

Flexibility, Dualism and the Great Recession

Tito Boeri

Università Bocconi and Fondazione Rodolfo De Benedetti

January, 20 2011, CPB-ROA Conference on Flexibility of the
Labour Market

Outline

- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory
- 3 Empirical Evidence on Dualism
- 4 The Financial Crisis and Dualism
- 5 An Exit Strategy from Dualism

Outline

- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory
- 3 Empirical Evidence on Dualism
- 4 The Financial Crisis and Dualism
- 5 An Exit Strategy from Dualism

Huge literature on labor market institutions. Theory has predictions on the effects of changes in the levels of each institution. Empirical work uses actual reforms to identify the effects of these institutions as **natural experiments**

However:

- Reforms rarely increase or reduce a one-dimensional institution for everybody as envisaged by the theoretical literature
- while they create long-lasting asymmetries
- Properties of these multi-tier regimes have yet to be fully understood

Huge literature on labor market institutions. Theory has predictions on the effects of changes in the levels of each institution. Empirical work uses actual reforms to identify the effects of these institutions as **natural experiments**

However:

- Reforms rarely increase or reduce a one-dimensional institution for everybody as envisaged by the theoretical literature
- while they create long-lasting asymmetries
- Properties of these **multi-tier regimes** have yet to be fully understood

Huge literature on labor market institutions. Theory has predictions on the effects of changes in the levels of each institution. Empirical work uses actual reforms to identify the effects of these institutions as **natural experiments**

However:

- Reforms rarely increase or reduce a one-dimensional institution for everybody as envisaged by the theoretical literature
- while they create long-lasting asymmetries
- Properties of these **multi-tier regimes** have yet to be fully understood

Huge literature on labor market institutions. Theory has predictions on the effects of changes in the levels of each institution. Empirical work uses actual reforms to identify the effects of these institutions as **natural experiments**

However:

- Reforms rarely increase or reduce a one-dimensional institution for everybody as envisaged by the theoretical literature
- while they create long-lasting asymmetries
- Properties of these **multi-tier regimes** have yet to be fully understood

Two-tier and Marginal Reforms

Institutional **reform**: change in the design of an institution

- **Two-tier (vs. complete)** reform: focus on the scope/coverage; the reform is confined to a subset of the potentially eligible population (alternatively its complete phasing in involves a very long transitional period)
- **Incremental (vs. discrete)** reform: focus on the size; the reform involves a small change in the overall institutional level-indicator
- **Structural** reforms: either complete and discrete reforms

Two-tier and Marginal Reforms

Institutional **reform**: change in the design of an institution

- **Two-tier (vs. complete)** reform: focus on the scope/coverage; the reform is confined to a subset of the potentially eligible population (alternatively its complete phasing in involves a very long transitional period)
- **Incremental (vs. discrete)** reform: focus on the size; the reform involves a small change in the overall institutional level-indicator
- **Structural** reforms: either complete and discrete reforms

Two-tier and Marginal Reforms

Institutional **reform**: change in the design of an institution

- **Two-tier (vs. complete)** reform: focus on the scope/coverage; the reform is confined to a subset of the potentially eligible population (alternatively its complete phasing in involves a very long transitional period)
- **Incremental (vs. discrete)** reform: focus on the size; the reform involves a small change in the overall institutional level-indicator
- **Structural** reforms: either complete and discrete reforms

The Taxonomy

Size	Discrete Two-tier	Structural
	Incremental Two-tier	Incremental Complete
	Scope	

Tracking Reforms in Europe

A snapshot from Fondazione Debenedetti database (1):

Spain - EPL database

Year	Month	id	Number	Law	Description	Topic	Target
1980	3	ES077	1	Ley 51/1980, Basic Employment Law (Ley Básica de Empleo)	Regulations governing the contract of employment, making contracts of employment more flexible; permanently established workforce representatives as a way to regulate workers' participation; and consolidated the status of collective agreements, as opposed to Labour Ordinances, as the principal source of industry-wide and occupational provisions.	Trade union rights	employees
			2		Regulation on termination of employment contracts.	Individual dismissals - Procedural obligations	employees
1981		ES078	1	Real Decreto 1362/1981	Regulation of fixed-term contracts	Fixed-term contracts	Fixed-term contracts
1984	8	ES001	1	Ley 32/1984	Restrictions for fixed-term contracts are substantially relaxed. Legal norms that established the circumstances under which a fixed term contract could be stipulated are practically over rided by the principle of promoting employment through the extension of its use. The so called "Contrato temporal de fomento del empleo" (Temporary Employment Promoting Contracts - TEPC) has a maximum duration of 3 years and a minimum of 6 months. The limit to the maximum number of TEPC to be signed is eliminated.	Fixed-term contracts	Fixed-term workers

Tracking Reforms in Europe

A snapshot from Fondazione Debenedetti database (2):

