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IMF Working Paper

The Italian Labor Market: Recent Trends, Institutions and Reform Options

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European Department

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Institutions and Reform Options¹**

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Abstract

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Despite improvements in labor market performance over the past decade, owing in part to past reforms, Italy's employment and productivity outcomes continue to lag behind those of its European peers. This paper reviews Italy's institutional landscape and labor market trends from a cross-country perspective, and discusses possible avenues for further reform. The policy discussion draws on international reform experience and on simulations based on a calibrated labor market matching model. A key lesson is that the details of reform design, and the sequencing of reforms, matter greatly for labor market outcomes and for the fiscal costs associated with these reforms.

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Contents	Page
I. Introduction	3
II. Recent Developments.....	4
III. Regulatory Framework	6
IV. Directions for Reform.....	9
A. Lessons from Case Studies	12
B. The Fiscal Implications of Labor Market Reform: A Numerical Exercise.....	15
V. Conclusions.....	17
Table	
1. Model Parameterizations	19
Figures	
1. Recent Labor Market Trends in Italy.....	4
2. Italy’s Labor Market Outcomes in Cross-Country Comparison, 2007	5
3. Earnings, Productivity and Competitiveness	6
4. Employment Protection and Product Market Regulation, 2003	9
5. Employment versus Key Product and Labor Market Regulations, 2003.....	10
6. Reforming Taxation and Wage Bargaining—Model Results.....	16
Boxes	
1. Key Reforms of the Italian Labor Market.....	7
2. Product Market Regulations and the Labor Market.....	11
3. Experiences of Successful Labor Market Reformers.....	13
Appendix.....	18
References.....	21

I. INTRODUCTION

Following significant labor market reforms in the 1990s and early 2000s, labor market outcomes have improved substantially in Italy: employment and labor force participation rates have increased, and the unemployment rate dropped to around 6 percent in 2007, down from a peak of over 12 percent in the mid-1990s.² But despite these improvements, employment rates in Italy continue to be substantially lower than those in most other European countries. Asymmetries in labor market policies have also exacerbated inequities in the labor market. For example, Italy's social safety net is generous for some worker groups, but virtually nonexistent for (most) others; the extent of employment protection varies substantially across worker groups; and the aggregate wage distribution is too compressed. As a consequence, a rising share of workers faces high employment risk but little income insurance. The existing wage bargaining system exacerbates these disparities: nationally bargained wages are less binding in the North, but too high for South, and the lack of a broad social safety net, particularly for those in the South, prevents sufficient spatial mobility to more quickly reduce regional disparities.

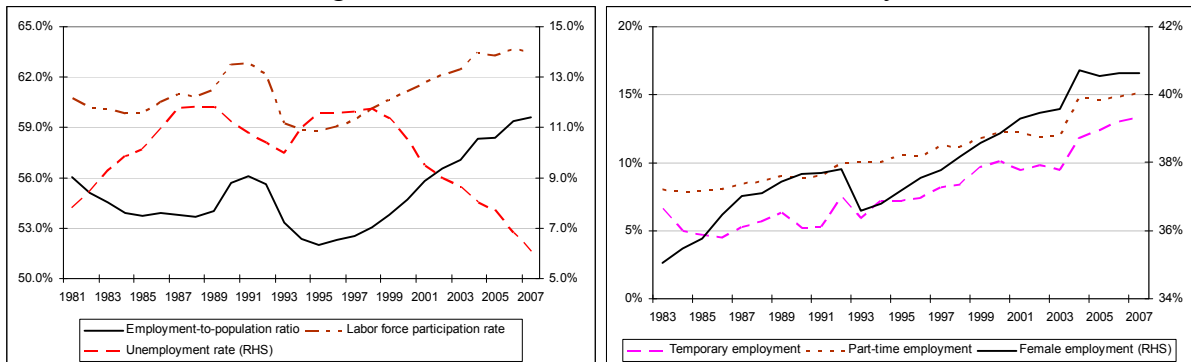
This paper provides an overview of the institutional landscape of Italy's labor market and of recent labor market outcomes, both from a cross-country perspective. Taking stock of the current situation and drawing from international experiences, it argues that addressing Italy's labor market underperformance requires a comprehensive view of the labor market, recognizing the importance of avoiding further partial measures that exacerbate existing inequities, and also recognizing that labor market reform benefits from, and depends on, reform measures in other areas, such as product market reform. While the experiences of successful labor market reformers suggest that partial reforms should be avoided, they do not imply that all shortcomings of the labor market need to be addressed simultaneously. However, they do point to the need for careful sequencing, and combination, of selected reforms.

A simulation exercise, based on a calibrated labor market matching model, quantifies the dynamic impact from a variety of possible reform paths, both on employment outcomes and on the fiscal costs associated with these reforms. The model simulations suggest that (1) even modest reform can have a substantial positive impact, but (2) reform dividends do not substantially materialize until about two years from the reform initiation, and (3) careful design, and pairing, of reforms can substantially reduce their (fiscal) costs.

The paper proceeds as follows: Section II summarizes recent labor market developments; Section III describes Italy's regulatory landscape; Section IV provides an overview of other

² However, the unemployment rate has since increased to about 6.7 percent in 2008Q3 according to OECD statistics.

Figure 1. Recent Labor Market Trends in Italy



Source: OECD

countries' reform experiences, and the lessons to be drawn for Italy, supported by simulating labor market reforms; and Section V concludes.

