (2004) argue, many of the claims that unemployment is solved through structural reform are based on "the assumption that in absence of protective labour market institutions, text-book-style competitive labour markets would prevail" (Baker et al., 2004:2003). However, if labour markets are inherently and non-trivially imperfect, the absence of a social protection mechanism may well lead to clientelism and crime rather than the perfect competitive ideal. Workers may respond to insecurity with more ´black market´ work, or they may drop out of the labour market entirely thus "paring back the welfare state may lead to greater detachment form the labour market"(Glyn et al., 2006:11).

As Baker et al. (2004:16) argue, "evidence does not suggest that there is a single model that guarantees successful employment performance". A richer understanding of diverse combinations of (in)security across the world and their welfare correlates may help move the discussion beyond misleading USA-Europe dichotomies, erroneous OECD-based prescriptions, or strict advertisement of one-case-based "success stories" which may not be applicable to other contexts. Looking at worldwide labour regulations and a wide array of their *de facto* outcomes, not theoretical deductions based on textbook models, may thus serve as a bulwark against any rushed conclusions and lead to new political opportunities. The following section discusses three most cited rigidities and their operationalization.

2.2 "Rigidities" revisited: Forms and (un)intended consequences

When explaining the allegedly inferior European labour market efficiency relative to the US since the oil shock, the most cited "rigidities" neo-liberals see as influencing labour supply and demand adversely are: *Employment Protection Legislation* (EPL) because tenure protection decreases labour demand; *Collective Relations Legislation* (CRL) because unions affect labour demand by increasing wage and employment protection levels; *social protection* in the form of a very generous system of non-wage income lowers labour supply because alternate forms of income increase the reservation wage (Siebert, 1997).[9]

The two main variations of the rigidity story are that high *levels* of social protection limit the ability of economies to adjust to shocks and that *changes* in social protection institutions explain employment outcomes (Glyn et al., 2006). Others argue that the evidence proving these claims is "largely inconclusive" (Baker et al., 2004: iii). The case of weak labour markets institutions and low unemployment should be set against cases of strong labour market institutions and low unemployment (ibid). The synergies of these institutional characteristics also play a role. As Baker et al. (2004:2) argue, poorly matched components of a social protection system may have "substantial negative effects on employment opportunities". Auer (2000) has shown this convincingly for 4 European success countries. Yet another school of authors argues that it is also misleading to diffusely speak about *the* "rigid" European labour market since there is a great diversity in institutions and regimes as well as unemployment rates. Nickell (1997) argues that some

[9] In this "contentious economics policy debate" other, less cited, factors are payroll taxes, the coordination of collective bargaining and active labour market policies (Baker et al., 2004).

institutional characteristics of European labour markets further the rise of unemployment rates and others do not.[10]

The following sections provide an overview over recent global changes in EPL, CRL and *social protection* and ways to following paragraphs operationalize three main factors in the three-dimensional flexibility-rigidity matrix.

2.2.1 Labour power: Employment Protection Legislation (EPL)

Employment Protection Legislation (EPL) decreases the firm's ability to adjust the number of (wo)man hours or heads, depending on the country, needed at will. Since the 1980s international agencies such as the IMF, OECD and the World Bank have pressed governments to erode EPL in the name of reducing labour market *rigidities* in lieu of encouraging more "contingent" working, via temporary labour, agency labour, and part-time work. The reason is, so the argument goes, that EPL has the unintended, negative effect of *in*creasing unemployment due to *anticipatory effects*. Employers foresee high dismissal costs during an economic slump and thus prefer to take on fewer regular employees than necessary if the prospective dismissal costs are too great (Siebert, 1997). As wages are sticky, employers cannot compensate for a decrease in product demand or productivity by lowering wages (ibid.). Besides increasing the total unemployment rate, EPL may adversely affect the unemployment and labour force participation rates of marginalized groups such as females and youth, as well as pushing more workers into the informal economy, leading to more shadow work (Heckman and Pagés, 2006).

There is little discussion on where to draw the line between too little and too much or which forms of flexibility are most (un)desirable E.g. what dismissal notice period is Pareto efficient or which form of overtime regulation and cost structure is optimal? The US was simply hailed as *the* right model while Europe was argued to simply have too much arbitrary dismissal protection.[11]

De facto, there has been an increase in industrialized countries of casual and temporary labour, subcontracting, telework, agency labour, etc (Standing, 1999). With a shrinking public sector relative to private sector employment, security has eroded where it was strongest. Top companies plan to achieve higher turnover rates (Perrin, 2000).

There is considerably less literature on developing countries. Interestingly, Heckman and Pagés (2006:31) argue that "once advance notice, compensation for dismissal, and severance pay are added, we find that the cost of job security provisions is much higher in the poorer LAC region than in the richer OECD sample" because "regulations are a low cost way (from the point of government fiscal authorities) of providing social insurance to protect workers". Therefore, "rigidities" are often more severe in lower income countries than in the high income OECD world (ibid., p.7). However, in large parts of the world, objective employment security has weakened in recent years, while not improving in countries with traditionally weak or non-existent employment security (ILO, 2006b).

[10] Furthermore, other factors that have nothing to do with the labour market per se such as the degree of competition among products tending to reduce unemployment rates may be important. However, these questions go beyond the scope of this paper.

[11] De facto, there has been an increase in industrialized countries of casual and temporary labour, subcontracting, telework, agency labour, etc (Standing, 1999). With a shrinking public sector relative to private sector employment, security has eroded where it was strongest. Top companies plan to achieve higher turnover rates (Perrin, 2000). While there is some debate on the trend in employment protection in industrialized countries as average tenure has not decreased, an ILO report (2006) argues that average tenure is not a valid indicator of loosening employment protection and ensuing casualization as its effects are masked by ageing and employment growth.

In pursuit of a more fine-graded criteria roster and considering that differing arrangements may be functionally equivalent, the burden of labour legislation here is conceptualized fourfold:

First, the labour legislation burden is operationalized as a cost of regular employee tenure security. This is measured by *dismissal costs* for permanent employees. Second, the *autonomy of employers in dismissal procedures* is measured. Does the employer have to consult a third party? Can he determine which employee to fire? The third component of the index is the *accessibility of alternative employment contracts* that allow for hassle free hiring/firing. Temporary contracts are one way to circumvent stipulations surrounding permanent employees. The availability of part-timers with insecure employment tenure or other alternative employment contracts facilitates an 'accordion' style of management. The company no longer needs to hire for peak times but, rather, can employ a small number of regular employees. Laws governing tenure or task restrictions of temporary staff are therefore included in the EPL index. Hopenhayn (2006) finds that in Argentina, temporary contracts increase hiring and substitute long-term towards sort-term hiring. They also tend to increase turnover and reduce skill training of workers on the side of firms.

Fourth, the cost of overtime is measured: Hiring more workers for a job is one alternative; obliging workers already on the payroll to work more is another. As overtime is to some extent a functional equivalent of hiring new hands, another component of EPL here is the *cost of increasing hours worked*. While in Europe the amount of overtime is limited, in the US it is not (Siebert, 1997).

2.2.2 Labour power: Collective Relations Legislation (CRL)

Although the rights to unionize and bargain collectively are fundamental labour rights,[12] governments and certain international agencies have targeted unions on the grounds that they raise labour costs and contribute to rigidities in employment and working practices (ILO, 2006b). Unions, the argument goes, are one of the chief institutional characteristics that impede wage and unemployment elasticity because this "wage cartel" increases unemployment via "unrealistic" wage demands and benefits and by tightening EPL (Siebert, 1997).

The evidence is unequivocal that unions do tend to raise wages of their members compared with other groups of workers (Budd and Na, 2000, Dasgupta, 2000, World Bank, 1995). Many studies show that, controlling for personal and other characteristics, there is a "union premium", e.g. in Bangladesh, Brazil and Tanzania (PSS, various years, Dasgupta, 2002, ILO, 2006b). The effect of unions on wages is not uniform, however, being less pronounced in Eastern Europe but evident in countries like Malaysia, Indonesia and the Philippines (ILO, 2006b). Unionized workers are also more likely to receive benefits.

This wage increase may, or may not, lead to higher labour costs as the wage premium may be due to higher, union induced, productivity such as unions contributing to "skilling" the labour force and increasing its functional flexibility (ILO, 2006b). Unions may also serve as low cost management structures, their absence mandating employers to hire more control and management personnel (Nickell, 1997). Likewise, benefits often attained by unions do not necessarily increase labour costs. Nickell (1997) argues that benefits of union members constitute in-kind wages that are subtracted from employee wages except when wages are protected by a minimum wage.

[12] These rights are enshrined in various ILO Conventions, most notably Convention No. 87 on Freedom of Association and Protection of the Right to Organise, 1948 and Convention No. 98 on the Right to Organise and Collective Bargaining, 1949.

