

ON THE EFFECTS OF TARGETED EMPLOYMENT POLICIES

Juan J. Dolado

*Universidad Carlos III de Madrid and
Centre for Economic Policy Research*

Marcel Jansen

Universidad Carlos III de Madrid

Juan F. Jimeno

*Universidad de Alcalá,
Fundación de Estudios de Economía Aplicada,
and Centre for Economic Policy Research*

In many European countries, employment policies are often framed as measures aimed at favoring particularly disadvantaged groups in the labor market. These groups are defined in terms of individual characteristics such as age, gender, skill, or unemployment duration, which are thought to be negatively correlated with worker productivity. Differentiated or dual labor market policies with different provisions for high-wage and low-wage jobs are pervasive across the labor regulations of many countries. Thus, the higher incidence of unemployment among low-skilled workers is often used to advocate targeted employment subsidies for this group (see, for instance, Drèze and Malinvaud, 1994), which have been introduced in many countries. Payroll tax rebates for low-skilled workers and the introduction of “atypical” employment contracts (such as part-time, fixed-term, or seasonal contracts), which have low firing costs and are restricted to certain groups of workers, are also very common.¹

We are grateful to Samuel Bentolila and to our discussant, Claudio Sapelli, for comments on a preliminary draft.

1. For a description of the nature of temporary contracts in some European Union countries, see Booth, Dolado, and Frank (2002).

Labor Markets and Institutions, edited by Jorge E. Restrepo and Andrea Tokman R., Santiago, Chile. ©2005 Central Bank of Chile.

While using two-tier schemes in reforming the labor market may enhance political support (see Saint-Paul, 2000), the full consequences of allowing for different employment regulations affecting different workers in markets with heterogeneous agents are not yet fully understood. Indeed, most papers analyzing the effects of employment policies do not take into account the targeted nature of some of those policies.

Our intuition on the importance of the targeted nature of some employment policies stems from our previous work on labor markets with two-sided heterogeneity in jobs and workers. In labor markets with heterogeneous workers searching for jobs that may be occupied by workers of different skills, the turnover rate of one type of worker affects the overall labor market tightness and, hence, the flows in and out of unemployment for all workers.² We explore these ideas in an earlier paper (Dolado, Jansen, and Jimeno, 2003), in which we consider a matching model with two-sided heterogeneity (complex and simple jobs and low- and high-skilled workers). In the model, high-skilled workers can be mismatched (that is, they can work in simple jobs), and, if they are, they engage in on-the-job search for better jobs.³ We show that, when job requirements and workers' skills are heterogeneous, differentiated firing costs may reduce equilibrium unemployment. The intuition for this result is that the mismatch of high-skilled workers implies a negative externality of on-the-job seekers on low-skilled workers when both types of workers are equally productive in simple jobs: because mismatched workers have a higher quit rate than low-skilled workers, they make those jobs more unstable and thus reduce the profits of firms opening them, leading to a lower job creation rate.⁴ Alternatively, firms opening simple vacancies will be less eager to do so in the presence of on-the-job search, and this will worsen the employment prospects of less productive workers who can only work in simple jobs. To the extent that larger firing costs for workers in complex jobs reduces workers' turnover in this type of job, the size of the negative externality will also decrease,

2. Labor market tightness is defined as the ratio between the number of vacancies and the number of workers searching for a job (namely, the unemployed) in models without on-the-job search and as the ratio between the number of vacancies and the number of unemployed workers plus mismatched workers in models with on-the-job search.