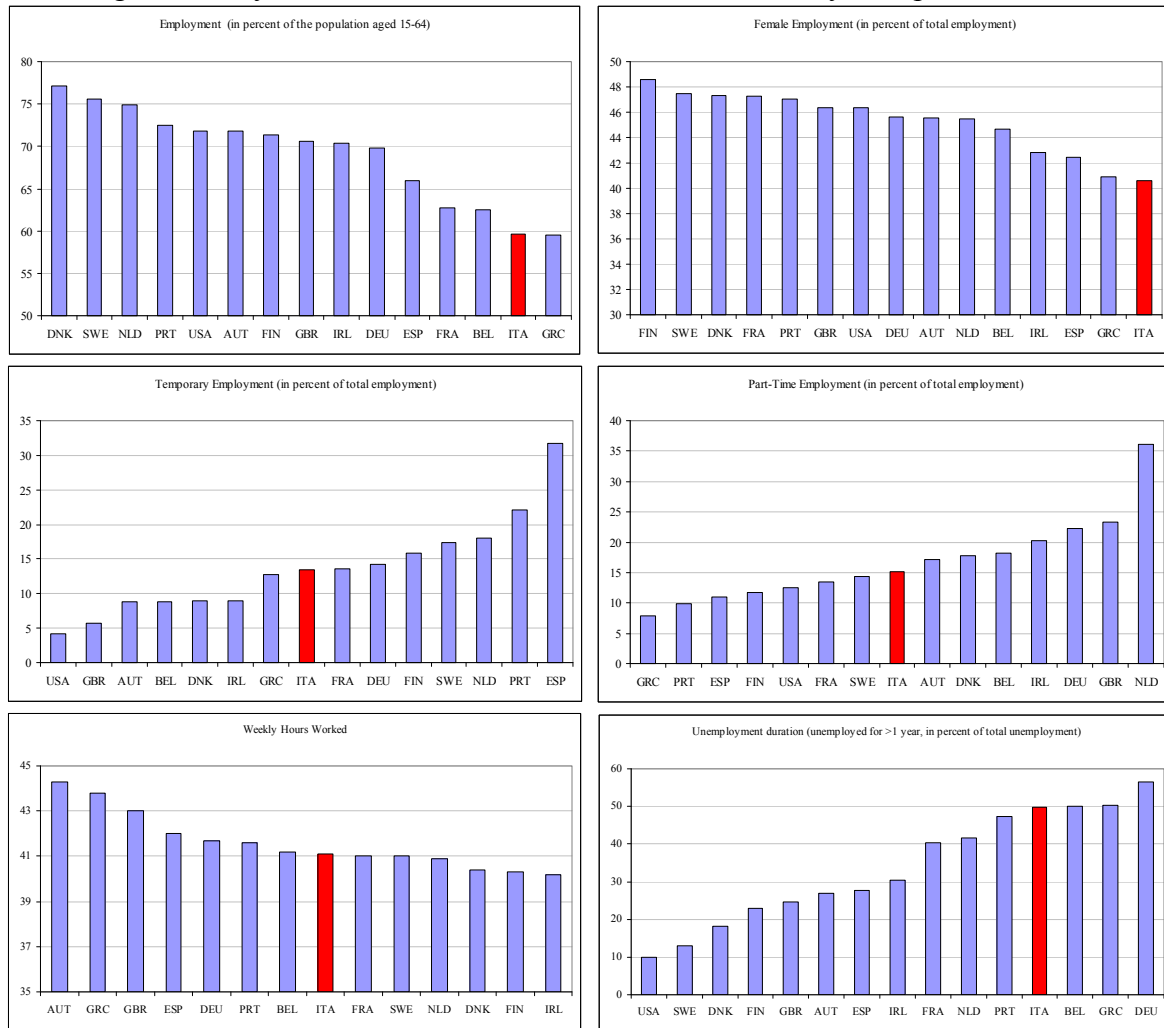
II. RECENT DEVELOPMENTS

Starting in the mid-1990s, both labor force participation and employment increased substantially in Italy. With cumulative employment growth almost twice that of the labor force, the unemployment rate declined sharply, to 6.1 in 2007, about half its peak rate in 1995 (Figure 1, left panel). Reform efforts, such as the 1997 Treu measures and the 2003 Biagi reforms (see Box 1), contributed to the growth in aggregate employment, but their focus on reform “at the margin” also led to an increasing dualism of the labor market.

Most of the employment gains since 1995 were in temporary and part-time employment. Between 1995 and 2007, the share of temporary employment increased from 7.2 percent to 12.4 percent, and the share of part-time employment from 10.5 percent to over 15 percent (Figure 1, right panel). In absolute terms, the number of workers in temporary work arrangements more than doubled during that time, while permanent employment increased by only 7 percent. While less dramatic, a similar gap was observed for part-time employment, which increased by 65 percent during the time period, compared to 9 percent cumulative growth in full-time employment. The jump in part-time employment in 2004 may also have benefited the share of women in employment, which increased by over one percentage point that year.

Recent positive developments notwithstanding, important weaknesses remain in the Italian labor market. Employment growth is starting to exhibit signs of a slowdown, and the level of employment, as a share of the working-age population, is still substantially below that in most other European countries. With hours worked at about the EU average, total labor utilization is comparatively low in Italy. And while the increased use in temporary and part-time employment, also now roughly at the EU average, has provided increased flexibility, it may also have displaced growth in permanent employment and contributed to stalling

Figure 2: Italy's Labor Market Outcomes in Cross-Country Comparison, 2007 1/



Source: OECD

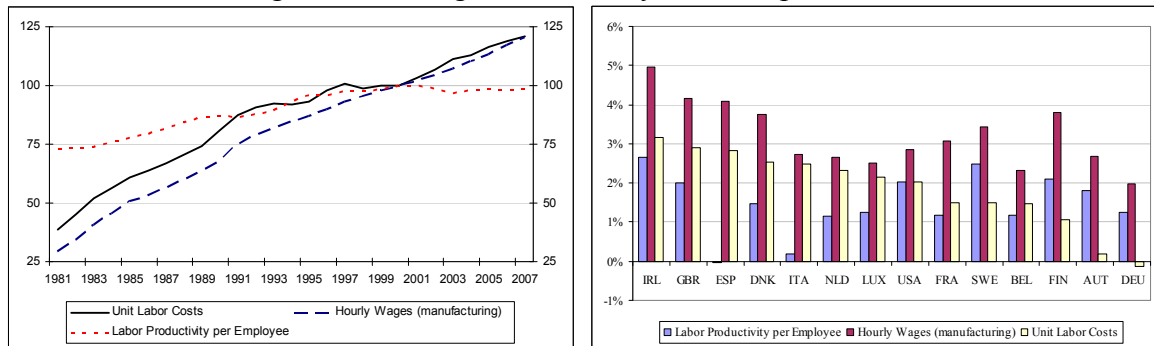
1/ All data are for 2007 or latest year available.

productivity growth.³ In spite of recent employment growth, unemployed workers still take a long time to find work—nearly 50 percent of the unemployed have been out of work for more than one year, substantially above the EU average (Figure 2).

Lastly, although earnings growth has been substantial, it was not excessive by cross-country comparison: over the past decade manufacturing earnings grew at an average annual rate of 2.6 percent in Italy, below the average rate of over 3.2 percent in other EU15 countries. Other labor costs also appear not to have played a large role: at 33.7 percent, the tax wedge in Italy,

³ The measurement of productivity poses methodological challenges in that the influx of low-productivity employment may depress measured average productivity even in the absence of changes in underlying competitiveness (see also Codogno, 2008).