The suppression of unions may even increase the factor price of labour. To fend off unionization incentives, many governments feel pressured to appease workers in the formal sector through privileges like high wages (e.g. Kenya, Congo, Zambia, Sudan) resulting in labour market imbalances (World Bank, 1995).

How unions affect the wages and employment of non-union members is more contested. The wage increase of union members can drag up the wages of workers in non-unionized workplaces (Boeri et al., 2001), sometimes in the effort to reduce incentives to unionize. Others only point to negative union externalities; Siebert (1997) argues that unions are not inclined to reduce their demands to take the effect on non-union members into account and thus increase unemployment by high wage demands in all but the tightest labour markets.[13]

However, worldwide union membership has been decreasing while unemployment has not followed in lock-step. According to the ILO's *World Labour Report*, in the time period between the mid 1980s and the mid 1990s, 51 per cent of the countries reported a decrease in union membership of more than 20 per cent, while 25 per cent reported a decrease of 25 per cent (Leisink, 1999). This trend has continued in recent years: across the world there has been widespread *de-unionization*, particularly in industrialized market economies (ILO, 2006b).[14]

The rate of decline has probably been most rapid and extensive in the so-called transition countries of Eastern Europe (PSS, various years, ILO, 2006b). In Central and Eastern Europe governments have strongly resisted the creation of independent trade unions, e.g. in Moldova and Belarus (ICFTU, 2006).

A predominant concern for many Asian countries is that independent unions could impede economic growth. Grave violations and open confrontation against unions have declined, though not subsided. **Bangladesh**, **Cambodia**, **China**, **India**, **South Korea** and the **Philippines** had particularly violent episodes in 2005 (ICFTU, 2006).

Dictatorships often target unions not only for economic reasons but for political reasons as well.[15] In much of the Middle East, particularly the Gulf States, unions are prohibited.[16] In Africa, governments are often involved in curbing union rights by restrictions in laws on organizing, collective bargaining and strike action, and repression in practice (ICFTU, 2006). In Latin America, autocratic dictatorships have contributed to current union weakness (Charnovitz, 1994). Union rights are especially shaky in Export Processing Zones (ICFTU, 1999). In general, unions are firm or sector-specific and lack real representative power (Heckman and Pagés, 2006:11). In Argentina, Mexico, Peru and

[13] One critical interactive factor concerning the effects unions have if this central bargaining on the side of the employees is met with employer coordination. Nickel (1997:68) argues that while "unions are bad for jobs", employer coordination negates this effect. While conceding that the wages in the US are more flexible, Nickell (1997:59) argues for a more detailed look at the relationship between unemployment increase and wage decrease as wages are known to be sticky downwards.

[14] Union membership has declined dramatically in the US since the 1980s (Wallace & Rothschild, 1988:8), now hovering around 10 per cent due to industry automation, rationalization and businesses moving to States with a "favourable business climate". One strong feature of this climate is the absence of unions (Braun, 1991). According to Ochel (1998) this decentralized, uncoordinated wage finding system has contributed to the widening of wage finding in the US, thus contributing to the increase in employment in the lower tiers of the service economy as discussed above (Ochel, 1998).

[15] Experiences in Africa, for instance, suggest that unions often fight against undemocratic regimes (World Bank, 1995).

[16] **Qatar** allowed the establishment of free trade unions in 2005 (ICFTU, 2006).

Brazil, the State accredits only chosen unions with "representative authority", in Argentina and Mexico the State also intervenes in the conflict resolution and arbitration process (ibid).

These examples highlight that the unionization rate is not necessarily a good reflection of union power. High unionization rates when unions constitute the extended arm of the State are not valid indicators of labour power. Conversely, in France, for instance, though the numbers unionized are low, the possibility of wildcat and solidarity strikes gives unions tremendous leverage. Mere percentages reflect little; they do not adequately represent very different union structures with different bargaining and representation capabilities (ILO, 2006b).

In lieu of the percentage of workers unionized, the "union density" as used by Glyn et al. (2006), this paper employs the collective relations legislation index (CRL). The CRL measures the protection of collective relations laws as the average of: (1) Labour union power reflecting rights around unionization and representation; and (2) Collective disputes measuring the leverage that unions are able to exert through disruptive action. The indicators of Botero et al. were cross-referenced with other data, e.g. from legal data from the ILO Socio-Economic Security Primary Database.

2.2.3 Social protection: Social security and benefits

Social protection benefits can come in many guises, unemployment or health insurance, pensions or any other age-based (child support), need-based (welfare) or universal State transfers are central to income security.

The factors constituting the social protection index here, also called *social security laws index*, are: *old age benefits, disability and death benefits* and *unemployment benefits*.[17] It could be argued that these three components should not be put into a single index. Arguably, protection mechanisms against income loss due to ill health and old age do not strictly constitute a functional equivalent of unemployment benefits. However, old age or disability benefits have in many countries functioned as a kind of unemployment compensation in kind through early retirement schemes.[18] Moreover, the logic regarding the adverse effects of benefits extends to all of these benefits: A generous system of non-wage income, particularly unemployment insurance, affects wages and thus unemployment via two mechanisms: (1) By decreasing the fear of unemployment and therefore increasing wage demands; (2) by making the unemployed choosier, it reduces the potential of the reserve army to rapidly fill vacant positions (Siebert, 1997).[19] All three components provide

[17] Ideally such an index would include protection mechanisms that are not linked to any form of employment but are based on citizenship or residency, e.g. universal pensions or "welfare" such as TANF in the USA or "Sozialhilfe" in Germany or the "universal pensions" in Namibia. The available data on this in developing countries, if indeed there are many of these schemes, is scare and not representative. Data on *old age benefits, disability and death benefits* and *unemployment benefits* are available for 85 countries, including many developing countries.

[18] Also limiting the focus to unemployment benefits would constrain the already difficult comparison between developing and developed countries as many developed countries do not have this benefit available to workers.

[19] A second effect of benefits not operationalized here is indirect: the increase in labour costs and taxes to finance social security payments has adverse effects. Siebert (1997) argues that increasing social insurance contributions has increased the dead-weight loss between wage cost for the employer and net wage received by employee thus increasing unemployment. Ochel (1998) also sees the employment ***ancillary wage costs*** as responsible for the different employment elasticities in Europe and the US. Nickell (1997), on the other hand, argues that the general tax burden is the decisive number not the taxes on wages. So if the tax on wages would be decreased and VAT

significant sources of non-wage income increasing what Auer et al. (2005) have called "empowerment on the labour supply side".[20] According to an OECD (1994) study, "if unemployment is to be kept low, it is vital to limit entitlements to benefits and refuse people who are not available for work, and give employers and local governments' incentives to tackle employment problems".

2.2.3.1 Old age, disability and death benefits

Since the 1980s, there has been a concerted strategy to promote the privatization of pension schemes and a shift from defined benefits to defined-contribution schemes modelled to a greater or lesser degree on the Chilean individual accounts pension system introduced in 1981 (ILO, 2006b). In 1990, this became a concerted effort by international organizations with the World Bank's influential report, Averting the Old Age Crisis, 1994, which stated, "the first step is to reform the public pillar by raising the retirement age, eliminating rewards for early retirement … downsizing benefit levels … and making the benefit structure flatter. The second step is to launch the private pillar". There has since been a marked shift away from the classical variants of the Bismarckian and Beveridge models that have constituted the models to insure against the vicissitudes of age for over a century.

2.2.3.2 Sickness and health benefits

In some developed and almost all developing countries, the absence of a universal health care system constitutes the main source of insecurity (ILO, 2006b). In the last decade, countries have been pushed to privatize, most notably by the WTO's General Agreement on Trade in Services, cut spending and enable private companies to provide (or compete with) public services and decentralize (Lethbridge, forthcoming, Insignia 1997xx).

The trend to decentralize responsibility to local or regional bodies reduces the central governments political exposure although it retains budgetary control; often central governments merely transfer funds for an "essential health package" of 10–15 interventions or services as recommended by the World Bank (Laurell, 2003; ILO, 2006b), contributing to geographic disparities in quality, access, and citizens' costs. According to the People's Security Surveys in Gujarat (India), 25 per cent of rural households did not have access to public health care facilities in contrast to 7 per cent of urban households (Unni and Rani, 2002). This emerging multi-tier system exposes a majority of the population to income insecurity due to a fear of impending health care costs (ILO, 2006b).

2.2.3.3 Unemployment benefits

An ILO (2006b:106) report finds: "Unemployment benefits have been one of the main pillars of the social insurance systems of industrialized countries. But they have been withering almost everywhere, and have scarcely spread to developing countries, even though they were proposed for a number of East Asian countries in the wake of the 1997–98 Asian crisis, and were introduced in the Republic of Korea."