Spain - EPL database

Topic	Target	Sign	Overall sign	Two-Tier vs. Complete	Two-Tier vs. Complete - Overall	incremental vs. discrete	Source	Other policy area?
Trade union rights	employees	increasing	increasing	complete	complete	incr	EMIRE	
Individual dismissals - Procedural obligations	employees	increasing		complete				
Fixed-term contracts	Fixed-term contracts	decreasing	decreasing	two-tier	two-tier	incr	NATLEX	
							IBERLEX - Base de datos -	

EPL reforms

- Incremental reforms: involve variation of the relevant OECD indicator of less than 10% of the average period cross-country standard deviation in the level of the institution
- Two-tier reforms: less than 50% of the potentially eligible population involved
- A trade-off between Size and Scope of Reforms?

as a percentage of the total nr of EPL reforms

Size	Discrete	8.5%	3.5%
	Incremental	43.3%	44.7%
		Two-tier	Complete

EPL reforms

- Incremental reforms: involve variation of the relevant OECD indicator of less than 10% of the average period cross-country standard deviation in the level of the institution
- Two-tier reforms: less than 50% of the potentially eligible population involved
- A trade-off between Size and Scope of Reforms?

as a percentage of the total nr of EPL reforms

Size	Discrete	8.5%	3.5%
	Incremental	43.3%	44.7%
		Two-tier	Complete

EPL reforms

- Incremental reforms: involve variation of the relevant OECD indicator of less than 10% of the average period cross-country standard deviation in the level of the institution
- Two-tier reforms: less than 50% of the potentially eligible population involved
- A trade-off between Size and Scope of Reforms?

as a percentage of the total nr of EPL reforms

Size	Discrete	8.5%	3.5%
	Incremental	43.3%	44.7%
		Two-tier	Complete

EPL reforms

- Incremental reforms: involve variation of the relevant OECD indicator of less than 10% of the average period cross-country standard deviation in the level of the institution
- Two-tier reforms: less than 50% of the potentially eligible population involved
- A trade-off between Size and Scope of Reforms?

as a percentage of the total nr of EPL reforms

Size	Discrete	8.5%	3.5%
	Incremental	43.3%	44.7%
		Two-tier	Complete

EPL reforms

- Incremental reforms: involve variation of the relevant OECD indicator of less than 10% of the average period cross-country standard deviation in the level of the institution
- Two-tier reforms: less than 50% of the potentially eligible population involved
- A trade-off between Size and Scope of Reforms?

as a percentage of the total nr of EPL reforms

Size	Discrete	8.5%	3.5%
	Incremental	43.3%	44.7%
		Two-tier	Complete

Scope



Outline

- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory**
- 3 Empirical Evidence on Dualism
- 4 The Financial Crisis and Dualism
- 5 An Exit Strategy from Dualism

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing tax T (not transfer) levied on termination of job-worker matches
- 2 an unemployment benefit $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an employment subsidy (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a hiring-recruitment subsidy, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- 2 an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- 2 an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- 2 an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- 2 an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- ① an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- ② an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- ③ an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- ④ a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages

Setup: qualitative description

Equilibrium job search model. Free entry of firms, but match frictions create rents split according to Nash bargaining wage rule. Shocks to match productivity, x . Endogenous job creation and destruction. Four types of Institutions:

- 1 an exogenous firing **tax** T (not transfer) levied on termination of job-worker matches
- 2 an **unemployment benefit** $b = \rho \bar{w}$ offered as a replacement of the average wage, \bar{w} , at the rate $0 < \rho < 1$ throughout the entire unemployment spell (ρ measures the generosity of unemployment benefits)
- 3 an **employment subsidy** (or tax credit), $e < b$ also provided on a flow basis at continuing jobs.
- 4 a **hiring-recruitment subsidy**, $h < c$, reducing the flow costs of unfilled vacancies, c

Job creation and destruction margins are affected by these institutions either directly and indirectly, that is, via their effects on wages.

Two-tier Regimes in the MP model

A two-tier reform of employment protection reduces firing taxes for entry jobs ($T_0 = 0 < T$), while leaving employment protection unaltered for continuing jobs.

New jobs last until they are hit by a productivity shock. If the new realization is below a reservation productivity specific to entry jobs, R_0 , the match is dissolved and ends with a flow into unemployment. If instead the new productivity realization is above R_0 , jobs are converted into permanent contracts, covered by the standard firing taxes, T

Two-tier Regimes in the MP model

A two-tier reform of employment protection reduces firing taxes for entry jobs ($T_0 = 0 < T$), while leaving employment protection unaltered for continuing jobs.

New jobs last until they are hit by a productivity shock. If the new realization is below a reservation productivity specific to entry jobs, R_0 , the match is dissolved and ends with a flow into unemployment. If instead the new productivity realization is above R_0 , jobs are converted into permanent contracts, covered by the standard firing taxes, T

Insider and Outsider Wages

Two-tier regimes generate two wage equations from Nash bargaining. The first wage equation determines workers pay in entry jobs or the wage of *outsiders* (dual workers), denoted by the subscript 0. The second wage equation applies to continuing jobs and provides *insider* wages at all productivity levels above the reservation productivity level. The difference between insider and outsider wages at the entry productivity level ($x=1$) is given by

$$w(1) - w_0 = (1 - \beta)w(\rho - \rho_0 + e_0) + \beta(rT)$$

Even for lower x , $w(x) > w_0$ in this setting. Partial equilibrium of two-tier reforms: increase wage differentials between entry jobs and continuing jobs.