Figure 3: Earnings, Productivity and Competitiveness 1/



Source: OECD

1/ 2000=100 (left panel); cross-country data are average annual growth rates during 1995-2006.

i.e., the combined tax burden of employer and employee deductions relative to total labor cost, falls below the EU average of 34.2 percent⁴ (panel b in Figure 5). Earnings growth did, however, outpace growth in labor productivity over the past two decades, which stagnated in 2000 and slightly decreased since then. As a result, Italy's unit labor costs grew by nearly 28 percent cumulatively during 1995-2007, compared to a European average of just over 20 percent during the same time period. Thus, the secular deterioration in relative unit labor costs is predominantly a problem of low productivity rather than high earnings growth.⁵

III. REGULATORY FRAMEWORK

Assessing the possible sources of Italy's labor market performance requires a nuanced and comprehensive view. Measured by standard *de jure* labor market indicators, such as those constructed by the OECD, Italy's regulatory framework ranks broadly mid-field in European comparison, and on some dimensions Italy in fact appears less regulated than the EU average. Yet, its labor market outcomes are among the worst in the EU.⁶ To gain a better understanding of this apparent disconnect between labor market regulations and outcomes, it is important to consider the interactions of different labor market regulations, rather than considering specific margins in isolation, and also to take into account spillover-effects between regulations in the labor market and those in others, especially product markets.

⁴ These numbers refer to married individuals with two children and average income, based on 2007 OECD data.

⁵ However, as argued below, while *average* earnings growth was relatively moderate in cross-country comparison, bargaining institutions contribute to insufficient wage variation across firms and regions, and thus may negatively affect productivity and employment outcomes.

⁶ *De jure* indicators may not capture the full extent of the regulations' *de facto* impact. For example, based on survey data, the World Economic Forum's recent competitiveness report ranks Italy 49th among 134 countries and near the bottom on most labor-market related indicators.

Box 1. Key Reforms of the Italian Labor Market⁷

Over the past two decades, Italy's labor market has undergone substantial reform. Adverse macroeconomic conditions, including an unemployment rate that exceeded 12 percent during the late 1980s, and Italy's envisaged entry into the EMU in 1999, resulted in several reform measures (*patti sociali*) starting in the early 1990s. Key among them were the social pact of 1993 which included the incomes policy arrangement and which laid down the foundations of the industrial relations and collective bargaining framework currently still in practice; and the Treu measures in 1997 and Biagi reforms in 2003, both aimed at improving labor market flexibility.

The collective bargaining structure laid out in the 1993 social pact postulates a two-tier bargaining structure: (1) collective bargaining at the national (sectoral) level, to determine the terms and conditions of employment (renegotiated every four years) and basic wage guarantees (*minimi tabellari*, renegotiated every two years); and (2) bargaining at the second (regional or firm) level, allowing the bargaining partners to supplement national contracts (valid for four years). Second-level bargaining is optional, and, importantly, wages can not be reduced below those negotiated in the *minimi tabellari*. Thus, although second-level bargaining in principle provides flexibility for better wage-productivity links, the wage floor imposed by the *minimi tabellari* limits the use of second-level bargaining.⁸

While the 1993 social pact provided a broad bargaining framework between the social partners, the Treu measures in 1997 (Law 197/1997), named after then-Labor Minister Tiziano Treu were the first legislative measures aimed specifically at increasing the employment rate, particularly in the South, and overall labor market flexibility. The Treu law aimed at increased flexibility via labor market reform "at the margin," mainly by introducing temporary contracts and providing incentives for part-time work. Another law in the same year (Law 469/1997) on the privatization and decentralization of job centers abolished the principle of a public monopoly on employment services. Efforts to increase labor market flexibility were taken forward with the 2003 Biagi reform (Law 30/2003), named after the late Marco Biagi, advisor on labor market reform under the 2001-2006 Berlusconi government. This reform further deregulated the use of atypical work arrangements, such as temporary agency work (staff-leasing) and part-time work, and introduced new forms of atypical work arrangements such as on-call jobs (*lavoro intermittente*), job sharing and occasional work (*lavoro a progetto*).

The low productivity and employment outcomes observed in Italy are in part due to asymmetries in labor institutions and their inability to reflect regional differences. Among the key hindrances of an efficient labor utilization and allocation are a rigid wage bargaining mechanism; inefficiencies and inequities in the unemployment insurance (UI) system; and asymmetric employment protection regulations (EPL). More specifically:

- *Collective wage bargaining*—About 60 percent of Italian workers are covered by collective bargaining agreements (see Box 1 for more detail on Italy's collective bargaining structure), high by European comparison, and the effective coverage is even

⁷ Parts of this box draw on the ILO's information on social pacts in Italy, available at <http://www.ilo.org/public/english/dialogue/ifpdial/info/pacts/italy.htm>.

⁸ Although Italy does not have a statutory minimum wage, collectively agreed wages impose a *de facto* wage floor even for workers not covered by collective bargaining—the Italian constitution contains a clause on the right to fair wages (sec. 36), and in determining the level of the fair wage, Italian labor courts have consistently taken the *minimi tabellari* as guiding parameters.

higher (see footnote 8). Although the bargaining structure has not resulted in excessive average wage growth compared to other European economies, the nature of Italy's two-tier system leaves little scope for many firms, specifically for small enterprises and many in the South, to engage in firm-level negotiations. As a result, a predominance of nationally negotiated wages over those at the firm level exacerbate regional differences in economic development.

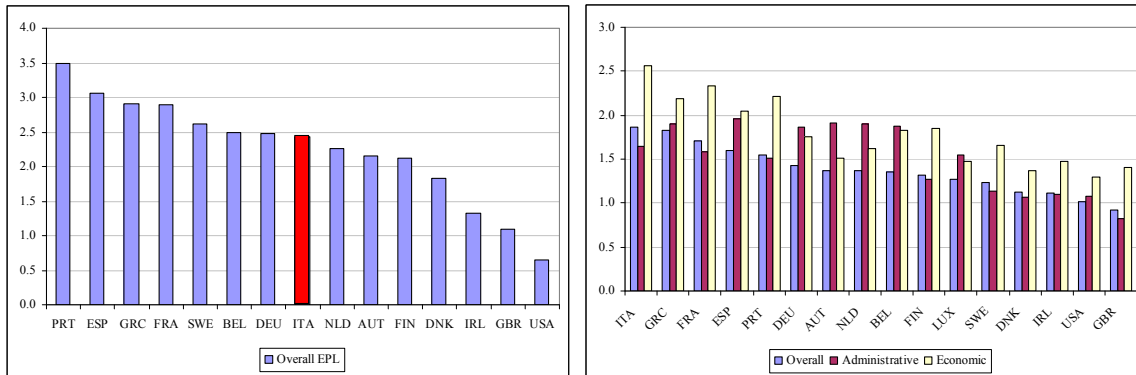
- *Unemployment insurance*—The Italian UI system is complex and uneven. While ordinary UI benefits are initially relatively high, with a net replacement rate of 60 percent, they drop to zero after 8 months (12 months for workers aged over 50), and complex eligibility rules imply that only few unemployed individuals actually receive such UI benefits (Demekas, 1995).⁹ By contrast, wage supplementation funds (*cassa integrazione guadagni*, or CIG) can be substantially more generous, both in terms of level and duration, but are limited to workers on certain contracts and those from participating firms (mostly large firms in the North). The lack of a broad and well-developed social safety net inhibits an efficient worker reallocation, both regionally and in terms of skill mismatches.
- *Employment protection*—Past reforms (see Box 1) have substantially reduced restrictions on fixed term and part-time employment arrangements, from among the highest in Europe in the mid-1980s to about the EU15 average in 2003, but have left restrictions on regular employment unchanged (see Figure 4). Although permanent EPL appear comparatively low according to the OECD indicators, market participants and academics alike recognize permanent employment as substantially protected.¹⁰ The asymmetric deregulation has tilted incentives for job creation toward “atypical” contracts, resulting in increased employment risk for an increasing fraction of the labor force (and particularly those with the least access to social insurance) and contributing to worsening productivity trends.¹¹