3. Low-skilled workers cannot perform complex jobs.

4. There is also a positive externality on the supply of unskilled vacancies, however, since more workers are looking for those jobs. The negative externality dominates.

leading to a larger supply of simple jobs. Indeed, it is possible to construct examples in which skill-biased technological change in the presence of targeted employment protection legislation may end up reducing skill mismatch by so much that the unemployment rate of both types of workers falls.⁵

In this paper, we extend some of the previous ideas to focus the discussion on the effects of targeted employment policies. Again, we envisage a labor market with worker heterogeneity and imperfect substitution of workers with different skills to perform a single type of job. Workers can be hired under different types of contract subject to different firing costs or employment subsidies. In this setup, as discussed above, workers' flows and job reallocation depend on the overall labor market tightness, so that any measure, whether targeted or not, affects the employment outcomes of all workers. Our aim here is to identify the main factors determining the effects of targeted employment policies in order to establish what is needed for partial reforms to become successful, in terms of both cutting unemployment and increasing welfare. We argue that the employment effects of targeted policies may hinge crucially on the initial state of the labor market. Thus, for instance, a reduction in firing costs targeted to low-productivity workers in sclerotic labor markets, where it is easy to find unemployed workers to fill vacancies, raises labor market tightness by so much that it may end up reducing the low-skilled unemployment rate without affecting the unemployment rate of high-skilled workers, which may marginally rise or fall. At the same time, the wages of both workers increase, because their outside option value rises in a tighter labor market. With an increase in wages and a reduction in unemployment, the welfare of both types of workers rises, yielding support for such a policy.

In tight labor markets, where it is difficult to find candidates to fill vacancies, the abovementioned targeted employment policy often increases the unemployment rate of low-productivity workers, because the increase in job destruction is larger than the increase in

5. Other papers also use search equilibrium models with worker or job heterogeneity to analyze the effects of some employment policies. For instance, Acemoglu (2001) shows that unemployment benefits and minimum wages may raise welfare in a model with good and bad jobs in segmented markets. Albrecht and Vroman (2002) analyze a labor market in which low and high-educated workers can be hired for unskilled jobs while only high-educated workers can perform skilled jobs, albeit without allowing for on-the-job-search as in Dolado, Jansen, and Jimeno (2003).

job creation, while there is little effect on the unemployment rate of high-productivity workers. Indeed, the welfare of low-productivity workers typically falls, while the welfare of high-productivity workers increases. The political support for such a partial reform will depend on the composition of the labor force. If, as is reasonable, there is a large proportion of unskilled workers in the economy, this kind of targeted test will not be politically feasible.

The rest of the paper is organized as follows. Section 1 presents some examples of targeted employment policies, paying particular attention to employment protection legislation. The focus on employment protection legislation is justified because in many countries, not just in Western Europe, provisions such as notice periods, procedures for dismissals, and severance payments often vary across occupations. Moreover, recent reforms to employment protection legislation have implemented targeted reductions of firing costs, in many occasions through the introduction of atypical contracts, yet only for workers with the worse employment outcomes. Section 2 is devoted to the empirical literature on targeted employment policies, including both cross-country and case studies pertaining to specific country experiences, so as to identify the effects of these reforms. Section 3 contains a summary of the theoretical implications derived from a search equilibrium model addressing the effects of partial reforms on various labor-market outcomes, such as unemployment, wages, job reallocation, and welfare. This theoretical discussion highlights two key issues: the main channels through which targeted employment policies may affect the labor market outcomes of all population groups, not only those of the targeted group; and the main factors determining the sign of the overall effect on unemployment and its distribution among population groups. Lastly, section 4 concludes.

1. EXAMPLES OF TARGETED EMPLOYMENT POLICIES

The targeted nature of employment policies is quite evident in the provision of employment incentives and in recent reforms of employment protection legislation. With regard to the provision of employment incentives, most countries provide financial incentives—such as top-up wages, social security contribution rebates, and tax credits—for hiring workers with some specific characteristics leading to worse employment outcomes. As for employment protection legislation, recent reforms have mainly liberalized atypical employment contracts

to allow hiring certain population groups under less strict dismissal regulations.⁶