Insider and Outsider Wages

Two-tier regimes generate two wage equations from Nash bargaining. The first wage equation determines workers pay in entry jobs or the wage of *outsiders* (dual workers), denoted by the subscript 0. The second wage equation applies to continuing jobs and provides *insider* wages at all productivity levels above the reservation productivity level. The difference between insider and outsider wages at the entry productivity level ($x=1$) is given by

$$w(1) - w_0 = (1 - \beta)w(\rho - \rho_0 + e_0) + \beta(rT)$$

Even for lower x , $w(x) > w_0$ in this setting. Partial equilibrium of two-tier reforms: increase wage differentials between entry jobs and continuing jobs.

Insider and Outsider Wages

Two-tier regimes generate two wage equations from Nash bargaining. The first wage equation determines workers pay in entry jobs or the wage of *outsiders* (dual workers), denoted by the subscript 0. The second wage equation applies to continuing jobs and provides *insider* wages at all productivity levels above the reservation productivity level. The difference between insider and outsider wages at the entry productivity level ($x=1$) is given by

$$w(1) - w_0 = (1 - \beta)w(\rho - \rho_0 + e_0) + \beta(rT)$$

Even for lower x , $w(x) > w_0$ in this setting. Partial equilibrium of two-tier reforms: increase wage differentials between entry jobs and continuing jobs.

Insider and Outsider Wages

Two-tier regimes generate two wage equations from Nash bargaining. The first wage equation determines workers pay in entry jobs or the wage of *outsiders* (dual workers), denoted by the subscript 0. The second wage equation applies to continuing jobs and provides *insider* wages at all productivity levels above the reservation productivity level. The difference between insider and outsider wages at the entry productivity level ($x=1$) is given by

$$w(1) - w_0 = (1 - \beta)w(\rho - \rho_0 + e_0) + \beta(rT)$$

Even for lower x , $w(x) > w_0$ in this setting. Partial equilibrium of **two-tier reforms: increase wage differentials between entry jobs and continuing jobs.**

Comparing Two-tier and Complete Reforms

Key differences with respect to complete reforms:

- $\rho \uparrow$ accompanied by reduction of ρ_0 does not necessarily increase u (flexicurity)
- $T \uparrow$ increases turnover via less transformation of entry into continuing jobs
- $e \uparrow$ may increase job destruction (for entry jobs)
- Less ambiguity in signing their effects on u .

Comparing Two-tier and Complete Reforms

Key differences with respect to complete reforms:

- $\rho \uparrow$ accompanied by reduction of ρ_0 does not necessarily increase u (flexicurity)
- $T \uparrow$ **increases turnover** via less transformation of entry into continuing jobs
- $e \uparrow$ may increase job destruction (for entry jobs)
- Less ambiguity in signing their effects on u .

Comparing Two-tier and Complete Reforms

Key differences with respect to complete reforms:

- $\rho \uparrow$ accompanied by reduction of ρ_0 does not necessarily increase u (flexicurity)
- $T \uparrow$ **increases turnover** via less transformation of entry into continuing jobs
- $e \uparrow$ may increase job destruction (for entry jobs)
- Less ambiguity in signing their effects on u .

Comparing Two-tier and Complete Reforms

Key differences with respect to complete reforms:

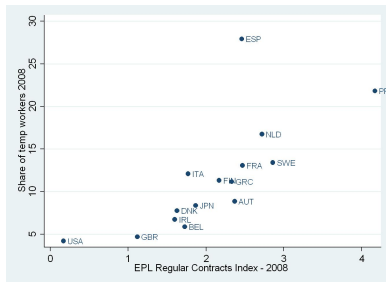
- $\rho \uparrow$ accompanied by reduction of ρ_0 does not necessarily increase u (flexicurity)
- $T \uparrow$ **increases turnover** via less transformation of entry into continuing jobs
- $e \uparrow$ may increase job destruction (for entry jobs)
- Less ambiguity in signing their effects on u .