⁹ In 2005, 2.3 percent of the labor force received UI benefits, about a third the rate in other EU countries. Reasons include that receipt of UI benefits in Italy includes an income-test of family members (see de Neubourg et al., 2007); it also has minimum requirements regarding work and contribution histories.

¹⁰ For example, Art. 18 in Law 300/1970 (*statuto dei lavoratori*) protects workers against dismissal without (narrowly defined) just cause, making it difficult for firms to lay off individual workers without risking substantial penalties; protection against collective dismissals is among the highest in OECD countries; and the survey data cited in footnote 2 illustrates the high *perceived* rigidity of Italy's labor market.

¹¹ The asymmetric liberalization of temporary EPL, and the increased use of temporary contracts, has impacted productivity, among other things, because their time-limited nature reduces incentives for human capital investments and temporary employment creation tends to be in low-skill areas. Also, the still high protection of permanent contracts continues to make it difficult to lay off non-productive workers on permanent contracts. The overall result has been a bias towards less-productive employment.

Figure 4. Employment Protection and Product Market Regulation, 2003 1/



Source: OECD

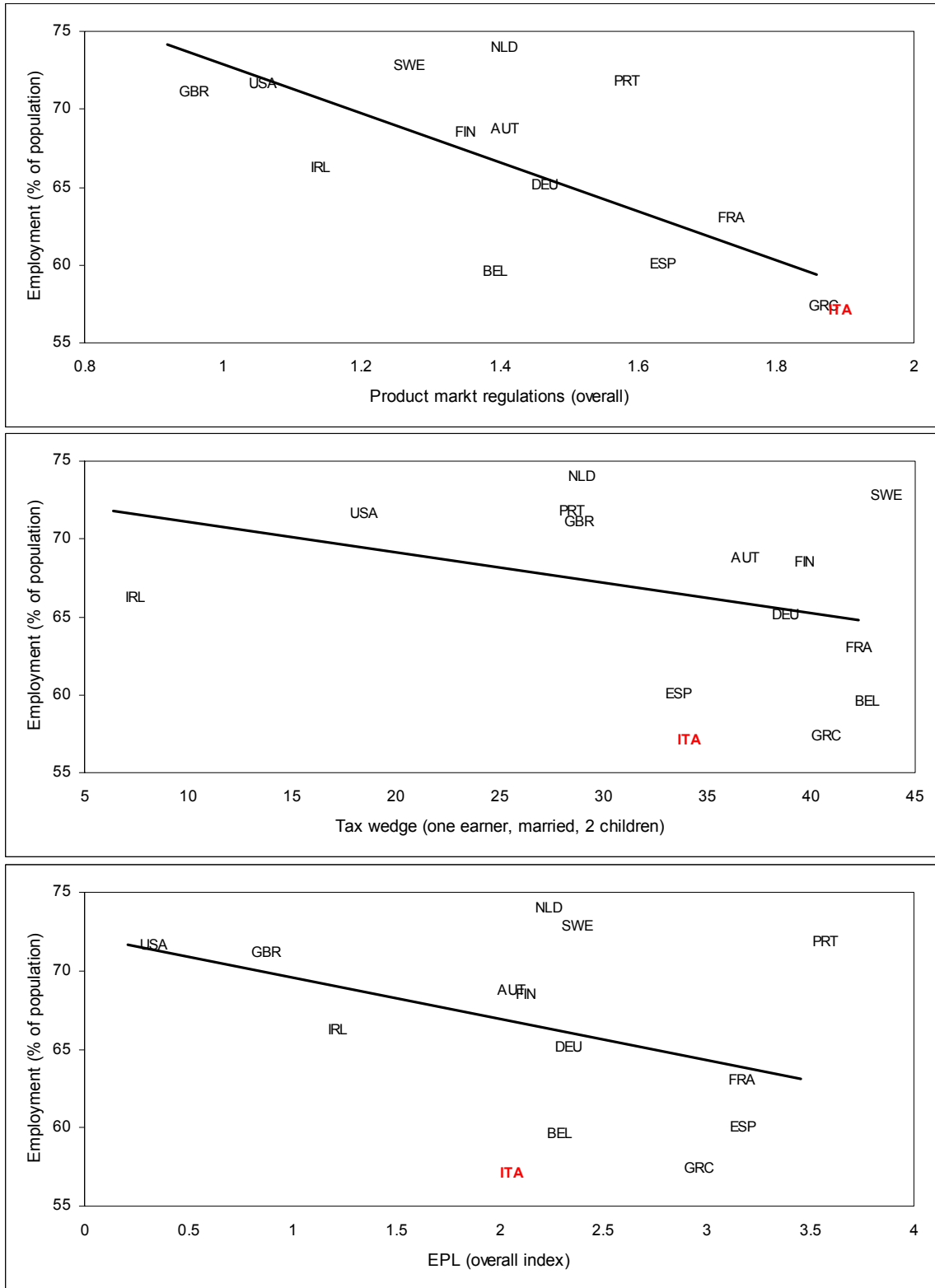
1/ Overall EPL includes restrictions on permanent and temporary jobs as well as on collective dismissals. Administrative regulations include administrative burdens on startups and regulatory and administrative opacity; economic regulations pertain to those of the economic structure and competition; the overall index is an aggregate of the subindices.