Although unemployment benefit schemes have been under strain more countries have such a scheme than in the 1980s, mainly because many Eastern Europe countries

increased, this would have no positive effect on employment figures (OECD, 1994 in Nickell, 1997). Following the OECD (1994) study, the general weight of the tax burden is examined as an outcome in this paper but not included in the legal index as the weight of the tax burden relative to other legal requirements was not clear.

[20] How strong these effects are depends on the difference between the wage and the unemployment compensation or sick benefits or pension replacement rates. This varies for population groups by age and civil status; it is lower for married couples with children in Germany for instance, (Ochel, 1996).

introduced them after the fall of communism when open unemployment emerged (ILO, 2006b).

Unemployment coverage correlates with country income even though variations in benefits and coverage are large: up to the factor four, if the measure is the cost of the programme relative to GDP (ibid). Likewise, replacement rates and eligibility criteria vary. In the US, unemployment compensation typically lies around 55 per cent of previous income in most states. This is substantially lower than in Europe. Due to a number of restrictions, only 30 to 40 per cent of unemployed receive these benefits (Ochel, 1998; Hunt,1998). These differences are cited as evidence that high unemployment benefits are a chief reason for high unemployment and low job growth in the Europe.

2.3 Measurement of workers´ welfare: Beyond labour market efficiency

As argued above, an Achilles heel of much labour market flexibilization advocacy is the assumption that in the absence of protective labor market institutions, text-book style competitive labour markets would prevail although labour markets are inherently and non-trivially imperfect (Baker et al., 2004:2). These analyses delineate how the cumulative effect and interaction of legislation governing employment plays out in *actual* country clusters. But which outcome indicators best serve to judge the effects of the clusters, interwoven legislative blanket constituting a social protection regime?

Howell (2005) argues that the most commonly used indicator, the unemployment rate, is a poor measure of both the state of worker welfare and labour market efficiency: “”For instance, a highly developed labour market such as the United States could be operating at nearly full employment (…) despite the large numbers of adult active work seekers unable to find anything but part-time work at poverty level wages (as in the late 1990s)”. Thus such an economy should not get the same score on labour market performance as a country with the identical unemployment rate but a lower percentage of poverty-level wages, involuntary part-time and discouraged workers (ibid.). Outcomes by which country cluster performance is judged in this analysis thus goes beyond total or youth unemployment statistics to include indicators of labour market *efficiency*, usefully employing available labour sources, as well as worker *well-being.*

The focus on *efficiency* also resonates with a strand in feminist literature strongly linking women’s emancipation to their income access. A central piece of the 'Gender-and-Development-Approach' (World Bank, 1997) is the more equitable representation of women in the current positions of power and resources.[21] Besides the direct effects associated with income, women also profit indirectly from better access to employment in the modern sector because it increases their bargaining position in the household (World Bank, 1995). A key *non-discriminatory labour market efficiency* indicator is the “gender blind” accessibility to employment. The outcome indicators by cluster chosen here include female labour force, female (per cent of total labour force) as well as ratios of female to male labour force participation and ratios of female to male unemployment rates.[22]

[21] Heintz (2000, 2001) shows that some explanations also link women’s emancipatory possibilities more closely to the extent to which social provisions by the State decommodify women’s labor and reduce women’s dependency on the male bread-winner (Lewis, 1997; Orloff, 1993; see Sainsbury, 1994 for an overview).

[22] The latter are included because of the “home maker” argument: women exhibit low labor force participation rates because they prefer to stay at home. Although "one might question the extent to which leaving a career under discriminatory duress is a decision" (Alessio and Andrzejewski,

Youth unemployment is included as much literature points to the differential impact labour market "rigidities" have on different demographic groups trying to break into the labour market such as young or migrant workers (Heckman and Pagés, 2006). As total unemployment may thus not reflect discrepancies in the equitable access to the labour market, youth unemployment is a second *non-discriminatory labour market efficiency* indicator.

A much debated, unintended consequence of stricter workers' rights legislation is a push into the informal economy. To assess if low unemployment rates merely mask the displacement of workers into shadow work, employment in the unofficial economy is delineated by cluster as a *labour market efficiency* indicator.

The ultimate goal of any social policy is to increase the levels of societal welfare. *Well-being indicators* here include indicators of economic *progress* (GDP growth) *poverty* (population below US$1 a day) and *equity* (Gini index). Lastly, as redistributive government policies are incurred at a cost, the tax burden is outlined per cluster (highest marginal tax rate, individual and corporate rate).

3 Hypotheses, definitions, indicators

3.1 Hypotheses

The three null-hypotheses are:

HO 1: The more flexible a country (little EPL or union power and a loose social security net), the better its performance on labour market efficiency and well-being indicators.

The opposite hypothesis would be:

HO2: Countries with greater labour empowerment indicators (such as stricter EPL, more union power and a tighter social security net) perform similarly or better on labour market efficiency and well-being indicators.

Both of these hypotheses, though logically deducible from the above literature discussion, suggest a *strict continuum of labour market efficiency and society welfare* in one or another direction. Thus the third null hypothesis would be:

HO3: Rather than a strict continuum of labour market efficiency and society welfare along the flexibility-rigidity continuum in either direction, the relationship between the protection of employee and employer protection is an inverse U-shape with an obvious middle ground.

3.2 Definitions

Rather than juxtaposing countries on the basis of one or two variables, a regime approach is employed. The term "regime" connotes "that in the relation between state and economy a complex of legal and organizational features are systematically interwoven"

2000:312), the home-maker-preference-argument cannot simply, a priori, be discounted. However, if women exhibit disproportionately high unemployment rates (relative to their male counterparts), this could indeed serve as an indicator for discrimination. The status of unemployment signifies that a person is seeking work but attaining none.

(Esping-Andersen, 1990:2). Employment tenure protection can come in various forms: in the form of legal contractual stipulations or strong unions able to negotiate time-sharing of work allowing workers to maintain employment, as in the case of Volkswagen. Only the totality of the provisions, the regime, adequately mirrors the protection status of any given worker. The following section outlines along which indicators countries are clustered into labour rights regimes.

3.3 Indicators

Similarly to Auer et al. (2005), the focus here is on *de jure protection* mechanisms. While, as Auer (ibid.) points out, *de jure* status does not always closely correlate with subjective attitudes, what is of interest here is the potential power workers have within a legal framework. The following variables, and their descriptions, are taken from Juan Botero, Simeon Djankov, Rafael La Porta, Florencio Lopez de Silanes and Andrei Shleifer (2004): "The Regulation of Labor", unless noted otherwise.

4. Data

The limiting factor in these analyses, as in any, is data availability and comparability. Including non-OECD countries further aggravates these problems of cross-national analyses. The variables operationalizing the concept are available for at least 85 countries around the year 2000 +/- 5.

The choice of indicators was also contingent upon maximizing reliable and valid comparability across the OECD and non-OECD world. For instance, the minimum wage stipulations proved not be a useful one-size-fits-all indicator, as it did not mirror a wage floor for most OECD countries. Highly developed OECD countries have often another mechanism of securing a wage floor other than a minimum wage across the board. In Germany for example, the same function is often fulfilled by a “Flächentarifvertrag” (wages, working hours and conditions for certain industrial sector and geographic area) and not country-wide stipulations like a national minimum wage. Despite the draw-back of any cross-country analysis using aggregate statistics across widely differing countries, examining such a wider sample of countries provides larger and exogenous variations and hence identifying power not found in analyses in most OECD countries (Heckman and Pagés, 2006, p. 1).

4.1 Legal regime variables: Labour power and social protection

A detailed description of the variables is found in the appendix.

4.1.1 Labour power: Employment protection legislation (EPL)

The employment laws index measures the protection of labor and employment laws as the average of: (1) Cost of firing workers; (2) Dismissal procedures; (3) Alternative employment contracts; and (4) Cost of increasing hours worked.

4.1.2 Labour power: Collective relations legislations (CRL)

The Collective Relations Legislation index measures the protection of collective relations laws as the average of: (1) Labour union power; and (2) Collective disputes.

4.1.3 Social protection: Benefits index

The Social protection index is composed of the three variables. It thus measures social security benefits as the average of: (1) Old age, disability and death benefits; (2) Sickness and health benefits; and (3) Unemployment benefits.

4.2 "Outcome" variables: Labour market efficiency and macroeconomic indicators

As argued above, clusters generated on legal variables are compared and contrasted on a wide variety of desirable outcomes variables (see exact definition in the appendix): Unemployment, total (per cent of total labour force); Unemployment, youth total (percentage of total labour force ages 15-24); Unemployment male/unemployment female, 20-24 years old; Labour force, female (percentage of total labour force); Labour force female/ male; Employment in the unofficial economy; GDP per capita growth (annual percentage); Size of the unofficial economy; Size of the shadow economy as a percentage of GDP (varying time periods); Population below US$1 a day (only for non-OECD countries); Gini index; Tax burden: highest marginal tax rate, corporate rate (per cent); and Highest marginal tax rate, individual rate (per cent).