Outline

- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory
- 3 Empirical Evidence on Dualism**
- 4 The Financial Crisis and Dualism
- 5 An Exit Strategy from Dualism

Effect of higher T on dualism?

$$\rho = 0.81$$



Strictness of EPL for Permanent Contracts and Share of Temporary Contracts in Total (Dependent) Employment

$$\rho = -0.72$$



Strictness of EPL for Permanent Contracts and Transition Probability from Temporary to Permanent Contracts

Two-tier wage structures: Premium of Permanent Contracts

$$\log w_i = \alpha + \beta_1 EDU_i + \beta_2 EDU_i^2 + \gamma_1 TEN_i + \gamma_2 TEN_i^2 + \mu PERM_i + \varepsilon_i$$

	Premium temporary-permanent μ	St. Err.	Obs.
Austria	20.1***	0.023	9867
Belgium	13.9***	0.017	7948
Denmark	17.7***	0.015	8009
Finland	19.0***	0.011	8940
France	28.9***	0.016	15260
Germany	26.6***	0.010	25448
Greece	20.2***	0.013	6978
Ireland	17.8**	0.069	1583
Italy	24.1***	0.008	30177
Luxembourg	27.6***	0.018	7889
Netherlands	35.4***	0.021	15845
Portugal	15.8***	0.016	7550
Spain	16.9***	0.007	22626
Sweden	44.7***	0.036	5412
United Kingdom	6.5*	0.037	7000

Complete Reforms with a long phasing-in

- Transitional dynamics may depart significantly from steady state outcomes of complete reforms.
- Immediately increase in volatility of employment and unemployment.
- Decline in labor productivity
- Temporary job creation (honeymoon) effect.

Complete Reforms with a long phasing-in

- Transitional dynamics may depart significantly from steady state outcomes of complete reforms.
- Immediately increase in volatility of employment and unemployment.
- Decline in labor productivity
- Temporary job creation (honeymoon) effect.

Complete Reforms with a long phasing-in

- Transitional dynamics may depart significantly from steady state outcomes of complete reforms.
- Immediately increase in volatility of employment and unemployment.
- Decline in labor productivity
- Temporary job creation (honeymoon) effect.

Complete Reforms with a long phasing-in

- Transitional dynamics may depart significantly from steady state outcomes of complete reforms.
- Immediately increase in volatility of employment and unemployment.
- Decline in labor productivity
- Temporary job creation (honeymoon) effect.

The Honeymoon Effect

Example of two-tier reforms of Epl (Boeri and Garibaldi, 2007)

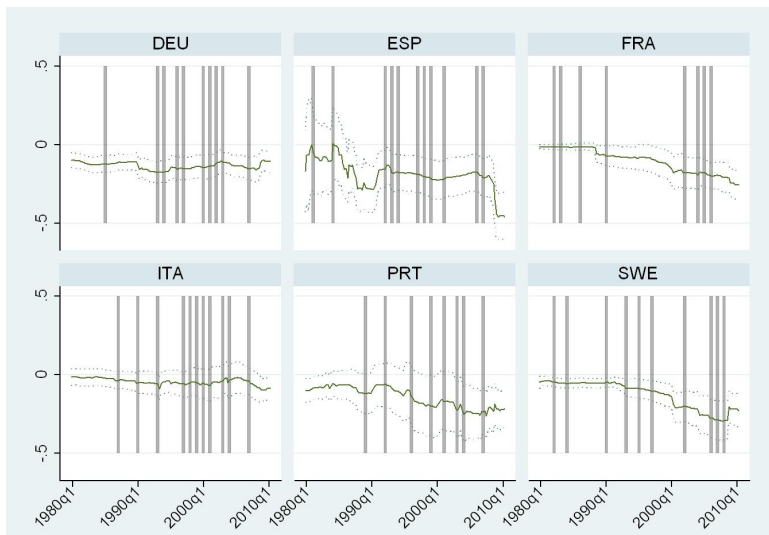
Pre-Reform EPL Strictness and Post-Reform Temporary Employment

Country	Time Period	EPL strictness (Regular Index)	EPL Strictness (Temporary Empl.)	Temporary Emp. Growth ΔETt (000)	Contribution of Temporary Jobs $\Delta ETt/E_0$
Belgium	1987-1996	1.68	4.63	22.7	0.66
	1997-2005	1.71	2.63	135.3	3.54
	Δ	0.03	-2.00	112.6	2.89
Italy	1987-1997	1.77	5.38	402.9	0.02
	1998-2005	1.77	2.82	823.2	4.11
	Δ	0	-2.56	420.3	4.09
The Netherlands	1987-1995	3.08	2.38	340.1	5.79
	1996-2005	3.06	1.45	288.8	3.80
	Δ	-0.02	-0.93	-51.3	-2
Portugal	1987-1996	4.56	3.34	-168.9	-4.10
	1997-2005	4.29	2.94	431.8	10.09
	Δ	-0.27	-0.40	600.6	14.19
Spain ¹	1981-1984	3.83	-	0	0
	1985-1995	3.67	3.66	3377.1	28.5
	Δ	-0.16	-	3377.1	28.5
Sweden	1987-1996	2.88	3.28	-138.9	-3.22
	1997-2005	2.86	1.63	189.2	4.82
	Δ	-0.02	-1.65	328.1	8.04

¹ For Spain, 1981-1984, the EPL index is the overall index, as in Nickell (2006)