Employment incentives typically target young workers with low skills. For instance, in Germany employee allowances are aimed at improving the employment prospects of unemployment assistance recipients, with a strong focus on young persons.⁷ In Italy, vocational integration schemes aimed at young people in depressed areas offer training allowances that are equally financed by the employer and the provincial employment office. These schemes may be converted into a training-cum-work-contract entailing reduced social security contributions. The conversion of these contracts and also of apprenticeship contracts into permanent ones is encouraged by extending the reduction of social security contributions for an additional twelve months.⁸ Tax relief is also offered for job creation, but only when the new employee is under 25 years of age and has been unemployed for a period of at least twenty-four months. France targets young people who are encountering special difficulties in finding work, with a focus on those aged sixteen to twenty-one without a diploma and those under twenty-five who do not have a vocational qualification or who abandoned their studies. These groups are eligible to be hired under so-called orientation contracts, qualification contracts, and employment-initiative contracts, in which the wages may be set below the minimum wage, the employer is exempted from social security contributions, and the state may pay a lump-sum recruitment subsidy. Finally, Spain offers reductions of social security contributions, which can reach 70 percent, for employers that grant permanent contracts to unemployed persons under thirty or over forty-five years of age or to unemployed women registered as jobseekers for at least one year and recruited in occupations and activities in which female workers are underrepresented.

Employment protection legislation, in turn, varies significantly not only across countries, but also within countries, based on firm and worker characteristics such as firm size, the existence of collective agreements, job tenure, and workers' skill and educational levels.⁹

6. Detailed information about these measures in European Union countries can be found in European Commission (2003).

7. The allowance is about twelve euros, on top of the wage received from the employer, for every day the employee worked at least six hours.

8. This rebate is 50 percent in the north of Italy and 100 percent in the south.

9. OECD (1999) presents a detailed and comprehensive description of employment protection legislation in several countries and its variation by worker skills, tenure, the existence of collective agreements, and firm size. For a justification and the implications of variable enforcement of employment protection legislation by firm size, see Boeri and Jimeno (2005).

With regard to skill level, for example, there are two sources of variation in the enforcement of employment protection legislation. First, procedural requirements for dismissals, notice periods, and severance pay provisions for unfair dismissals are usually stricter for white-collar workers. Second, high-skilled workers are not always entitled to be hired under atypical employment contracts with less strict employment protection provisions.

Countries where employment protection provisions are less strict for blue-collar workers include Austria, Belgium, Denmark, France, Greece, and Italy. In all of these but France, the required notice period is shorter for blue-collar workers than for white-collar workers, and in Denmark and Greece, blue-collar workers are entitled to lower severance pay. Severance pay for unjustified dismissal is also lower for blue-collar workers in Belgium and Greece.¹⁰

Spain provides a paradigmatic case study of partial reforms introducing atypical employment contracts. Faced with an unemployment rate above 20 percent in 1984, the Spanish government tried to implement a significant change in employment protection legislation by liberalizing temporary contracts in two main respects: their use was extended to include hiring employees to regular positions (not just to seasonal or probationary positions); and they entailed much lower severance payments than the regular permanent contracts. As a result of this two-tier reform (permanent contracts retained their previous indemnities for fair and unfair dismissals), the proportion of temporary employees in total salaried employment surged in the second half of the 1980s and stayed above 30 percent (35 percent in 1995) after 1990. A series of countervailing labor market reforms aimed at reducing the reform's incidence were introduced in 1994, 1997, 2001, and 2002, aimed at providing a less stringent employment protection legislation for permanent contracts and considerable restrictions on the use of fixed-term contracts.¹¹ A new permanent contract for new hires was introduced in 1997. The main novelty was that under this contract, mandatory firing costs for unfair dismissals were lower than those pertaining to the old permanent contracts (thirty-three days of wages per year of seniority with a maximum of twenty-four months' wages versus forty-five days of wages and forty-two months' wages,

10. Institutional details of employment protection legislation in these countries are in OECD (1999). The information in the text refers to the late 1990s.