4.3 Note on measurement considerations: Enforcement and impact time

The two Achilles heels in any analysis of this kind are how to gauge the "uptake" or "enforcement" of social protection provisions and which lag time to employ.

The uptake of unemployment insurance, for instance, varies dramatically. A recent International Labour Organization report (2006b) assesses that in much of the world even old-style labourist social security schemes are non-operational, particularly in so-called "transition" economies' where formal commitment to provide State benefits to workers is not honoured. This is matched in the developing world, e.g. many African governments commit to some universal provision of social protection. In Tanzania, for instance, the right to social security is set out in the 1977 constitution but has not been met due to a lack of resources (Tungaraza and Mapunda, 2000) leaving only about 6 per cent of the total population covered by "formal social security schemes" (Steinwachs, 2002). The benefits provided are too low to avert poverty (Wangwe and Tibandebage, 1999).

Indicators on effectiveness of social security schemes could not be included here because of lack of data (ILO, 2006b). Thus, countries are rated according to the *de jure* provisions regarding employment protection and collective action as well as the number of social risks covered by national legislation and the eligibility conditions for benefits. Cross-examining the indicators on laws does not solve the enforcement issue nor are they strictly comparable because different variables and measuring techniques are employed. However, a perfunctory ranking of countries suggests that there is considerable overlap with

indicators used by a 2006b ILO report[23] (see appendix) and that many countries fail to provide basic security. An ILO report found that only 17 of the 102 countries meet all those criteria satisfactorily while 34 countries do not meet *any* of the criteria. Although there are some burgeoning attempts to measure enforcement more precisely (see Abu Sharkh 2006), there are no valid and reliable indicators permitting to weigh legislative variables according to their meaningfulness regarding uptake.

The second problem this paper shares with all of it kind is the causality conundrum and the related problem of how to assess which time frame is adequate for the assessment of legislation impact. If legislation is in place for a year versus ten years, how should the difference in impact time be accounted for? This paper uses cross-sectional data for the legal variables (around the year 2000) and ten year averages for the outcome variables around the year 2000 to address the problems of short-term fluctuations (see notes on individual variables for exact years). This may mitigate but does not solve the legislation impact time problem.

5. Sample: Worldwide

Theoretically, the sample is worldwide. De facto, coverage is a question of countries collecting, reporting or acknowledging data on certain topics. Different countries have or lack incentives to report to international agencies. Taking the World Development Indicator database of the World Bank as an example, countries with missing values tend to be either (a) very small, e.g. island states with a presumably insufficient State infrastructure to collect data, such as Sao Tome, Dominica, Bahamas, St. Kitts, St Lucia, etc., or (b) have civil strife/war like Afghanistan, or (c) belong to very rich oil states like Qatar or Kuwait, perhaps due to a lacking necessity of being assessed (and "helped") by international agencies.

6. Methods: Cluster analyses

6.1 Logic of clustering

In contrast to rankings, cluster analyses can take several indices into account simultaneously to assess the similarities and dissimilarities of the units of analysis. In this case countries are grouped on the basis of employment law, collective relations law and social security laws. The rankings of countries on any of these factors individually can be found in the appendix. The advantage of clustering countries along these three dimensions simultaneously is that it takes the problem of *functional equivalency* into account when grouping nations along their worker protection legislation, e.g. a country having a weaker legal framework surrounding employment protection because strong unions fulfil this protective position.

6.2 Methods of clustering

There are two main methods: hierarchical and k-means cluster analysis. A hierarchical cluster analysis identifies relatively homogeneous groups of cases according to the selected

[23] Main sources are International Social Security Association: *Social Security Programs Throughout the World* (Geneva, ISSA, 1999); *ILO Cost of Social Security Inquiry* (Geneva, ILO, 1998), <www.ilo.org/protection/socfas>; and F. Bonnet: *Whither Social Security? A Response Through Indicators*, SES Paper (Geneva, ILO, forthcoming).

variables based on an algorithm that starts with each case in a separate cluster and combines clusters until all cases form a single cluster. For recent applications and discussions of clustering, see the work of Wolfson et al., (2004) and McKernan et al., (2005).

Since this procedure, like most other statistical procedures, is sensitive to the omitted variable bias, the variables may be quantitative, binary, or count data. As differences in scaling can distort the results, the variables here are standardized.

The distance measure used in clustering was Euclidean distance.

$$\text{Distance}(x,y) = \sum_i (x_i - y_i)^2$$

After a cursory assessment via hierarchical cluster analyses, regarding the number of clusters the data fall into, k-means cluster analyses was performed. K-means allows an assessment of *how* (along which variables) and to what *extent* (cluster mean distance) they differ.[24] Distances are again computed using simple Euclidean distance. The same cautionary words as with hierarchical cluster analyses apply.

7. Results

The analysis is divided into OECD and non-OECD countries to take account of differing enforcement and uptake levels in OECD and non-OECD countries. Dismissal laws when laxly enforced arguably have a more negligible impact than laws backed-up by a functional system of compliance insurance. Social security laws may have a greater effect when they are not only on the books but mirror uptake and thus influence the distribution of welfare within a society.[25] Ideally, a weighing of legal provisions according to the degree of uptake or enforcement would be possible. It is not due to lack of data.

To divide the analyses into OECD and non-OECD countries also constitutes an explorative attempt to gage if countries with a similar composition of worker protection legislation have comparable relative welfare outcomes within clusters. Real world parallels between these two universes may be instructive: If stricter EPL legislation leads to greater unemployment this should be true for developed and developing countries alike.

7.1 OECD

7.1.1 Cluster grouping

Cluster analyses yielded the following groupings (for OECD cluster descriptives see Table 1). The tables evidence quite a range among the standardized indexes with the collective action index having the greatest spread.

[24] Note, the running means option was not employed to avoid issues related to case order.

[25] Russia´s pensions are a much-cited example of divergence between *de jure* provisions and de facto uptake.

Table 1: OECD cluster descriptives[26]

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Tenure index	27	-1.89	1.57	.10	1.01
Collective action index	27	-2.00	1.70	.18	1.13
Social security index	27	-.38	1.30	.63	.39
Valid N (list wise)	27				

Table 2 arranges the clusters by relative distance suggested by distance between the final cluster centres with the Anglo-Saxon countries typically being the most flexible of the continuum regarding labour arrangements (with the exception of the social security laws) and the corporatist, continental affording the greatest security on all three indices (social security laws are again the exception, being very marginally higher in the European Flexicurity cluster). As the clusters are in a three dimensional space, the continuum is not strictly linear. The countries are ranked by their distance to the cluster centre within the three dimension space of each cluster. By cluster the findings are as follows:

Table 2: OECD final cluster centres[27]

	Anglo-Saxon Labour flex	*European Labour flex*	*European Flexicurity*	*Non-West OECD Securi-flex*	*Corp.-Cont. Triple- sec*
Labour-index EPL	-1.23	-.53	.63	-.37	1.03
Labour-index CRL	-1.73	-.02	-.59	1.00	1.32
Social security index	.61	.43	.89	.29	.86

Anglo-Saxon Labour Flex: New Zealand, United Kingdom, Canada, United States. New Zealand is thus the closest to the cluster centre and the US is the furthest. This cluster consists of countries that exhibit low scores on the EPL and union power index while scoring modestly high on the social security index.

European Labour Flex: Belgium, Australia, Greece, Switzerland, Austria, Ireland. Somewhat similar to the first cluster concerning the relative mix of the three indices, this cluster, however, scores higher on all three. It consists of a Commonwealth country, the Celtic Tiger as well as Mediterranean countries. Australia and Turkey are the outliers, measured by distance from cluster centre.

European Flexicurity: Finland, Czech Republic, Denmark. This cluster scores much higher on the EPL and social security index, while union power is weak. Its cluster centre is approximately equidistant from the Anglo-Saxon Labour Flex and Corporatist Continental Triply Secure, being a little closer to the latter. The hallmark of the flexicure is not a specific degree of EPL laxness but rather some elemental form of social protection combined with the midrange EPL and CRL score, within the OECD group.

[26] Zscores of normalized indices employed for analyses.

[27] Zscores.

Non-West OECD Securi-flex: Korea, Rep., Mexico, Hungary, Turkey. This cluster stands out as having the lowest social security protection while scoring relatively high on the collective relation laws. The union power that this suggests may be misleading though as some of the countries, Mexico in particular, only allow state accredited unions. This cluster is very heterogeneous if measured by distance from cluster centre with Turkey being the most different.

Corporate Continental Triply Secure: Spain, Germany, Italy, Portugal, Poland, Norway, Sweden, France, Netherlands. The latter three countries have a considerable distance from the cluster centre with the Netherlands being furthest. A dendogram[28] suggested that Sweden could form its own cluster as well. This cluster is farthest from the Anglo-Saxon cluster and scores high on all three indices, reporting the highest scores of all clusters on EPL and union power.