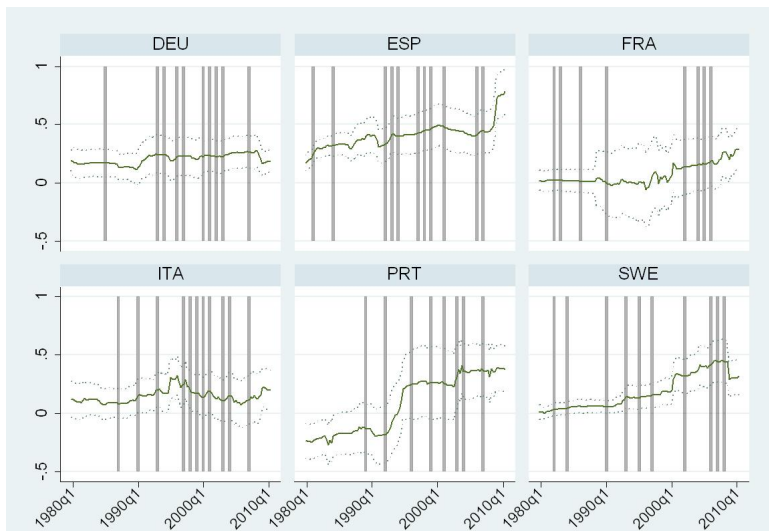
Two-tier Reforms and Unemployment Volatility

Estimating Okun's Law Betas: $\Delta u_t = \alpha + \beta \Delta y_t + \varepsilon_t$



Two-tier Reforms and Employment Volatility

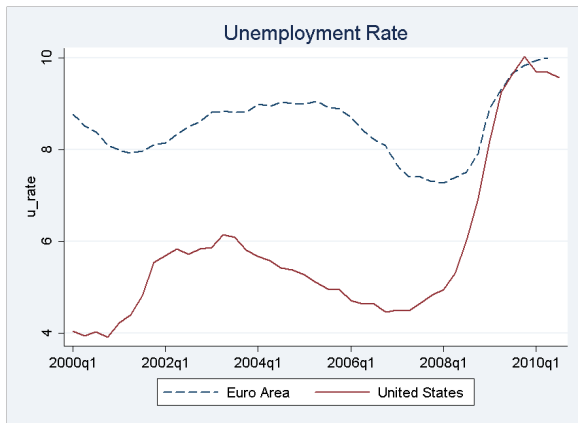
Estimating Okun's Law Betas: $\Delta e_t = \alpha + \beta \Delta y_t + \varepsilon_t$



Outline

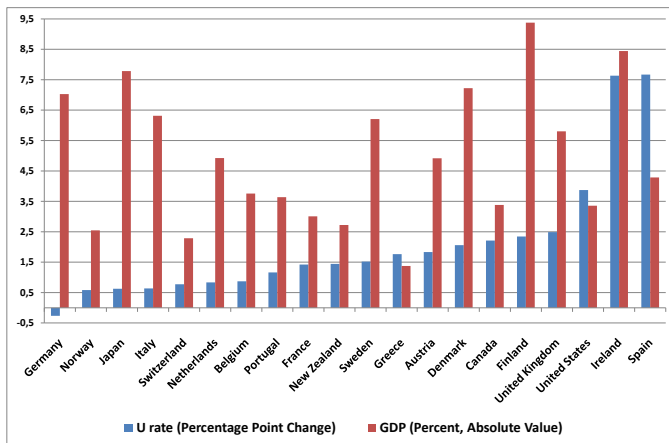
- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory
- 3 Empirical Evidence on Dualism
- 4 The Financial Crisis and Dualism**
- 5 An Exit Strategy from Dualism

US more responsive than reformed Europe



Within EU heterogeneity also conditioning on Output.

Not only Dualism



Why? Nature (financial) of the Crisis?

- Not much theory on the links between financial crises and labour market dynamics
- More on (steady state) interactions between financial and labour frictions
- Rendon (2000), Belke and Fehn (2002), Arellano et al. (2010) easy access by firms to financial markets as a substitute for labour market flexibility
- Financial market liberalization complementary to labour market deregulation (Boeri, Galasso and Conde-Ruiz, 2006; Wasmer and Weil, 2003)
- Almost nothing on dualism and financial crises (Caggese and Cunat (2008) on hiring of temps and liquidity constraints; also Brunello (2005) on Japan)

Why? Nature (financial) of the Crisis?

- Not much theory on the links between financial crises and labour market dynamics
- More on (steady state) interactions between financial and labour frictions
- Rendon (2000), Belke and Fehn (2002), Arellano et al. (2010) easy access by firms to financial markets as a substitute for labour market flexibility
- Financial market liberalization complementary to labour market deregulation (Boeri, Galasso and Conde-Ruiz, 2006; Wasmer and Weil, 2003)
- Almost nothing on dualism and financial crises (Caggese and Cunat (2008) on hiring of temps and liquidity constraints; also Brunello (2005) on Japan)

Why? Nature (financial) of the Crisis?