Product market regulations are also high and likely to have affected labor market outcomes (Box 2). In 2003, Italy ranked among the countries in the EU with the most regulated product markets (Figure 4). Italy's high score is driven mostly by regulations of the economic structure and competition. Consistent with the theoretical and empirical research (Box 2), which cites a lack of product market competition as an important constraint on employment growth, simple correlations between employment and product market regulation paint a strong, and negative, relationship between the two, with Italy at the extreme end of this relationship (Figure 5). Notably, the other scatterplots in Figure 5 suggest that the tax wedge and average EPL, while restrictive, do not stand out as the prime factors in keeping employment low in Italy. While these plots merely depict unconditional pairwise correlations, and as such do not allow for causal interpretations, they are consistent with the notion that product market regulations are important and should be part of comprehensive labor market reform measures.

IV. DIRECTIONS FOR REFORM

The details of Italy's labor market institutions are important. Among the key lessons from the overview of Italy's labor market institutions is that the problems are not excessive average wage growth, but a bargaining system that provides insufficient differentiation, leading to

Figure 5. Employment versus Key Product and Labor Market Regulations, 2003 1/



Source: OECD

1/ All data are for 2003, the latest available year for data on product market regulations.

Box 2. Product Market Regulations and the Labor Market

Product market regulations¹² have been shown to be strongly negatively correlated with employment (see, e.g., Boeri et al., 2000, and Figure 5). A key channel for this relationship is the fact that in a monopolistic market structure, firms set prices at a markup over marginal cost, thus reducing the equilibrium quantity of output. Increased competition then tends to result in a lower equilibrium price, higher output and, all else equal, higher employment.

The effect of product market deregulation on real wages, and the size of employment gains, depends on labor market institutions: in labor markets with strong unions, wages are elevated over the marginal product of labor because unions extract a share of the (monopolistic) firms' rents. Because product market deregulations reduces firms' rents, and thus also workers' wage premium, the scope for employment effects of product market deregulation is larger in labor markets where unions are strong. The empirical evidence is broadly consistent with these predictions: Fiori et al. (2007), Griffith et al. (2007) and Amable et al. (2007) all find that product market deregulation is more effective in highly-regulated labor markets.

Based on Blanchard and Giavazzi (2003), however, in the aggregate workers will benefit from both higher real wages and higher aggregate employment following product market deregulation.¹³ In addition, reductions in total rents reduce the incentives of workers to appropriate a share of these rents (e.g., through unionization) and thus are likely to facilitate future labor market reform. Fiori et al. (2007) confirm empirically the key predictions of the Blanchard-Giavazzi model, namely, a positive effect of product market deregulation on employment and on the probability of future labor market reform. The theoretical and empirical results suggest that in the presence of both rigid product and labor markets, reforming the product market first may likely have a large payoff and could also facilitate subsequent labor market reform.¹⁴

However, Blanchard and Giavazzi (2003) also point to complementarities based on political economy considerations. Although workers on the whole benefit from product market reform, some groups may suffer from deregulation (e.g., incumbent firms, or sectors particularly affected by deregulation) and therefore oppose product market deregulation. Such deregulation may thus be more feasible when combined with measures to help those groups that are negatively affected. The experiences of successful labor market reformers (Box 3) support the notion that tackling labor market reform in a comprehensive manner, by appropriately combining reform along different dimensions of labor market regulation, helps reduce opposition to such reforms.

wage outcomes that are too restrictive for some subsets of the economy; they are not an excessively generous UI system (as, arguably, in some other European countries), but one that is too low on average, and too uneven, missing those worker groups that most need its

¹² Following the OECD, product market regulations are ones that “reduce the intensity of competition in [...] the product market” (Conway et al., 2005, p. 3). These regulations can, however, take many shapes; the OECD's database on product market regulations contains measures ranging from the *administrative burden on startups* to the *size of the public enterprise sector* to *regulatory and administrative opacity*.

¹³ Average real wages will be higher in Blanchard and Giavazzi (2003) because the lower prices that result from increased product market competition outweigh any reductions in the rents that workers can appropriate.

¹⁴ However, the debate on the optimal product-labor market sequencing is ongoing; for example, Berger and Danninger (2006) find that simultaneous deregulation may have the largest employment impact.

support; and while employment protection is too high overall, it is specifically its asymmetry that causes additional distortions.

A. Lessons from Case Studies

Important lessons from the experiences of successful reformers can be adapted to the Italian case. Box 3 summarizes key features of labor market reforms that have been undertaken by a number of European countries. Some lessons of particular relevance for Italy include the following:

- *Successful labor market reforms typically also address inefficiencies in product markets.* Successful reformers have typically also deregulated product markets, in line with a broad academic literature (Box 2). Given that Italy's product market is among the most regulated in Europe, this lesson is of particular importance there. Moreover, product market deregulation is typically not fiscally costly, and more competitive product markets can also facilitate subsequent labor market reform. Thus, product market deregulation should be a top priority in Italy.
- *Successful reforms avoid being piecemeal.* Labor market reforms should be implemented in packages that avoid unintended consequences. Italy's reform history itself provides numerous examples of piecemeal reforms, such as the asymmetric liberalization of temporary employment, partial tax reductions, and expansion of the CIG scheme.¹⁵ More specifically:
 - a. An extended use of second-level bargaining is crucial to obtain a more flexible and differentiated wage structure.¹⁶ Reductions in labor taxes may be necessary to provide additional flexibility, but these should be broad-based, rather than partial, and should be implemented only with commitments of unions to moderate wage demands at the national level so as to broaden the scope for wage supplements at the firm-level, while ensuring that tax cuts benefit both workers and firms.

¹⁵ Recent measures to reduce taxes at the margin, such as the reduction of taxation on overtime/bonus pay and the *tredicesima*, affect average costs of employment (and thus job creation) only marginally, disproportionately benefit those in permanent employment, and have the potential to result in substantial fiscal costs. Italy's government has also recently committed additional funds to the CIG scheme, thus potentially exacerbating existing inequities in the social safety net (see also Boeri and Garibaldi, 2008a).

¹⁶ To achieve a less compressed wage distribution, Boeri and Garibaldi (2008b) propose the introduction of a statutory minimum wage: in their proposal, a minimum wage could replace collectively agreed wages as a new "fair wage" benchmark (see footnote 8), and thus provide more scope for firms to deviate from collectively negotiated wages.