7.1.2 Outcomes

The outcomes are placed along a continuum with the Anglo-Saxon countries being the most "flexible" and the Corporate Continental countries being the least flexible as suggested by Table 2: OECD Final Cluster Centres. Arranging the countries along a continuum reveals that there in no clear linear progression along the security-flexibility continuum; see Table 3: OECD Labour market outcomes by clusters and Table 4: OECD Poverty, inequality and tax burden outcomes by clusters. Even concerning the most cited indicators, unemployment rates in total and of marginal groups, not every additional degree of flexibility coincides with lower incidences of unemployment. The most flexible European labour markets, the European labour flex, have total and youth unemployment rates comparable to those of the most rigid, the Corporate Continental Triply Secure.

To gage which differences constitute a significant difference, test assess the magnitude of dissimilarity. All reported significances are at the .05 level at least.[29] Clusters are tested against all other clusters unless other comparisons are specified.

Table 3: OECD labour market outcomes by clusters

	Total unemployment (a)	*Youth unem-ployment (b)*	*Female labour force (c)*	*Fem./male labour force*	*Male unem-ployment rate (20-24y.) (d)*	*Female unem-ployment rate (20-24y.) (e)*
Anglo-Saxon Labour Flex	5.55%	11.92%	45.22%	0.63	13.41	10.32
European Labour Flex	7.92%	16.98%	38.90%	0.59	17.26	19.51
European Flexicure	6.12%	12.62%	44.52%	0.79	11.14	11.69
Corp.-Cont. Triple-Sec	7.90%	17.06%	43.07%	0.74	17.06	21.11

Notes: a. Unemployment total (% of total labour force); b. Unemployment youth total (% of total labour force 15-24 y.); c. Labour force, female (% of total labour force); d. Unemployed males 20-24 years old / active males 20-24 years old 1991-2000; e. Unemployed females 20-24 years old / active females 20-24 years old 1991-2000.

[28] A "dendrogram" is "a visual representation of the steps in a hierarchical clustering solution indicating the values of the distance coefficients at each step".

[29] Results of all tests are available from the author upon request.

Table 4: OECD poverty and inequality as well as tax burden outcomes by clusters

	GDP per capita growth (a)	*Unofficial economy Size*	*GINI index (b)*	*Individual highest marginal tax rate (c)*	*Corporate highest marginal tax rate (c)*
Anglo-Saxon Labour Flex	3.14%	12.63	0.37	36.78	34
European Labour Flex	4.19%	23.00	0.34	45.25	30
European Flexicure	2.18%	14.92	0.27 (2.35)	44.5	31
Corp.-Cont. Triple- Sec	2.31%	20.29	0.31	41.42	30.76

Notes: a. Annual GDP per capita growth (%), average 1996-2003; b. Last observation carried forwards and backwards for 1995-2004 ; c. Observations pertain to 2002.

Tests reveal that the Corporate Continental Triply Secure model underperforms significantly regarding both labour market and macroeconomic statistics. The Anglo-Saxon model performs well on most labour indicators compared to all other OECD clusters: female labour force participation is significantly higher, while the young adult female unemployment rate is significantly lower. This cluster also reports a significantly lower incidence of unofficial economic activity. However, Anglo-Saxon countries tend to evidence significantly more inequality, especially when compared to the Flexicure.[30]

On the other end of the flexibility-security spectrum, the Corporate continental triply secure cluster, combining high social security benefits with strong dismissal protection and union power, underperforms significantly relative to all other OECD clusters on youth unemployment and female unemployment, both absolute and relative to that of males. On the macroeconomic indicators, the significantly lower growth rates stand out.

Comparing the Flexicure cluster to the Anglo-Saxon model reveals that the Flexicurity countries do not boast significantly higher incidences of unemployment while reporting a significantly lower Gini-coefficient. While the Flexicurity cluster reports a low share of informal economy and the lowest Gini-index, the growth rates do not compare favourably with those of other clusters. Looking beyond labour market indicators reveals how much the choice of the preferred model is a judgement call *contingent upon the ranking of favourable outcomes*.

7.2 Non-OECD

Direct comparisons between the OECD countries and developing countries are difficult because OECD countries almost always have some form of social security provisions even if they belong to the flexible Anglo-Saxon model. Within these limits, the alternate sample of non-OECD countries can serve as a "counterfactual proxy", pre-empting unjustified extrapolations or universal laws. For instance, while more union strength is associated with higher unemployment in the West, the cluster with above average union security across all groups, the Indebted Union Secure, reports relatively low unemployment rates. Below is a more detailed account.

[30] The small non-Western OECD cluster was dropped from the analyses. This cluster reported very low overall and youth unemployment rates and female unemployment rates. Comparing reported unemployment rates between members of the Western and non-Western, e.g. Mexico, cluster may not be a valid comparison as open unemployment, in contrast to underemployment, necessitates a certain wealth to be affordable to the individual.

7.2.1 Cluster grouping

Among developing nations, cluster analyses suggested the following typology (for Non-OECD cluster descriptions; see Table 5). The clusters are again arranged by the distance of their cluster centres from each other as suggested by Table 6.

Table 5: Non-OECD cluster descriptives[31]

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Tenure index	57	-1.81	1.95	-0.05	1.00
Collective action index	57	-2.00	2.05	-0.08	0.93
Social security index	57	-2.42	1.21	-0.30	1.06
Valid N (list wise)	57				

Table 6: Non-OECD Final Cluster Centres[32]

	Low income Full-flex	*Indebted Union-sec*	*Low income Tenure-sec*	*NIC Flexicurity*	*Middle income Securi-flex*	*Socialist legacy Full-Sec.*
Labour-index EPL	-1.38	-.64	.65	-.36	-.75	.99
Labour-index CRL	-1.67	.29	-.55	-.93	.51	.35
Social security index	-1.62	-1.34	-1.59	.19	.46	.73

Low-Income Fully Flexible: Malaysia, Jamaica, Zambia, Nigeria, Malawi, Kenya. This cluster is made up of low-income countries, except for Malaysia. They provide very little EPL for workers and no union rights or social security. This cluster has the greatest distance to the Socialist legacy full security cluster.

Indebted Union Secure: Sri Lanka, Zimbabwe, Madagascar, Burkina Faso, Ghana, Bolivia, Lebanon, Senegal. This cluster is more diverse in terms of the income level of the countries, spanning from Burkina Faso to Zimbabwe. However, all of the countries are either severely or highly indebted according to the World Bank. These countries provide their workers little in the way of EPL or social security but have some elemental union rights.

Low-Income Tenure Secure: Mali, Jordan, Indonesia, Uganda, India, Tanzania. The composition of this cluster is the inverse of the previous one regarding labour-based rights. These low-income countries tend to have more EPL legislation but lower union rights than the previous cluster.

NIC Flexicurity: Brazil, Pakistan, Singapore, China, Thailand, Chile, Israel, Uruguay, Mongolia and Dominican Republic. This cluster is the unequivocal winner regarding the outcomes. While scoring low on both the EPL, though not as low as some other clusters, and the Collective action index, it provides some elemental social security.

Middle Income Securi-Flex: South Africa, Croatia, Argentina, Romania, Colombia, Philippines, Egypt, Arab Rep., Morocco, Ecuador, Hong Kong and China. Countries in this

[31] Zscores of normalized indices employed for analyses.

[32] Zscores.

cluster typically report a medium income and medium scores on union rights and social security provisions, while scoring below average on EPL.

Socialist Legacy Full Security: Venezuela, Kyrgyz Republic, Slovak Republic, Lithuania, Slovenia, Armenia, Bulgaria, Ukraine, Russian Federation, Latvia, Panama, Viet Nam, and Tunisia. This cluster is strongly dominated by countries with a socialist past. This cluster scores highly on EPL, union rights and social security provisions. It performs well relative to the other clusters in its group.

7.2.2 Outcomes

The outcomes are again aligned along a flexibility-security continuum.[33] The most flexible cluster is associated with the highest incidences of unemployment, particularly among youth, while reporting the lowest growth rates. It also combines the highest shadow economy and poverty. To the degree that a flexible labour market is argued as being endogenous to welfare outcomes, flexibility alone does not seem to be the answer to labour market efficiency and economic prosperity.

On the other side of the continuum is the Socialist Legacy Fully Secure cluster. As in the OECD sample, this cumulative three-pronged security has adverse labour market effects with relatively high unemployment and significantly higher unemployment among young males (20 to 24 years); see Table 7: Non-OECD labour market outcomes by clusters. However, it also boasts significantly more female labour market participation and lower discrimination of women on the labour market if measured in male to female unemployment rates. Regarding the macroeconomic performance such as GDP growth or social welfare indicators such as absolute poverty rates or inequality, this cluster performs very well, having a significantly lower Gini-coefficient than all other clusters (see Table 8: Non-OECD Poverty and inequality as well as tax burden outcomes by clusters).