- Not much theory on the links between financial crises and labour market dynamics
- More on (steady state) interactions between financial and labour frictions
- Rendon (2000), Belke and Fehn (2002), Arellano et al. (2010) easy access by firms to financial markets as a substitute for labour market flexibility
- Financial market liberalization complementary to labour market deregulation (Boeri, Galasso and Conde-Ruiz, 2006; Wasmer and Weil, 2003)
- Almost nothing on dualism and financial crises (Caggese and Cunat (2008) on hiring of temps and liquidity constraints; also Brunello (2005) on Japan)

Why? Nature (financial) of the Crisis?

- Not much theory on the links between financial crises and labour market dynamics
- More on (steady state) interactions between financial and labour frictions
- Rendon (2000), Belke and Fehn (2002), Arellano et al. (2010) easy access by firms to financial markets as a substitute for labour market flexibility
- Financial market liberalization complementary to labour market deregulation (Boeri, Galasso and Conde-Ruiz, 2006; Wasmer and Weil, 2003)
- Almost nothing on dualism and financial crises (Caggese and Cunat (2008) on hiring of temps and liquidity constraints; also Brunello (2005) on Japan)

Why? Nature (financial) of the Crisis?

- Not much theory on the links between financial crises and labour market dynamics
- More on (steady state) interactions between financial and labour frictions
- Rendon (2000), Belke and Fehn (2002), Arellano et al. (2010) easy access by firms to financial markets as a substitute for labour market flexibility
- Financial market liberalization complementary to labour market deregulation (Boeri, Galasso and Conde-Ruiz, 2006; Wasmer and Weil, 2003)
- Almost nothing on dualism and financial crises (Caggese and Cunat (2008) on hiring of temps and liquidity constraints; also Brunello (2005) on Japan)

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility.
Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility. Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility. Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility. Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility. Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial Crisis and Dualism: A Job Destruction Effect

- Financial deepening reduces churning and employment volatility. Reduces demand for EPL
- As firms do not adjust employment to transient shocks
- Yet, what happens when a highly leveraged firm experiences a financial shock and liquidity is suddenly pulled back?
- The lack of liquidity can force firms to liquidate projects as well as jobs, thus enhancing job destruction
- It is a **labor demand** effect. Stronger the lower the cost of employment reductions at the margin
- Dualism and high leverage is a dangerous mix

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

Financial (Housing) Crisis and Dualism: A Job Creation Effect

- Bulk of Job Creation related to startups more than to expansion of existing units.
- Startups are very risky: one out of ten survives 5 years after birth. Higher perception of risk drives resources away from startups. Less new projects. Just some temporary gap filling related to attrition.
- Also less spinoffs and quits to new projects: workers need financial markets and mortgages to finance new projects and mobility (real estate investment)
- During a financial crisis, real estate prices drop, workers face risk of negative equity and mobility is reduced
- This mobility effect of finance can increase unemployment at given vacancy rates
- Likely to be more serious when jobs are offered only in temporary contracts

The JD Effect: High-leverage and Dualism as a nightmare

Elasticity of Employment to Output	(1)	(2)
Leverage (Debt to Sales)	-0.02**	-0.01**
FC Financial-related Recession	0.0943***	0.1249***
EPL reg	-0.0795***	-0.0802
share TEMP		0.011**
Leverage*TEMP*FC		0.030**
Leverage*lowEPL*FC	0.02***	

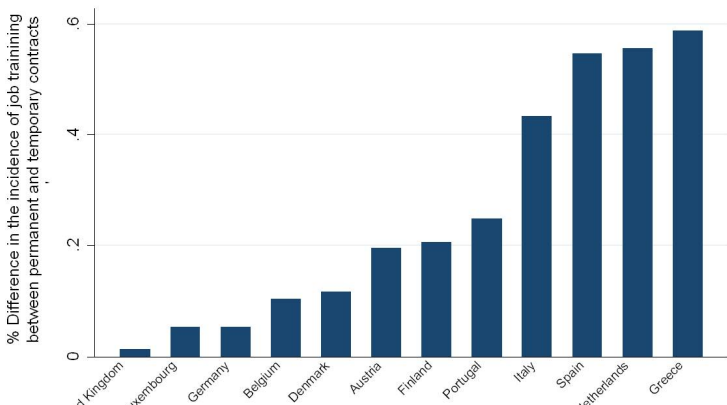
Including country and sector fixed effects. Source: IMF data

The JD-JR Effect: Mobility, Mortgages and Dualism

Probability of Moving for Job-Related Reasons	(1)	(2)
Age	-0.0259*** (0.0004)	-0.025 (0.0004)
Female	-0.0003 (0.0104)	0.0003 (0.0104)
Education	0.1710*** (0.0068)	0.1710*** (0.0068)
HH size	-0.1810*** (0.0043)	-0.1810*** (0.0043)
Perm. Contr.	0.5350*** (0.0183)	0.5520*** (0.0183)
Crisis Dummy	0.0397 (0.0490)	-0.0003 (0.0510)
Mortgage*Crisis	-0.3620*** (0.0490)	-0.3620*** (0.0490)

All new Hires are Temporary. Underinvestment in Human Capital

In France, Italy, and Spain up to 90 per cent of new hirings is fixed-term. Also in the US increasing role of TWA. Much less training is offered to them compared to permanent contracts.



Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of “scarring” effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Lost Generations. Longer term Effects

Evidence of "scarring" effect of unemployment at the beginning of a career

- Ellwood (1982): poor start induces lower lifetime wages and lower employment opportunities
- Mroz e Savage (2006): unemployment at 22 implies earning 30 per cent lower at 25. At age 30-32 below -2-3 per cent
- Kletzer and Fairlie (1999): wage losses over the lifetimes 8 per cent for men and 13 per cent for women
- Gregg and Tomlinie (2001): wage losses 13-21 per cent
- Arulampalam (2001): increase in risk of new job losses
- Bell and Blanchflower (2009) von Wachter (2009): health effect even 20 years after

Summarizing

- Huge Job Losses when High Leverage is accompanied with low EPL or large share of Dual Workers
- Job Losses of Dual Workers very serious problem because of limited access to unemployment benefits or short-time work and loss of human capital

Summarizing

- Huge Job Losses when High Leverage is accompanied with low EPL or large share of Dual Workers
- Job Losses of Dual Workers very serious problem because of limited access to unemployment benefits or short-time work and loss of human capital

Outline

- 1 The Nature of Reforms Increasing Flexibility
- 2 Aggregate Effects of Dual-track Reforms: some Theory
- 3 Empirical Evidence on Dualism
- 4 The Financial Crisis and Dualism
- 5 An Exit Strategy from Dualism**

Dualism during and after FC

- **More volatility of employment**
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
- A Lost Generation? Example of the cohorts entering the labour markets in Japan and Sweden after the financial crises of the 1990s

Dualism during and after FC

- More volatility of employment
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
- A Lost Generation? Example of the cohorts entering the labour markets in Japan and Sweden after the financial crises of the 1990s

Dualism during and after FC

- More volatility of employment
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
- A Lost Generation? Example of the cohorts entering the labour markets in Japan and Sweden after the financial crises of the 1990s

Dualism during and after FC

- More volatility of employment
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
- A Lost Generation? Example of the cohorts entering the labour markets in Japan and Sweden after the financial crises of the 1990s

Dualism during and after FC

- More volatility of employment
- Automatic stabilizers do not operate efficiently
- Higher social costs of recessions
- Reduced Human Capital Investment after financial recessions: hiring on temporary contracts offering no on-the-job training, lower education wage premia, lower incentives to investment also in formal education
- A Lost Generation? Example of the cohorts entering the labour markets in Japan and Sweden after the financial crises of the 1990s

We do not want an Exit from Finance!

- Access to finance reduced unnecessary layoffs in the US (secular fall of temporary layoffs)
- Caggese, Cunat (2008): Financially constrained firms have a larger proportion of fixed-term contracts (higher volatility of total employment)
- Reducing access to finance we cannot exit from dualism as liquidity constraints induce small firms to offer only temporary contracts
- Further example that expected financing constraints matter in hiring decisions

We do not want an Exit from Finance!

- Access to finance reduced unnecessary layoffs in the US (secular fall of temporary layoffs)
- Caggese, Cunat (2008): Financially constrained firms have a larger proportion of fixed-term contracts (higher volatility of total employment)
- Reducing access to finance we cannot exit from dualism as liquidity constraints induce small firms to offer only temporary contracts
- Further example that expected financing constraints matter in hiring decisions

We do not want an Exit from Finance!

- Access to finance reduced unnecessary layoffs in the US (secular fall of temporary layoffs)
- Caggese, Cunat (2008): Financially constrained firms have a larger proportion of fixed-term contracts (higher volatility of total employment)
- Reducing access to finance we cannot exit from dualism as liquidity constraints induce small firms to offer only temporary contracts
- Further example that expected financing constraints matter in hiring decisions

We do not want an Exit from Finance!

- Access to finance reduced unnecessary layoffs in the US (secular fall of temporary layoffs)
- Caggese, Cunat (2008): Financially constrained firms have a larger proportion of fixed-term contracts (higher volatility of total employment)
- Reducing access to finance we cannot exit from dualism as liquidity constraints induce small firms to offer only temporary contracts
- Further example that expected financing constraints matter in hiring decisions

We do not want an Exit from (Contributory) Social Insurance!

- Strengthening of contributory nature of social security is a key condition for sustainability under Ageing Populations and Migration to Welfare
- Policy Response of paying social transfers out of General Government revenues create huge moral hazard problems. Example of the ever increasing STW (Cassa Integrazione) in Italy
- Social Protection to temporary workers should be offered by addressing the Dualism induced by Two-tier Reforms, not by undoing Reforms of Social Security (UB, Pensions, etc.)

We do not want an Exit from (Contributory) Social Insurance!

- Strengthening of contributory nature of social security is a key condition for sustainability under Ageing Populations and Migration to Welfare
- Policy Response of paying social transfers out of General Government revenues create huge moral hazard problems. Example of the ever increasing STW (Cassa Integrazione) in Italy
- Social Protection to temporary workers should be offered by addressing the Dualism induced by Two-tier Reforms, not by undoing Reforms of Social Security (UB, Pensions, etc.)