Box 3. Experiences of Successful Labor Market Reformers

A large academic literature (e.g., Prescott, 2004, and Ljungqvist and Sargent, 1998) aims at explaining differences in labor market outcomes between the US and Europe. However, the US-Europe dichotomy hides substantial heterogeneity in labor market policies and outcomes *within* the group of European economies. In fact, several European countries have over the past two decades implemented broad labor market reforms and, in many cases, experienced substantial improvements in labor market outcomes. Annett (2007) examines the reform experiences of four such countries—Denmark, the Netherlands, Ireland and the UK—where unemployment rates have decreased substantially following reforms. Although the four countries differ in the details of their policy changes, Annett (2007) concludes that wage moderation was of key importance for labor market improvements in all four. This was achieved by combinations of: (1) reduced union power and/or consensus-based agreements with unions; (2) tightened unemployment insurance systems; (3) reduced labor taxation; (4) reduced employment protection legislation; and (5) product market deregulation. In addition, Denmark and the Netherlands expanded active labor market policies (ALMPs), and Ireland, the Netherlands and the UK also reduced the size of government, including government employment.

A key lesson from these country experiences—both in terms of economic effectiveness and political feasibility—is that many policy measures exhibit important complementarities that help reduce opposition to, and increase the effectiveness of, reforms. Examples include:

- *Labor taxes and union power*—Unions' opposition to accepting more moderate wage increases can be achieved by reaching agreements that trade wage moderation for reductions in labor taxation, which can help compensate workers for moderate increases in pre-tax wages. Wage moderation may also be necessary for tax cuts to be effective in generating employment gains as otherwise employers' labor costs may not be sufficiently reduced.¹⁷
- *Employment protection and social safety net*—Reducing employment protection increases labor market flexibility, but also exposes workers to increased employment and income risk. Combining reductions in employment protection with improvements in the social safety net, such as unemployment insurance, can help mitigate the income risk associated with increased job turnover and thus reduce opposition to reform.¹⁸ However, a careful design of UI is crucial to provide income insurance to workers while also maintaining labor market flexibility and appropriate incentives.¹⁹

¹⁷ Belgium serves as an example where strong unions managed to appropriate most of the tax cuts, resulting in mostly higher take-home pay rather than lower labor costs and thus preventing more substantial employment gains (see Zhou, 2007). By contrast, the Netherlands' *Wassenaar* agreement in 1982 between labor and employer representatives explicitly traded wage restraint for reductions in labor taxation and contributed to substantial employment growth during the 1980s and 1990s. Consensus agreements with, or reductions in the power of, unions were also important elements of the Irish and UK reforms.

¹⁸ Although employment protection may also have positive effects, such as increasing firms' job-specific investment because of longer average worker tenures, Takizawa (2003) shows in a calibrated model for Portugal that the negative effects dominate. The details of EPL reforms also matter. Many European countries have relaxed restrictions on fixed-term contracts, while leaving those for permanent positions or collective dismissals unchanged, which in many cases, and notably in Italy, has created a dual labor market.

¹⁹ For example, the level of UI benefits should be chosen sufficiently high to provide some income insurance, but not too high so as to maintain sufficient incentives for recipients to engage in active job search; job search activities should also be monitored; and UI benefits should decrease over time.

Box 3. Experiences of Successful Labor Market Reformers (*continued*)

- *Product market and labor market reform*—Employment gains associated with labor market reform were greater in the presence of liberal product markets (see Annett, 2007), consistent with the sequencing results emerging from the literature on the cross-effects of product and labor market deregulation (Box 2).

Many of the labor market reforms can be costly, at least in the short run, and may therefore require fiscal adjustments. Annett (2007) notes that most successful labor market reformers combined labor market reform with expenditure-based consolidation. A prime candidate for reducing expenditures that also improves labor market performance is to reduce public sector employment. Among the case studies, Ireland, the Netherlands and the UK reduced government employment. This also contributed to wage moderation by (1) increasing the labor supply available to the private sector and (2) reducing the extent to which public wages affect private sector wages by acting as a *de facto* wage floor. While public employment reductions may temporarily increase unemployment, ensuring an appropriate social safety net, possibly combined with ALMPs, can mitigate opposition.²⁰

Overall, the country examples indicate that labor market reforms which combine labor market flexibility (efficiency) with a high level of social protection (equity) can not only increase the political feasibility of reform, but also lead to greater effectiveness.²¹ An important lesson that emerges from these experiences, and academic research, is that employment risk is a necessary part of a flexible economy, allowing it to reallocate quickly in response to economic shocks, and so attempts to reduce employment risk *per se* are unlikely to improve labor market outcomes. However, measures to reduce the income risk associated with fluctuations in employment can be beneficial for economic welfare and in fact facilitate the political feasibility of reforms in the first place.

- b. A further EPL reduction, and equalization across employment types, should be combined with a reform of the UI system, including a broadening of coverage and lengthening of duration.²² That is, increased employment risk should be buffered by improved income insurance.²³

²⁰ ALMPs can help unemployed workers return into employment more quickly and are a prominent feature of, for example, Denmark’s “flexicurity” model (see Jespersen et al., 2008). However, the overall cost-effectiveness of such measures is ambiguous, and while ALMPs may increase employment rates for targeted groups, this may be at the expense of other groups (see, e.g., Estevão, 2007).

²¹ The Danish model of “flexicurity” provides an example. Besides achieving substantial growth in employment since the early 1980s, the consensus-based approach, both with unions and the public in general by providing increased social protection, has provided this model with strong public support and durability.

²² A reduction in the size of public sector employment could also be considered, as it is, to some extent, also a form of social insurance, if a highly inefficient one.

²³ Although UI can create disincentive effects by raising reservation wages, Acemoglu and Shimer (2000) note that (moderate) UI may also increase labor productivity by encouraging workers to seek more productive jobs, and firms to create them. With incomplete insurance markets, social insurance can also raise economic welfare, although Rogerson and Schindler (2002) caution that the details of such insurance are crucial.

B. The Fiscal Implications of Labor Market Reform: A Numerical Exercise

Labor market reforms can be costly in the short run, while positive employment effects may only be felt in the medium term. Fiscal constraints can therefore make the implementation of reform more difficult. However, an appropriate reform design, such as the sequencing and pairing of reforms, can mitigate fiscal constraints and will be especially important in countries with more limited fiscal space. Sequencing reforms appropriately by initiating product market reforms first can provide substantial employment gains at little to no cost. But even within the set of possible labor market reforms, appropriate design can affect the costliness of such measures.

This section pursues such issues in more detail within the context of a search and matching model of the labor market. The seminal reference in this field is the contribution by Mortensen and Pissarides (1994) who construct a model with endogenous job creation and job destruction and where wages are determined by bilateral bargaining between a worker and a firm. The search and matching framework serves as an ideal laboratory for studying the implications of labor market reforms on labor market outcomes. To illustrate the importance of proper sequencing, the simulations reported here focus on various combinations of tax cuts and wage moderation (defined as reduced wage bargaining power), corresponding to model parameters τ and θ , respectively.