Table 7: Non-OECD labour market outcomes by clusters

	Total unemployment (a)	*Youth unemployment (b)*	*Female labour force (c)*	*Fem./male labour force*	*Male unemployed rate (20-24y.) (d)*	*Female unemployed rate (20-24y.) (e)*
Low income Full-Flex	12.99%	34.70%	43.35%	0.69	-	-
Indebted Union-Sec	7.52%	14.31%	41.60%	0.74	14.6	23.96
Low income Tenure-Sec	8.15%	18.10%	40.10%	0.67	-	-
NIC Flexicure	7.73%	16.88%	38.91%	0.64	9.39	17.3
Middle income Securi-Flex	14.12%	31.47%	36.64%	0.55	15.96	23.24
Socialist legacy Full-Sec.	12.01%	28.97%	45.05%	0.77	20.89	21.50

Notes: a Unemployment total (% of total labour force); b Unemployment youth total (% of total labour force 15-24 y.); c Labour force, female (% of total labour force); d Unemployed males 20-24 years old / active males 20-24 years old 1991-2000; e Unemployed females 20-24 years old / active females 20-24 years old 1991-2000.

[33] Zscore

Table 8: Non-OECD poverty and inequality as well as tax burden outcomes by clusters

	GDP per capita growth % (a)	*Unofficial economy size %*	*Population below 1$/day (b)*	*GINI index (c)*	*Individual highest marginal tax rate % (d)*	*Corporate highest marginal tax rate % (d)*
Low income Full-Flex	2.71	41.48	34.70	0.47	27.60	31.26
Indebted Union-Sec	3.25	45.60	32.83	0.43	34.87	31.50
Low income Tenure-Sec	3.49	29.87	7.65	0.44	32.06	25.81
NIC Flexicure	4.80	34.05	25.75	0.37	31.25	31.43
Middle income Securi-Flex	2.74	32.66	6.67	0.43	33.7	30.33
Socialist legacy Full-Sec.	4.04	37.63	3.50	0.36	32.38	25.30

Notes: a Annual GDP per capita growth (%), average 1996-2003; b West set to .1 interpolated and nearest neighbor 1995- 2005 ; c Last observation carried forwards and backwards for 1995-2004 ; d. Observation pertain to 2002

Again there seems to be, if not a golden, at least a "bronze middle", the Flexicure. As in the OECD sample, the hallmark of this cluster is that these countries provide a basic social floor with medium-high labour protection indices. This cluster reports significantly lower total and youth and young unemployment rates compared to all other clusters. However, regarding labour market exclusion indicators, it is also noteworthy that female labour force participation is significantly lower while the unemployment rates of young women relative to that of young men is still significantly higher. The shadow economy is also significantly below that of the Non-OECD group mean. This suggests that the low unemployment rates do not merely reflect the migration of workers from the formal to the informal economy. This cluster also reports high GDP per capita growth rates, favourable poverty statistics and a low tax burden.

8. Conclusion

Much of the discussion on the beneficial impact of flexible labour markets has taken place within the confines of the Western OECD world. This has tended to obscure the effects of completely removing any protective barriers for workers. On a more global scale, countries with no safeguards against arbitrary, instantaneous dismissal, no collective action power or social safety net tend to be the countries that score lowest on labour market efficiency indicators and social justice indicators as well as regarding macroeconomic performance. However, the countries with the most extensive labour protection regimes perform poorly on efficiency and welfare indicators. The three null hypothesis delineated above can be rejected fairly confidently, leading to the following conclusions:

The most flexible labour markets in the world, the Low-Income Full-Flex, do not correlate with optimal results regarding all labour market efficiency and well-being indicators. Countries with a completely flexible labour market, the Non-OECD Low-Income Full-Flex, having no unions, no dismissal protection and no social safety net, report high unemployment rates, the lowest growth rates, the highest absolute poverty rates, great inequality and a large shadow economy. This low score of all indicators of socio-economic performance rejects the null hypothesis that a simple linear relationship exists between flexibility (for employers) and desirable socio-economic performance. Among OECD countries, comparisons are somewhat constrained as there tends to be a floor of elemental safeguards even among the most flexible. Yet again, the countries with both the most flexible labour markets and the loosest social safety nets, the Anglo-Saxon Labour Flex are not the star performers if a broader range of comparative socio-economic indicators is

employed. Whereas the Anglo-Saxon model tends to perform well regarding (un)employment statistics, inequality is high and GDP growth, at best, average.

Countries with the most extensive labour protection regimes worldwide are also not among the star performers. The European Corporate Continental Triply Secure constitutes this cluster, as these countries have a high ranking on all three indices of labour empowerment. These European countries perform very poorly regarding labour market efficiency statistics. Whereas the high total unemployment rate or the sky-rocketing youth unemployment rate is well known, female unemployment rates also tend to be much higher than that of males suggesting grave inequalities in labour market inclusion due to ascriptive characteristics such as gender. More surprisingly than the much-quoted inferior labour market performance is that these corporatist continentals' countries also under-perform *vis-à-vis* the Flexicure regarding the size of the unofficial economy and the Gini index.

There evidence for some optimal middle ground on the flexibility-rigidity across the world regarding all labour market and well-being indicators, the data suggest trade-offs between different desirable outcomes. While countries with a basic form of social insurance and moderate dismissal protection fare well. Examining performance along different indicators indicates that performing well on one welfare indicator is not necessarily predictive of performing well on another. Countries with a low unemployment rate are not necessarily those with a low Gini-coefficient or consistently high growth rates. Socialist legacy full security countries are a good case in point for trade-offs, performing poorly on the unemployment indicators while doing well in terms of growth and equity.

The two hypotheses yielded by the analyses are thus: Countries with a basic form of social insurance and moderate dismissal protection, the Flexicure, cumulatively perform significantly better. However, within this middle ground of the flexibility-rigidity continuum, different protection regimes correlate dissimilarly on outcome indicators. More flexible labour markets correlate positively with labour market efficiency outcomes, such as unemployment rates, while countries with a more secure labour market perform better on societal well-being indicators, such as equity and poverty measures. The answer to the question "the winner is?" thus depends on the indicators employed for comparison.

Much remains to be done. These clusters could be examined on their labour market and macroeconomic outcome longitudinally as any cross-sectional analysis cannot adequately address causality issues. Further studies may seek to develop a weighing system for assessing the enforcement or "accessibility" of labour protection policies. The impact of specific reforms of the European "reform cluster" could be traced in more specific case studies. The indices could be clustered in a disaggregated form; in further analyses protection mechanisms against income loss due to ill health and old age could be separated from unemployment benefits for instance. Clusters could be compared along other outcome indicators.[34] Other multivariate procedures could be employed to confirm the results. Most importantly, how much is too much or too little according to which indicator should be examined more closely. While some of these suggestions have found their way into the appendices, the realization of confirmatory methods is beyond the scope of this paper.

Despite all the cited limitations of this study, numerically and substantive it takes the discussion beyond its current confines, and two tentative policy conclusions emerge: first, the superiority of the Anglo-Saxon cluster versus all European models could not be

[34] Many more long-term and short-term outcome variables are of interest: Less apparent effects of looser EPL such as the deskilling of the work force are not included. If employers are less inclined to train employees on short-term contracts and if less stringent EPL leads to more employees with short term contracts, the cumulative effect may be that employees receive less training overall with possibly adverse effects on productivity and, ultimately, wages.

confirmed. Rather, a certain group of European countries outperform the Anglo-Saxon cluster but more than that: they out-perform their European neighbours on a variety of labour market outcomes as well as poverty scores and informal economy ratings. Rather than the misleading Europe-US dichotomy, these countries could provide a variety of applicable models of how to maximize workers' rights while circumventing adverse economic outcomes.

Second, the study highlights the importance of widening the basis for comparison. As a closer look at more countries along more indicators of well-being indicates that even among the winners, who successfully combine security and flexibility, certain trade-offs between labour market efficiency and social equity seem to take place, which outcomes to maximize remains a political decision.