11. See Dolado, García-Serrano, and Jimeno (2002) for a detailed description of those reforms.

respectively). Only certain population groups were eligible to be hired under the new contract, however—namely, young workers (aged eighteen to twenty-nine), long-term unemployed registered at the public employment office for at least twelve months, unemployed above forty-five years of age, disabled people, and workers whose contracts were transformed from temporary into permanent ones. In the 2001 reform, the government managed to extend the use of the new contracts to young workers between sixteen and thirty years of age, long-term unemployed registered for at least six months, and unemployed women of any age working in sectors where they were underrepresented.

Spain is not the only country that has liberalized atypical employment contracts or reduced firing costs contingent on specific workers characteristics. In 1984, Italy introduced employment promotion contracts (*contratti di formazione e lavoro*) aimed at promoting the hiring and firm-based training of young workers (aged fifteen to twenty-nine). Likewise, fixed-term contracts were first introduced in France in 1979, but their scope was very much reduced by the socialist government in 1982. As of a reform in 1990, fixed-term contracts can be used only for seasonal activities, the replacement of an employee on leave, temporary increases in activity, *and* the facilitation of employment for targeted groups, from the young to the long-term unemployed (Blanchard and Landier, 2002).

Partial labor market reforms have taken place in many Latin American countries, sometimes aimed at decreasing firing costs (Colombia and Peru at the end of the 1980s) and others at raising them (Brazil, Venezuela, Chile, the Dominican Republic, Nicaragua, and Panama).¹² However, the only country that significantly liberalized the use of atypical contracts targeted on certain demographic groups was Argentina, where a reform in 1991 introduced fixed-term contracts and training contracts for young workers. A new reform in 1995 introduced special contracts to promote the employment of population groups facing disadvantages in that respect.

2. EMPIRICAL EVIDENCE ON THE EFFECTS OF TARGETED EMPLOYMENT POLICIES

The empirical literature on the labor market effects of labor regulation contains two distinctive streams. First, cross-country studies

12. See IDB (2003).

use quantitative or qualitative indicators representing the effect of those institutions to explain international differences in labor market outcomes, such as employment and unemployment rates.¹³ Within this stream of the literature, recent studies look at the interactions between institutions and shocks, as well as the different impacts of institutions on the labor market outcomes of different population groups, such as young people and women.¹⁴ However, this literature often considers targeted employment policies or partial labor market reforms only in the construction of the overall institutional indexes, and not separately as individual institutional features. As stressed in this paper, this treatment can be very restrictive since, for instance, a general reduction of firing costs does not have the same labor market effects as a commensurate reduction in the severance payments of a certain group of workers.

Nevertheless, a few studies estimate the labor market impact of some targeted employment policies, such as temporary contracts, separately from aggregate indexes of employment protection legislation. Among them, Jimeno and Rodriguez-Palenzuela (2002) find that less strict regulation of fixed-term employment contracts tends to reduce youth unemployment rates without any impact on the unemployment rate of prime-age males. In a similar vein, Nunziata and Staffolani (2001) use an unbalanced panel of nine member countries of the Organization for Economic Cooperation and Development (OECD) during the second half of the 1980s and first half of the 1990s to estimate the effects of employment protection legislation. They allow for three types of regulations: employment protection legislation on firing permanent employees, regulations regarding fixed-term employees, and regulations on temporary work agencies. They find that less stringent fixed-term contract regulations have a significant positive impact on temporary and total employment during upturns, with no significant effect on total permanent employment. In the case of young workers (fifteen to twenty-four years of age), less stringent fixed-term contract regulations increase both temporary and permanent employment. With regard to temporary work agencies, they find that less stringent regulations have an incremental effect on

13. See Nickell and Layard (1999).

14. On interactions, see Blanchard and Wolfers (2000). On the differential impact of labor market institutions across population groups, see Bertola, Blau, and Kahn (2002), Jimeno and Rodriguez-Palenzuela (2002), and Neumark and Wascher (2003). On the impact of employment protection legislation on employment adjustment, see Caballero, Engel, and Micco (2003).

temporary employment and total employment, but only during downturns. In the case of young workers, however, less stringent regulations for temporary work agencies raise temporary employment while reducing permanent employment.