We do not want an Exit from (Contributory) Social Insurance!

- Strengthening of contributory nature of social security is a key condition for sustainability under Ageing Populations and Migration to Welfare
- Policy Response of paying social transfers out of General Government revenues create huge moral hazard problems. Example of the ever increasing STW (Cassa Integrazione) in Italy
- Social Protection to temporary workers should be offered by addressing the Dualism induced by Two-tier Reforms, not by undoing Reforms of Social Security (UB, Pensions, etc.)

We need Smart Reforms

Removing temporary contracts would mean reducing also employment creation in the recovery after having experienced the negative side of dualism. Better to go beyond dualism, working on employers' incentives. Need to balance two forces

- Let firms enjoy flexibility at entry. On the labour demand side, firms benefit from a labour market where experimentation is allowed
- Set a well defined path to stability for workers, through a long run entrance with an open-ended labour contract
- Flexibility is important in the entry phase. Problem of asymmetric information
- Tenure tracks to stable jobs

We need Smart Reforms

Removing temporary contracts would mean reducing also employment creation in the recovery after having experienced the negative side of dualism. Better to go beyond dualism, working on employers' incentives. Need to balance two forces

- Let firms enjoy flexibility at entry. On the labour demand side, firms benefit from a labour market where experimentation is allowed
- Set a well defined path to stability for workers, through a long run entrance with an open-ended labour contract
- Flexibility is important in the entry phase. Problem of asymmetric information
- Tenure tracks to stable jobs

We need Smart Reforms

Removing temporary contracts would mean reducing also employment creation in the recovery after having experienced the negative side of dualism. Better to go beyond dualism, working on employers' incentives. Need to balance two forces

- Let firms enjoy flexibility at entry. On the labour demand side, firms benefit from a labour market where experimentation is allowed
- Set a well defined path to stability for workers, through a long run entrance with an open-ended labour contract
- Flexibility is important in the entry phase. Problem of asymmetric information
- Tenure tracks to stable jobs

We need Smart Reforms

Removing temporary contracts would mean reducing also employment creation in the recovery after having experienced the negative side of dualism. Better to go beyond dualism, working on employers' incentives. Need to balance two forces

- Let firms enjoy flexibility at entry. On the labour demand side, firms benefit from a labour market where experimentation is allowed
- Set a well defined path to stability for workers, through a long run entrance with an open-ended labour contract
- Flexibility is important in the entry phase. Problem of asymmetric information
- Tenure tracks to stable jobs

Contrato Unico, Contratto Unico di Inserimento, Contrat Unique

Proposals developed in Spain (Bentolila, Dolado and 100 academic economists), France (Blanchard-Tirole, Cahuc-Kramarz) and Italy (Boeri and Garibaldi): tenure track to stable jobs with protection increasing with tenure. Differences according to national regulations.

Il Contratto Unico di Inserimento

Italian draft bill differentiates entry through experimentation from genuinely fixed term jobs. Open ended contract with two phases:

- *Entry Phase* (up to the third year): the worker has the right to severance payments proportional to tenure (independently of firm size): dismissal without just cause requires up to six months in severance payments (5 days of severance every month). Entry phase lasts three years
- *Stability Phase* (from third year onward): current legislation (for dismissal without just cause: reinstatement right in firms above 15 employees and six months severance in small firms)
- Fixed term contracts and de-facto dual workers (yet self employed in the books) only with higher salaries (top decile of the current distribution of wages for these contracts) and higher contributions to unemployment benefits

Il Contratto Unico di Inserimento

Italian draft bill differentiates entry through experimentation from genuinely fixed term jobs. Open ended contract with two phases:

- *Entry Phase* (up to the third year): the worker has the right to severance payments proportional to tenure (independently of firm size): dismissal without just cause requires up to six months in severance payments (5 days of severance every month). Entry phase lasts three years
- *Stability Phase* (from third year onward): current legislation (for dismissal without just cause: reinstatement right in firms above 15 employees and six months severance in small firms)
- Fixed term contracts and de-facto dual workers (yet self employed in the books) only with higher salaries (top decile of the current distribution of wages for these contracts) and higher contributions to unemployment benefits

Il Contratto Unico di Inserimento

Italian draft bill differentiates entry through experimentation from genuinely fixed term jobs. Open ended contract with two phases:

- *Entry Phase* (up to the third year): the worker has the right to severance payments proportional to tenure (independently of firm size): dismissal without just cause requires up to six months in severance payments (5 days of severance every month). Entry phase lasts three years
- *Stability Phase* (from third year onward): current legislation (for dismissal without just cause: reinstatement right in firms above 15 employees and six months severance in small firms)
- Fixed term contracts and de-facto dual workers (yet self employed in the books) only with higher salaries (top decile of the current distribution of wages for these contracts) and higher contributions to unemployment benefits