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Appendix

Rankings of countries by disaggregate indices

Employment laws index

Country	*Employment laws index*	*Country*	*Employment laws index*
Russian Federation	0.8276	Chile	0.4735
Tunisia	0.8158	Sri Lanka	0.4685
Portugal	0.8088	Peru	0.4630
Mozambique	0.7946	Taiwan	0.4534
Kazakhstan	0.7796	Switzerland	0.4520
Georgia	0.7713	Korea	0.4457
Kyrgyz Republic	0.7459	India	0.4434
Spain	0.7447	Burkina Faso	0.4396
France	0.7443	China	0.4322
Sweden	0.7405	Thailand	0.4097
Finland	0.7366	Turkey	0.4026
Slovenia	0.7359	Ecuador	0.3966
Netherlands	0.7256	Hungary	0.3773
Latvia	0.7211	Bolivia	0.3728
Germany	0.7015	Kenya	0.3687
Jordan	0.6977	Egypt	0.3683
Norway	0.6853	Uganda	0.3530
Tanzania	0.6843	Australia	0.3515
Indonesia	0.6813	Colombia	0.3442
Mali	0.6674	Argentina	0.3442
Ukraine	0.6609	Pakistan	0.3433
Slovak Republic	0.6571	Ireland	0.3427
Venezuela	0.6509	Romania	0.3273
Italy	0.6499	Mongolia	0.3256
Poland	0.6395	South Africa	0.3204
Panama	0.6246	Singapore	0.3116
Lithuania	0.6233	Israel	0.2890
Armenia	0.6017	Ghana	0.2881
Dominican Rep.	0.5972	United Kingdom	0.2824
Mexico	0.5943	Uruguay	0.2762
Denmark	0.5727	Morocco	0.2616
Brazil	0.5676	Canada	0.2615
Vietnam	0.5401	Zimbabwe	0.2513
Czech Republic	0.5205	United States	0.2176
Bulgaria	0.5189	Nigeria	0.1929
Greece	0.5189	Malaysia	0.1885
Belgium	0.5133	Malawi	0.1833
Senegal	0.5099	Hong Kong	0.1696
Lebanon	0.5024	Japan	0.1639
Austria	0.5007	Jamaica	0.1628
Croatia	0.4879	New Zealand	0.1607
Philippines	0.4762	Zambia	0.1480
Madagascar	0.4749		

Collective relations laws index

Country	*Collective relations laws index*	*Country*	*Collective relations laws index*
Peru	0.7113	Panama	0.4554
Kazakhstan	0.6815	Croatia	0.4524
France	0.6667	Slovak Republic	0.4524
Norway	0.6488	Bulgaria	0.4435
Portugal	0.6488	Zimbabwe	0.4435
Ecuador	0.6369	Belgium	0.4226
Italy	0.6310	Denmark	0.4196
Japan	0.6280	Switzerland	0.4167
Germany	0.6071	Lebanon	0.4137
Hungary	0.6071	Egypt	0.4107
Spain	0.5863	Indonesia	0.3929
Mozambique	0.5804	Mali	0.3929
Argentina	0.5774	India	0.3839
Mexico	0.5774	Chile	0.3810
Russian Federation	0.5774	Jordan	0.3810
Ukraine	0.5774	Tunisia	0.3810
Senegal	0.5744	Uganda	0.3810
Georgia	0.5685	Brazil	0.3780
Poland	0.5655	Australia	0.3720
Romania	0.5565	Austria	0.3601
Korea	0.5446	Thailand	0.3571
South Africa	0.5446	Uruguay	0.3542
Sweden	0.5387	Singapore	0.3423
Venezuela	0.5357	Czech Republic	0.3393
Latvia	0.5327	China	0.3304
Burkina Faso	0.5268	Tanzania	0.3244
Armenia	0.5179	Finland	0.3185
Philippines	0.5149	Taiwan	0.3155
Sri Lanka	0.5060	Israel	0.3095
Lithuania	0.4970	Pakistan	0.3095
Morocco	0.4881	Zambia	0.2914
Colombia	0.4851	Dominican Rep.	0.2715
Greece	0.4851	United States	0.2589
Slovenia	0.4851	New Zealand	0.2500
Ghana	0.4821	Malawi	0.2470
Vietnam	0.4821	Mongolia	0.2292
Turkey	0.4732	Jamaica	0.2262
Ireland	0.4643	Kenya	0.2262
Madagascar	0.4643	Nigeria	0.2054
Netherlands	0.4643	Canada	0.1964
Bolivia	0.4613	Malaysia	0.1875
Kyrgyz Republic	0.4613	United Kingdom	0.1875
Hong Kong	0.4554		

Social security laws index

Country	*Collective relations laws index*	*Country*	*Collective relations laws index*
Denmark	0.8727	Germany	0.6702
Ukraine	0.8499	Ecuador	0.6542
Russian Federation	0.8470	United States	0.6461
Sweden	0.8448	Poland	0.6459
Norway	0.8259	Japan	0.6417
Switzerland	0.8151	Netherlands	0.6282
Colombia	0.8131	Belgium	0.6240
Israel	0.8068	South Africa	0.5753
Hong Kong	0.8050	Brazil	0.5471
Canada	0.7869	Vietnam	0.5198
Finland	0.7863	Morocco	0.5165
France	0.7838	Mexico	0.5063
Australia	0.7820	Philippines	0.4941
Slovenia	0.7755	Dominican Rep.	0.4876
Kyrgyz Republic	0.7678	Turkey	0.4777
Spain	0.7660	Pakistan	0.4714
China	0.7643	Thailand	0.4707
Bulgaria	0.7610	Singapore	0.4618
Italy	0.7572	Georgia	0.4491
Egypt	0.7550	Mozambique	0.4452
Taiwan	0.7478	Peru	0.4167
Lithuania	0.7458	India	0.4003
Panama	0.7431	Lebanon	0.3948
Romania	0.7411	Senegal	0.3835
Greece	0.7386	Bolivia	0.3702
Mongolia	0.7383	Nigeria	0.3447
Portugal	0.7352	Kenya	0.3114
Armenia	0.7337	Kazakhstan	0.2778
Venezuela	0.7299	Jordan	0.2099
Slovak Republic	0.7284	Madagascar	0.2003
Hungary	0.7275	Malaysia	0.1950
New Zealand	0.7188	Sri Lanka	0.1945
Argentina	0.7154	Indonesia	0.1772
Ireland	0.7144	Jamaica	0.1677
Austria	0.7139	Mali	0.1658
Tunisia	0.7063	Zimbabwe	0.1623
Latvia	0.7023	Ghana	0.1576
Czech Republic	0.6981	Burkina Faso	0.1447
United Kingdom	0.6915	Uganda	0.1088
Chile	0.6887	Zambia	0.1055
Croatia	0.6797	Tanzania	0.0880
Uruguay	0.6778	Malawi	0.0000
Korea	0.6774		

Legal Data From ILO´s Socio-Economic Security Primary Database (around 2000)

Country	*Law/regulations banning /restricting one/more types of union*	*Country*	*Law/regulations banning /restricting one/more types of union*	*Country*	*Law/regulations banning /restricting one/more types of union*
Albania	No	Germany	No	Panama	No
Algeria	No	Ghana	No	Papua New Guinea	Yes
Argentina	No	Greece	Yes	Peru	No
Armenia	No	Grenada	Yes	Philippines	No
Australia	Yes	Guatemala	No	Poland	No
Austria	No	Guinea Bissau	No	Portugal	No
Azerbaijan	No	Honduras	Yes	Romania	No
Bangladesh	Yes	Hungary	No	Russian Federation	No
Barbados	No	India	No	Rwanda	No
Belarus	No	Indonesia	No	Saint Kitts and Nevis	No
Belgium	No	Iran, Islamic Republic	No	Saint Lucia	No
Benin	Yes	Ireland	No	Saint Vincent and the Grenadines	No
Brazil	Yes	Israel	No	Senegal	No
Bulgaria	No	Italy	No	Sierra Leone	No
Burkina Faso	Yes	Japan	No	Slovakia	No
Burundi	No	Kazakhstan	No	Somalia	No
Canada	No	Kiribati	No	South Africa	No
Chile	Yes	Korea, Republic of	No	Spain	Yes
China	No	Kyrgyzstan	No	Sri Lanka	No
Colombia	No	Latvia	Yes	Sudan	No answer
Congo	No	Lebanon	Yes	Sweden	No
Congo, Dem. Republic	No	Lithuania	No	Switzerland	No
Costa Rica	No	Luxembourg	No	Tajikistan	No
Côte d'Ivoire	No	Macedonia	No answer	Tanzania, United Republic of	No
Croatia	No	Madagascar	No	Thailand	Yes
Cyprus	Yes	Malaysia	Yes	Tunisia	Yes
Czech Republic	No	Mauritania	Yes	Turkey	Yes
Denmark	No	Mauritius	No	Turkmenistan	No
Dominica	No	Mexico	No	Ukraine	No
Ecuador	No	Moldova, Republic of	No	United Kingdom	No
Egypt	Yes	Morocco	No	United States	Yes
Estonia	No	Nepal	No	Uzbekistan	No
Ethiopia	Yes	Netherlands	No	Venezuela	Yes
Fiji	Yes	New Zealand	No	Western Samoa	No
Finland	No	Nigeria	Yes	Zimbabwe	No
France	No	Norway	No		
Georgia	No	Pakistan	Yes		

Other questions included:

The F2a Law/regulations banning/restricting one/more types of union

2b Which type of union, if any, is not allowed in the country?