The second stream of the literature looks at specific country episodes to evaluate the effects of labor market reforms through the analysis of labor market outcomes before and after the reform (that is, using a differences-in-differences format). Studies of this type include Kugler, Jimeno, and Hernanz (2003) on the 1997 Spanish reform, Blanchard and Landier (2002) on France, and Hopenhayn (2001) on the Argentine reform. In Spain, Kugler, Jimeno, and Hernanz (2003) find that the reduction of firing costs (and payroll taxes) for young and older workers and the long-term unemployed had a positive effect on the employment rate of young workers with hardly any effect on their dismissal rate, whereas it increased both dismissals and hiring among older workers. Blanchard and Landier (2002), in turn, look at transitions between temporary and permanent employment in France. They find an increase in worker turnover since 1983, especially among younger cohorts, for whom the probability of holding a fixed-term job increased, the probability of holding a permanent job decreased, and the probability of becoming unemployed showed no clear trend. For Argentina, Hopenhayn (2001) also finds that the introduction of fixed-term contracts had a very strong impact on labor turnover, inducing an increase in hiring accompanied by some substitution of permanent jobs with temporary jobs.

3. HOW TARGETED EMPLOYMENT POLICIES WORK: SOME THEORETICAL PREDICTIONS

As discussed in the introduction, a comprehensive analysis of targeted employment policies ought to start with a consideration of the existence of worker heterogeneity and imperfect substitution among workers of different skills to perform a single type of job.¹⁵ Worker heterogeneity is needed to justify differential treatment by targeted

15. This section is based on a companion paper (Dolado, Jansen, and Jimeno, 2004) in which we present a full-fledged search model to investigate the effects of dual employment protection legislation—namely, the reduction of firing costs for less productive workers—in the spirit of recent partial reforms of employment protection legislation in many countries.

measures. Imperfect substitution is the channel through which measures affecting only one type of worker impinge on the labor market outcomes of nontargeted groups.

In principle, the definition of worker heterogeneity must cover two relevant dimensions. First, different types of workers have different productivity levels. For instance, the distribution of productivity levels of young and low-skilled workers are bound to lie to the left of the distribution of productivity levels of older and high-skilled workers.¹⁶ Second, the arrival rate of shocks to productivity may also vary with workers' characteristics, such as age, educational levels, and skills. Unskilled workers could be more prone to large and negative productivity shocks than skilled workers. In standard search equilibrium models of the labor market, the population group with the lowest productivity and the highest arrival rate of productivity shocks would experience the highest unemployment rate, so that, in principle, there is a rationale for introducing employment policies that target the unskilled group.

Given the distributions of productivity and their evolution over time, firms would find it optimal to hire workers of each type when their productivity is above a certain threshold, which depends on workers' reservation wage, the shapes of the productivity distributions, the arrival rate of productivity shocks, overall labor market tightness, and the skill composition of the unemployed. Similarly, firms would destroy jobs whose productivity is below a certain threshold, which depends on job termination costs, in addition to the same determinants of the hiring threshold. Targeted measures typically aim at lowering the hiring productivity threshold, the firing productivity threshold, or both, for workers with the worse productivity distribution. Thus, employment subsidies for less productive workers or a reduction in their firing costs typically makes it more attractive to hire this type of worker. Hence, the first direct effect of targeted employment policies is on the targeted group's flows in and out of unemployment.