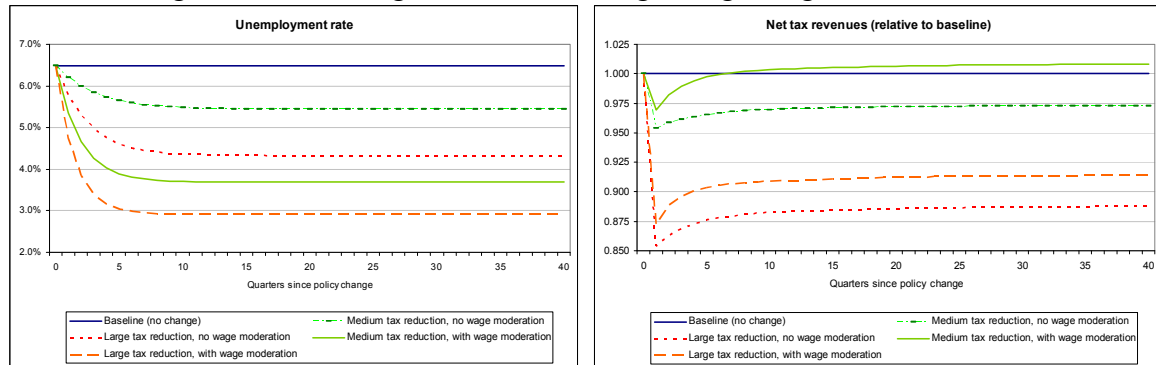
For the purpose of the present analysis, two equations derived from the model are of special importance. First, by endogenously determining the worker flows between employment and unemployment, the model can be used to trace out the dynamic labor market adjustment following a change in the regulatory environment. More specifically, given period t 's unemployment rate U_t and the model's endogenous transition probabilities, next period equilibrium unemployment U_{t+1} can be written as

$$U_{t+1} = (1 - U_t)\mu F(\underline{\varepsilon}) + U_t(1 - \alpha^w[1 - F(\underline{\varepsilon}^0)])$$

where $\mu F(\underline{\varepsilon})$ is the rate at which employment positions are terminated and $\alpha^w[1 - F(\underline{\varepsilon}^0)]$ is the rate at which unemployed workers transition into employment. The derivations of these expressions and the definitions of the various parameters are laid out in the appendix.

The second relevant equation calculates the (net) fiscal revenues related to the labor market. These net revenues are the balance of tax revenues on output produced by firms minus

Figure 6. Reforming Taxation and Wage Bargaining—Model Results 1/



1/ The simulations are based on the model described in the appendix. The experiments involve reductions in the tax rate τ from 40% to 37.5% and 33%, respectively, and a reduction in workers' bargaining power θ from .6 to .4. Net tax revenues are defined as total tax revenues minus outlays on UI benefits.

outlays on UI benefits for unemployed workers. In the language of the model:

$$Net\ Fiscal\ Revenue_t = \tau \int_{\varepsilon} y(\varepsilon) dG_t(\varepsilon) - b^u U_t$$

where $G_t(\varepsilon)$ is the time-varying distribution of employment across levels of ε , the underlying productivity shock, and where $y(\varepsilon)$ is the output produced by a worker-firm match at a given level of ε . (Again, the appendix provides additional detail.)

Starting from a baseline parameterization that broadly replicates Italy's recent labor market outcomes, Figure 6 presents the evolution of unemployment and fiscal (net) revenues over 40 quarters following the implementation of four different reform packages.²⁴ The policy experiments combine moderate and large tax cuts with varying levels of workers' bargaining power. The simulations highlight two key points. First, in the simulations it takes more than eight quarters for the labor market variables to broadly converge to their new steady state levels; thus, the effects of labor market reforms are unlikely to materialize quickly.²⁵ Second, while net tax revenues partially recover from the initial drop (due to the reduction in tax rates), they reach, and in fact exceed, the benchmark equilibrium level only in the scenario where moderate tax cuts are combined with reduced wage demands. And third, even small policy changes may have substantial impact: even a medium tax reduction without any changes to the bargaining framework lowers equilibrium unemployment by over one percentage point (however, the employment gains are insufficient to finance the loss in fiscal revenues due to the lower tax rate).

While the precise numbers should be interpreted with caution, the results highlight the importance of carefully pairing and designing labor market reforms and, importantly,

²⁴ The benchmark model calibration is chosen to generate an unemployment rate of 6.5 percent and 50 percent long-term unemployment (i.e., in the baseline steady state, 50 percent of the unemployed have been in unemployment for four quarters or more), broadly in line with Italy's recent outcomes (see Figures 1 and 2).

²⁵ The speed of adjustment appears broadly consistent with Mourougane and Vogel (2008), although they find even (slightly) slower adjustment speeds.

avoiding partial measures. Specifically, the fact that reforms are fully self-financing only in the case where tax cuts are combined with reduced wage demands is consistent with some of the country experiences described in Box 3. In particular, the loss in fiscal revenues arising from lower tax cuts is compensated for by a broader tax base only if the employment growth effects are sufficiently large (which, by decreasing unemployment, also reduces outlays on unemployment insurance benefits). But to trigger sufficiently strong employment growth, it is important that the tax cuts also translate into sufficiently increased incentives for job creation—in the model, this requires a simultaneous reduction in workers’ bargaining power. Thus, confirming the country experiences discussed in Box 3, reform packages that combine tax reductions with reforms of the bargaining structure and/or unions’ commitment to wage moderation are the most promising.²⁶

V. CONCLUSIONS

This paper has provided a brief summary of Italy’s labor market institutions and recent trends in labor market outcomes. Despite substantial improvements over the past decade, Italy’s labor market performance still lags behind that in other European economies, and the need for a second generation of labor market reforms is pressing. Such reforms must address the broad-ranging asymmetries in labor market regulations, including those in employment protection legislation and social safety nets, and help wages better respond to different conditions across firms and regions. The paper has highlighted a number of possible avenues, including product market deregulation, a more flexible wage bargaining framework, a rationalization of the tax framework, and a broadened and streamlined UI system.

While fiscal constraints limit Italy’s ability to implement radical reform, this paper has argued, based on cross-country experiences and model simulations, that not all shortcomings of the labor market need to be addressed simultaneously: more limited, but well-designed labor market reforms can be effective and contain their costs. In this context, liberalizing product markets is of first-order importance as it can help improve labor market outcomes, induces little to no fiscal cost, and may increase the political feasibility of subsequent labor market reforms. A key challenge in any reform effort is to avoid piecemeal measures which can be costly and ineffective (or worse).