F2b OTHER type of union, if any, is not allowed in the country: SPECIFY?

F9a National Tripartite Board or Council for labour policies or issues

F9b Name of this body

F9c Describe the membership of this body

F12a Laws outlawing or restricting the right to strike

F12b What are the restrictions

F12b What are the restrictions: Other specify

Variable descriptions (from Botero et al. 2004)

Legal regime: Labour power and social protection

Labour power: Employment protection legislation (EPL)

The employment laws index measures the protection of labor and employment laws as the average of: (1) Cost of firing workers; (2) Dismissal procedures; (3) Alternative employment contracts; and (4) Cost of increasing hours worked. These three indices are put in one for reasons explicated above.

Cost of firing workers

Cost of firing workers: Measures the cost of firing 20 percent of the firm's workers (10% are fired for redundancy and 10% without cause). The cost of firing a worker is calculated as the sum of the notice period, severance pay, and any mandatory penalties established by law or mandatory collective agreements for a worker with three years of tenure with the firm. If dismissal is illegal, we set the cost of firing equal to the annual wage. The new wage bill incorporates the normal wage of the remaining workers and the cost of firing workers. The cost of firing workers is computed as the ratio of the new wage bill to the old one.

Dismissal procedures

Dismissal procedures: Measures worker protection granted by law or mandatory collective agreements against dismissal. It is the average of the following seven dummy variables which equal one: (1) if the employer must notify a third party before dismissing more than one worker; (2) if the employer needs the approval of a third party prior to dismissing more than one worker; (3) if the employer must notify a third party before dismissing one redundant worker; (4) if the employer needs the approval of a third party to dismiss one redundant worker; (5) if the employer must provide relocation or retraining alternatives for redundant employees prior to dismissal; (6) if there are priority rules applying to dismissal or lay-offs; and (7) if there are priority rules applying to re-employment .

Alternative employment contracts

Alternative employment contracts: Measures the existence and cost of alternatives to the standard employment contract, computed as the average of: (1) a dummy variable equal to one if part-time workers enjoy the mandatory benefits of full-time workers; (2) a dummy variable equal to one if terminating part-time workers is at least as costly as terminating full

time workers; (3) a dummy variable equal to one if fixed-term contracts are only allowed for fixed-term tasks; and (4) the normalized maximum duration of fixed-term contracts.

Cost of increasing hours worked

Measures the cost of increasing the number of hours worked. We start by calculating the "maximum number of hours of work in a year before overtime" per year in each country (excluding overtime, vacations, holidays, etc.). Normal hours range from 1,758 in Denmark to 2,418 in Kenya. Then we assume that firms need to increase the hours worked by their employees from 1,758 to 2,418 hours during one year. A firm first increases the number of hours worked until it reaches the country's maximum normal hours of work, and then uses overtime. If existing employees are not allowed to increase the hours worked to 2,418 hours in a year, perhaps because overtime is capped, we assume the firm doubles its workforce and each worker is paid 1,758 hours, doubling the wage bill of the firm. The cost of increasing hours worked is computed as the ratio of the final wage bill to the initial one.

Labour power: Collective relations legislations (CRL)

The collective relations laws index measures the protection of collective relations laws as the average of: (1) Labor union power and (2) Collective disputes.

Labor union power

Labor union power: Measures the statutory protection and power of unions as the average of the following seven dummy variables which equal one: (1) if employees have the right to unionize; (2) if employees have the right to collective bargaining; (3) if employees have the legal duty to bargain with unions; (4) if collective contracts are extended to third parties by law; (5) if the law allows closed shops; (6) if workers, or unions, or both have a right to appoint members to the Boards of Directors; and (7) if workers' councils are mandated by law.

Collective disputes

Collective disputes: Measures the protection of workers during collective disputes as the average of the following eight dummy variables which equal one: (1) if employer lockouts are illegal; (2) if workers have the right to industrial action; (3) if wildcat, political and sympathy/solidarity/secondary strikes are legal; (4) if there is no mandatory waiting period or notification requirement before strikes can occur; (5) if striking is legal even if there is a collective agreement in force; (6) if laws do not mandate conciliation procedures before a strike; (7) if third-party arbitration during a labor dispute is mandated by law; and (8) if it is illegal to fire or replace striking workers.

The SES data base has partly overlapping info.xxcorrelate

The banks (Polity IV) data base also have information on 5-year sum general strikes, a kind of de facto measure of union power.

Social protection: Benefits index

Social protection index is composed of the three variables below. It thus measures social security benefits as the average of: (1) Old age, disability and death benefits; (2) Sickness and health benefits; and (3) Unemployment benefits.

Old age, disability and death benefits

Old age, disability and death benefits: Measures the level of old age, disability and death benefits as the average of the following four normalized variables: (1) the difference between retirement age and life expectancy at birth; (2) the number of months of contributions or employment required for normal retirement by law; (3) the percentage of the worker's monthly salary deducted by law to cover old-age, disability, and death benefits; and (4) the percentage of the net pre-retirement salary covered by the net old-age cash-benefit pension.

Sickness and health benefits

Sickness and health benefits: Measures the level of sickness and health benefit as the average of the following four normalized variables: (1) the number of months of contributions or employment required to qualify for sickness benefits by law; (2) the percentage of the worker's monthly salary deducted by law to cover sickness and health benefits; (3) the waiting period for sickness benefits; and (4) the percentage of the net salary covered by the net sickness cash benefit for a two-month sickness spell.

Unemployment benefits

Unemployment benefits: Measures the level of unemployment benefits as the average of the following four normalized variables: (1) the number of months of contributions or employment required to qualify for unemployment benefits by law; (2) the percentage of the worker's monthly salary deducted by law to cover unemployment benefits; (3) the waiting period for unemployment benefits; and (4) the percentage of the net salary covered by the net unemployment benefits in case of a one-year unemployment spell.

"Outcome" variables: Labour market efficiency and macro-economic indicators

Unemployment, total (% of total labor force)

Unemployment refers to the share of the labor force that is without work but available for and seeking employment. Definitions of labor force and unemployment differ by country. Source: International Labour Organization, Key Indicators of the Labour Market database.

Unemployment, youth total (% of total labor force ages 15-24)

Unemployed males (females) aged 20 to 24 as a percentage of the total active male (female) population of the same age during 1991-2000. Source: ILO, Laborsta <http://laborsta.ilo.org>.

Unemployment male/unemployment female, 20-24 years old

Unemployed males aged 20 to 24 as a percentage of the total active male population of the same age divided by unemployed females aged 20 to 24 as a percentage of the total active female population of the same age during 1991-2000. Source: ILO, Laborsta <http://laborsta.ilo.org>.

Labor force, female (% of total labor force)

Female labor force as a percentage of the total show the extent to which women are active in the labor force. Labor force comprises all people who meet the International Labour Organization's definition of the economically active population. Source: International Labour Organization.

Labour force female/ male

Female participation rate as a percentage of the total female population aged 15 to 64 divided male participation rate as a percentage of the total male population aged 15 to 64. Based on population censuses or household surveys. Source: Forteza and Rama [2000].

Employment in the unofficial economy

Share of the total labor force employed in the unofficial economy in the capital city of each country as a percent of the official labor force. Figures are based on surveys and, for some countries, on econometric estimates. Source: Schneider [2000] and the Global Urban Indicators Database [2000].

GDP per capita growth (annual %)

Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2000 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Source: World Bank national accounts data, and OECD National Accounts data files.

Size of the unofficial economy

Size of the shadow economy as a percentage of GDP (varying time periods). Source: Authors' calculations based on averaging all estimates reported in Schneider and Enste (2000) for any given country, as well as Sananikone [1996] for Burkina Faso, Chidzero [1996] for Senegal, Turnham et al. [1990] for Indonesia and Pakistan, and Kasnakoglu and Yayla [1999] for Turkey.

Population below 1$ a day

Population below $1 (PPP) per day consumption, percentage is part of the Millennium Development Goals. Source: **http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=580**, Data pooled from 1995 to 2004.

Gini index

The gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. Data pooled from 1995 to 2004 and divided by 100. Source: World Bank staff estimates based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. Divided by 100.

Tax burden

Highest marginal tax rate, corporate rate (%)

Highest marginal tax rate (corporate rate) is the highest rate shown on the schedule of tax rates applied to the taxable income of corporations. Source: PricewaterhouseCoopers, Corporate Taxes: Worldwide Summaries, by permission of John Wiley and Sons, Inc.

Highest marginal tax rate, individual rate (%)

Highest marginal tax rate (individual rate) is the highest rate shown on the schedule of tax rates applied to the taxable income of individuals. Source: PricewaterhouseCoopers, Individual Taxes: Worldwide Summaries, by permission of John Wiley and Sons, Inc.