Yet, the change in one particular group's unemployment flows affects overall labor market tightness. Under imperfect substitution of workers, hiring and firing decisions for the nontargeted group depend on overall labor market tightness. A second effect of targeted

16. In formal terms, the distribution for low-skilled workers is stochastically dominated by that of high-skilled workers.

employment policies, therefore, is to change the hiring and firing decisions that affect the nontargeted group. Labor market tightness increases because firms open more job vacancies when their wage costs drop as a result of the reduced firing costs of the low-skilled workers. Wages also rise as a result of workers having a better outside opportunity. The size of this effect, which is different for the two groups of workers under consideration (targeted or not), depends on how wages are determined and on the sensitivity of profits from opening job vacancies to the overall labor market tightness. In any case, overall labor market tightness rises while firing and hiring productivity thresholds change for all workers. Typically, the employment rate of the targeted group would improve relative to that of the nontargeted group. In the literature on active labor market policies, the fact that the relative hiring of the two types of workers changes is called the substitution effect of targeted measures, which is widely discussed in policy analysis.

However, the theoretical analysis of employment policies pays less attention to the identification of the main parameters determining the size and sign of these two effects, the direct effect on the targeted group and the spillovers on the nontargeted group. Search and matching models of the labor market, which are currently the standard toolkit for the analysis of employment policies, typically ignore worker heterogeneity and nonsegmented markets for workers of different skills, features which we argue are key for a comprehensive account of the effects of targeted employment policies. As sketched above, this set up includes many parameter values that determine these effects, and models of this class generally cannot be solved analytically. One has to resort to simulated results obtained from appropriately calibrated models.

To more precisely illustrate the nature of the interactions involved in the analysis of targeted employment policies, we now examine the reduction of firing costs for low-skilled workers when severance payments before the reform are identical for the two types of workers.¹⁷ We first assume that the labor market initially is very sclerotic, so unemployment rates for all workers are high (but much higher for low-skilled workers) and overall labor market tightness is low, namely, it is easy to find candidates for unfilled new vacancies. Lowering the firing cost would increase job reallocation and, therefore, tightness. This leads to a reduction of the unemployment rate of

17. For equations and simulations of this kind of model, see Dolado, Jansen, and Jimeno (2004).

the targeted group, as the direct effect on job creation should dominate the effects of increasing tightness on the expected profits from opening job vacancies. The flow out of unemployment for nontargeted workers is low, as more workers of the targeted group are hired, and the unemployment rate of nontargeted group is thus likely to rise initially. However, given that firms find it easy to locate candidates for their vacancies, job creation will spill over to the nontargeted sector, so the steady-state unemployment rate of high-productivity workers hardly changes or may even fall if the matching process between workers and vacancies is sufficiently efficient. Further, the higher labor market tightness causes an increase in wages for both workers because of their higher reservation wages. With an increase in wages and a reduction in unemployment, the welfare of both types of workers rises, yielding overall support to such a policy.¹⁸

The process works differently in tight labor markets, where it is difficult to find candidates to fill vacancies. The targeted employment policy described above often increases the unemployment rate of low-productivity workers because the increase in turnover dominates the increase in job creation, with little effect on the unemployment rate of high-productivity workers. More precisely, the reduction in firing costs leads to an increase in layoffs of low-skilled workers, but the increase in efficiency translates into fewer additional jobs because the matching rates are relatively insensitive to changes in labor market tightness when the labor market is already tight. Indeed, the welfare of low-productivity workers typically falls, while the welfare of high-productivity workers increases. The political support for such a partial reform depends on the number of winners and losers, which is determined by the composition of the labor force. Summing up, the intuition behind this differential effect arises from the sensitivity of job creation to the increase in firms' profits from filling jobs with low-productivity workers. Jobs are filled relatively fast in a sclerotic labor market. Any change in the expected profits from hiring a low-productivity worker will therefore translate into a strong increase in job creation and in the number of matches, leading to lower unemployment. By contrast, vacancies

18. As shown by Ljungqvist (2002), the employment effects of firing costs depend crucially on how wages are determined. When firing costs are assumed to reduce the firm's threat point in the initial match, firing costs tend to increase equilibrium unemployment, whereas they tend to increase employment when the worker's relative share of match surplus is assumed to stay constant when severance pay is varied. Mortensen and Pissarides (1999) propose alternative specifications of the bargaining process in which the workers extract rents from firing costs in continuing matches but not in the first match, as in the bonding scheme.