²⁶ Some qualifications regarding the model interpretation are in order. First, the simple model and wage bargaining framework cannot capture the more complex two-tier bargaining structure currently in place in Italy, although the results do convey the notion that it is important to provide firms with sufficient flexibility in wage setting so that they benefit, at least in part, from tax reductions (rather than the tax reductions being bargained away by strong unions) and providing them with incentives create sufficient new employment. Second, while the simulations point out the reform measures that strike a favorable balance between increased employment and fiscal costs, these are not necessarily the welfare-optimizing reform measures: e.g., some labor market reforms may be desirable from an aggregate perspective even if they are not “self-financing” in a narrow sense. It may then be optimal to implement these reforms regardless and finance them, say, through expenditure cuts in other areas. Lastly, the simulations focus on only taxes and bargaining; other elements, such as the level of UI generosity, are important additional policy parameters (see footnote 14).

Appendix

The model used in the main text closely follows Mortensen and Pissarides (1994). In particular, there is a continuum of measure 1 of identical workers, and a larger continuum of identical firms, and they discount the future at rate r . Workers are either unemployed or employed, firms active or vacant. Unemployed workers can search costlessly for a job and in steady state, maximize the (flow) value function

$$rU = b + \alpha^w E \max[N(\varepsilon) - U; 0]$$

where b is the sum of an unemployed worker's value of leisure, b^l , and UI benefits, b^u ,²⁷ and α^w is the Poisson arrival rate of vacant firms. The function $N(\varepsilon)$ denotes the value from employment after drawing a random productivity parameter ε , uniformly distributed over the interval $[-1, 1]$, and is defined as

$$rN(\varepsilon) = w(\varepsilon) + \mu E \max[N(\varepsilon') - N(\varepsilon); U - N(\varepsilon)]$$

where μ is the Poisson arrival rate at which new productivity shocks are drawn while employed.

For vacant and active firms, respectively, the value functions are given by

$$rV = -k + \alpha^f E \max[J(\varepsilon) - V; 0]$$

and

$$rJ(\varepsilon) = (1 - \tau)y(\varepsilon) - w(\varepsilon) + \mu E \max[J(\varepsilon') - J(\varepsilon); V - J(\varepsilon) - c^f]$$

where k is a flow resource cost associated with posting a vacancy, α^f is the arrival rate of unemployed workers, and τ is a tax on the firm's output $y = q + \sigma\varepsilon$, with $q, \sigma > 0$.²⁸ Firms also incur a pure resource firing cost c^f when a match is terminated. Free entry of firms eliminates *ex ante* profits from posting a vacancy, implying $V = 0$ and so

$$k = \alpha^f E \max[J(\varepsilon); 0].$$

Wages are determined by bilateral Nash bargaining and satisfy

$$w = \arg \max(N - U)^\theta J^{1-\theta}$$

²⁷ The distinction is relevant for the calculation of the fiscal costs associated with policy changes: b^u is a transfer from the government, so lower unemployment implies lower aggregate transfers, while b^l is a pure utility flow and does not enter the fiscal calculations.

²⁸ This specification captures the fact that taxes reduce the joint surplus from engaging in production, but it does not capture the distortion from, say, payroll taxes which drive a wedge between the firm's and the worker's marginal return from working. Thus, this specification likely underestimates the distortionary effects of taxation.

Table 1. Model Parameterizations

Parameter	Baseline	Small tax cut	Large tax cut	Small tax cut	Large tax cut
		(no change in θ)		(reduction in θ)	
b^l	.45	.45	.45	.45	.45
b^u	.05	.05	.05	.05	.05
q	1	1	1	1	1
σ	.2	.2	.2	.2	.2
r	.01	.01	.01	.01	.01
μ	.081	.081	.081	.081	.081
η	.5	.5	.5	.5	.5
c^f	.6	.6	.6	.6	.6
τ	.4	.375	.33	.375	.33
θ	.6	.6	.6	.4	.4
U^{SS}	6.5%	5.4%	4.3%	3.7%	2.9%

where θ is between 0 and 1 and denotes the worker's bargaining power. Defining surplus in continuing matches as $S(\varepsilon) = J(\varepsilon) + N(\varepsilon) - U + c^f$, the first-order conditions imply

$$J(\varepsilon) = (1 - \theta)S(\varepsilon)$$

$$N(\varepsilon) - U = \theta S(\varepsilon).$$

Note that the firing cost does not apply when a vacant firm and unemployed worker first meet but do not consummate the match, implying that the initial surplus function is given by $S^0(\varepsilon) = J(\varepsilon) + N(\varepsilon) - U$ and the initial wage function as $w^0(\varepsilon) = w(\varepsilon) - r\theta c^f$.

The timing of the model is as follows: upon meeting, a worker-firm pair draws a realization of ε and then bargains over the wage. By construction, both will agree to continue search if $S(\varepsilon) < 0$, and consummate the match otherwise. As a consequence, there exists a reservation value $\underline{\varepsilon} \in [-1, 1]$ such that $S(\underline{\varepsilon}) = 0$ (in all parameterizations presented here the solution was interior). Analogously, the initial reservation wage is defined by $S^0(\underline{\varepsilon}^0) = 0$.

The rate at which workers and firms meet is determined by a Cobb-Douglas matching technology, where the number of meetings is given by

$$M(V, U) = V^\eta U^{1-\eta}$$

where V is the aggregate measure of posted vacancies, and U is the measure of unemployed workers. Arrival rates for workers and firms, respectively, can then be written as

$$\alpha^w = M(V, U)/U = (V/U)^\eta$$

and

$$\alpha^f = M(V, U)/V = (V/U)^{-1+\eta}.$$

The tax rate τ is taken as exogenous in the sense that the equilibrium calculated here contains no balanced budget requirement for the government. This is not to say that the government does not have to satisfy an intertemporal budget constraint, but one objective of the model calculations is to assess the magnitude of fiscal pressures that arise from various policy (which, of course, will eventually have to be addressed by fiscal policy measures). For the current purpose, then, balanced budget requirements are left out of the model.

The model is solved numerically. Calculating the transition dynamics from the baseline equilibrium to the new steady state after changes in policy is facilitated by noting that agents in the model immediately adjust their reservation values upon a change in the economic environment. Thus, the dynamic transition can be calculated by simply applying the transition probabilities based on the updated reservation values (i.e., those after the policy change), and so (after discretizing) unemployment evolves according to

$$U_{t+1} = (1 - U_t)\mu F(\underline{\epsilon}) + U_t(1 - \alpha^w[1 - F(\underline{\epsilon}^0)]).$$

The exogenous and endogenous parameter values associated with each parameterization's steady state are summarized in Appendix Table 1. The parameterizations are based on a quarterly model. The variable U^{SS} presented in the table is the steady-state unemployment rate in each case.

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