remain unfilled for a long time in a tight labor market. Changes in the profits of filled jobs thus have a smaller effect on job creation than on job destruction, leading to a rise in unemployment. The theoretical predictions of our model also point out that the case of a higher elasticity of the matching rate of workers with respect to labor market tightness—which is an indicator of the speed at which workers find jobs—combined with a higher incidence of productivity shocks on low-skilled workers relative to high-skilled workers strengthens our previous conclusions regarding the differential effects of targeted policies in sclerotic and tight labor markets.

The fact that the effects of targeted employment policies may vary across the two types of workers depending on the initial state of the labor market is obviously very relevant for their analysis from a political-economy perspective. In particular, the targeted group will not always gain from a partial reform. The political feasibility of this type of partial reforms depends crucially on the initial state of the labor market (sclerotic or tight), the composition of the labor force, the relative incidence of productivity shocks across workers, and the efficiency of the matching process in a frictional labor market.

4. CONCLUDING REMARKS

One relevant feature of employment policies and labor market reforms is that they are very often targeted at specific demographic groups, normally those with difficulties in finding jobs (for example, youth, women, and the long-term unemployed). Some empirical studies that estimate the effects of this type of policy conclude that the impact on the labor market outcomes for different population groups can vary widely and do not always go in the same direction.

In this paper, we have argued that more analysis of these policies using search equilibrium models of the labor market with worker heterogeneity is needed. We have conjectured that the effects of targeted employment policies may depend on the state of the labor market (the degree of tightness). An interesting outcome of our analysis is that support for partial reforms is likely to be greater in sclerotic labor markets than in tight ones, since the welfare of all workers increases in the former. This issue is relevant to the debate in the literature on the optimal timing of reforms (see, for example, Saint-Paul, 1996). It is often argued that reductions in firing costs should be undertaken during expansions rather than recessions, but Saint-Paul (1996) presents

compelling evidence that the opposite happens in practice. To the extent that a sclerotic labor market corresponds to bad times and a tight labor market to good times, the above discussion provides a rationale for that seemingly suboptimal practice in frictional labor markets where it is costly to match workers and vacancies.

It is illustrative to compare the effects of a partial reduction of firing costs for a targeted group, as considered above, to a comprehensive reform that delivers a commensurate reduction of firing costs for all workers (skilled and nonskilled). In the latter case, the direct effect on hiring and firing is smaller for low-skilled workers (since the reduction of their firing costs is smaller) and larger for high-skilled workers. Since, initially, the unemployment rate of low-skilled workers is bound to be higher than the unemployment rate of high-skilled workers, the comprehensive reform is likely to have a smaller impact on flows in and out of unemployment than would a targeted reform. The direct effect on overall labor market tightness is thus lower under the comprehensive reform, and the overall reduction in equilibrium unemployment is also likely to be lower. In any case, our discussion provides clear reasons to believe, first, that the effects of a targeted reform on overall equilibrium unemployment and the incidence of unemployment across population groups are different from those of a commensurate reform and, second, that in both cases, these effects may change depending on the initial state of the labor market. This calls for more theoretical and empirical analysis to achieve a better assessment of the balance between these two types of labor market reforms.

REFERENCES

- Acemoglu, D. 2001. "Good Jobs versus Bad Jobs: Theory and Some Evidence." *Journal of Labor Economics* 19(1): 1–22.
- Albrecht, J. and S. Vroman. 2002. "A Matching Model with Endogenous Skill Requirements." *International Economic Review* 43(1): 283–305.
- Bertola, G., F.D. Blau, and L.M. Kahn. 2002. "Labor Market Institutions and Demographic Employment Patterns." Working paper 9043. Cambridge, Mass.: National Bureau of Economic Research.
- Blanchard, O. and A. Landier. 2002. "The Perverse Effects of Partial Labor Market Reform: Fixed-Term Contracts in France." *Economic Journal* 112(480): 214–44.
- Blanchard, O. and J. Wolfers. 2000. "The Role of Shocks and Institutions in the Rise of European Unemployment." *Economic Journal* 110(462): C1–33.
- Boeri, T. and J.F. Jimeno. 2005. "The Effects of Employment Protection Legislation: Learning from Variable Enforcement." *European Economic Review* (forthcoming).
- Booth, A.L., J.J. Dolado, and J. Frank. 2002. "Symposium on Temporary Work: Introduction." *Economic Journal* 112(480): F181–88.
- Caballero, R.J., E. Engel, and A. Micco. 2003. "Job Security and Speed of Adjustment." Massachusetts Institute of Technology. Mimeographed.
- Dolado, J.J., C. García-Serrano, and J.F. Jimeno. 2002. "Drawing Lessons from the Boom of Temporary Jobs in Spain." *Economic Journal* 112(480): F270–95.
- Dolado, J.J., M. Jansen, and J.F. Jimeno. 2003. "On-the-job Search in a Matching Model with Heterogeneous Jobs and Workers." Discussion paper 4094. London: Centre for Economic Policy Research.
- . 2004. "Dual Employment Protection Legislation: A Framework for Analysis." Universidad Carlos III de Madrid. Mimeographed.
- Drèze, J. and E. Malinvaud. 1994. "Growth and Employment: The Scope of a European Initiative." *European Economic Review* 38(3–4): 489–504.
- European Commission. 2003. *Labour Market Policy: Qualitative Report*. Luxembourg: Office for Official Publications of the European Communities. (Individual reports are available for each European Union member country).
- Hopenhayn, H. 2001. "Labor Market Policies and Employment Duration: The Effects of Labor Market Reform in Argentina." Research

- network working paper R-407. Washington: Inter-American Development Bank.
- IDB (Inter-American Development Bank). 2003. *Good Jobs Wanted. Labor Markets in Latin America*. Washington.
- Jimeno, J.F. and D. Rodríguez-Palenzuela. 2002. "Youth Unemployment in the OECD: Demographic Shifts, Labour Market Institutions, and Macroeconomic Shocks." Working paper 2002-15. Madrid: Fundación de Estudios de Economía Aplicada.
- Kugler, A., J.F. Jimeno, and V. Hernanz. 2003. "Employment Consequences of Restrictive Employment Policies: Evidence from Spanish Labour Market Reforms." Working paper 2003-14. Madrid: Fundación de Estudios de Economía Aplicada.
- Ljungqvist, L. 2002. "How Do Lay-off Costs Affect Employment?" *Economic Journal* 112(482): 829–53.
- Mortensen, D.T. and C.A. Pissarides. 1999. "New Developments in Models of Search in the Labor Market." In *Handbook of Labor Economics*, edited by O. Ashenfelter and D. Card. Amsterdam: North-Holland.
- Neumark, D. and W. Wascher. 2003. "Minimum Wages, Labor Market Institutions, and Youth Employment: A Cross-National Analysis." Finance and economics discussion paper 2003-23. Washington: Board of Governors of the Federal Reserve System.
- Nickell, S. and R. Layard. 1999. "Labour Market Institutions and Economic Performance." In *Handbook of Labor Economics*, edited by O. Ashenfelter and D. Card. Amsterdam: North Holland.
- Nunziata L. and S. Staffolani. 2001. "The Employment Effects of Short-Term Contract Regulations in Europe." University of Oxford and University of Ancona. Mimeographed.
- OECD (Organization for Economic Cooperation and Development). 1999. *Employment Outlook*. Paris.
- Saint-Paul, G. 1996. "Exploring the Political Economy of Labour Market Institutions." *Economic Policy* 23 (October): 265–300.
- . 2000. *The Political Economy of Labor Market Reforms*. Oxford University Press.