Ευρωπαϊκή Οικονομική Πολιτική

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Outline of the Presentation

- Main Topic: **Integration through Labour Movements**
- Europe vs US
- Labour Supply and Labour Demand
- Understanding the Cost and Benefits of Migration

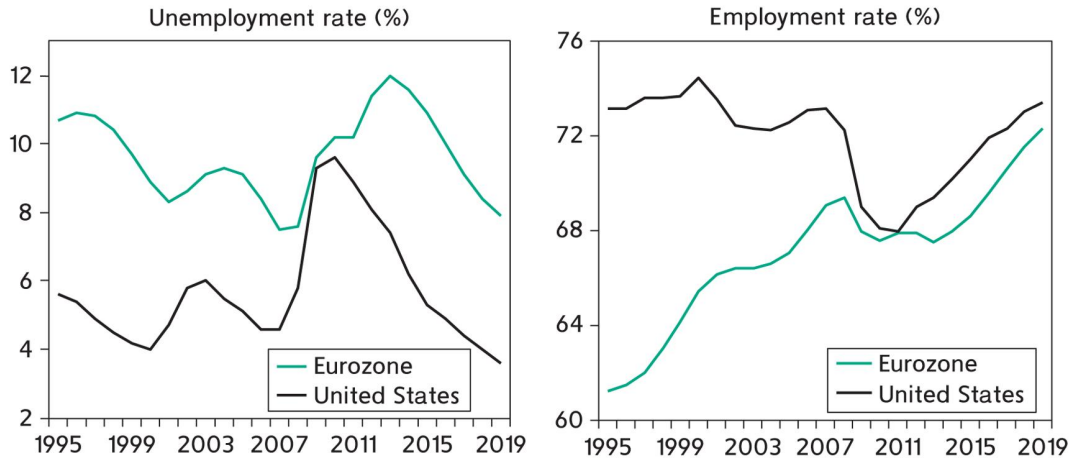
European labour markets: a brief characterization

- Differently from goods, national labour markets in EU are on their own:
- limited migration within the EU; very different legislations and practices across countries.
- On average, the EU is not doing well in comparison to USA:

European labour markets: a brief characterization

- On average, the EU is not doing well in comparison to USA:

Figure 8.1 Labour markets: Eurozone–USA comparison, 1995–2019



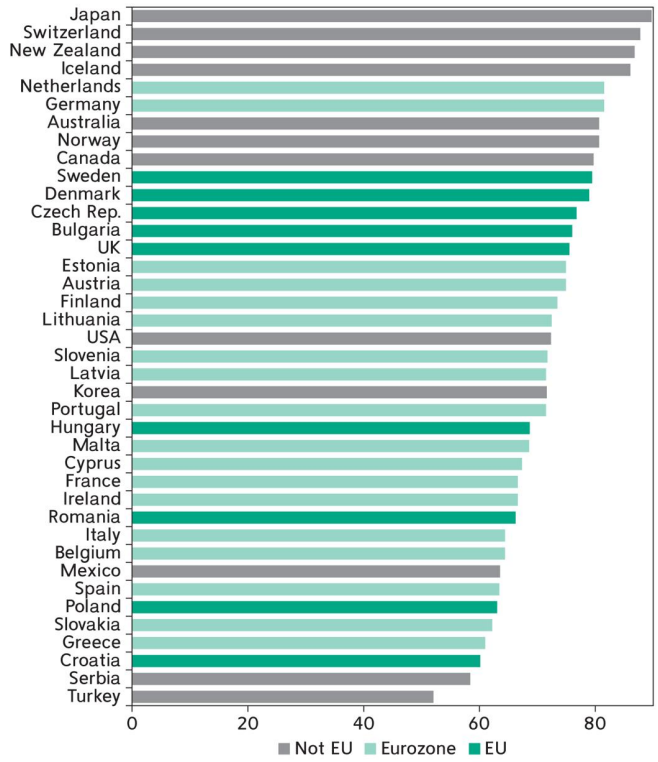
Note: Eurozone includes the 19 member countries in 2018.

Source: Based on data from AMECO, European Commission.

European labour markets: a brief characterization

A heterogeneous picture within the EU:

Figure 8.2 Average employment rates over 2015–19 in the EU and comparable non-EU countries



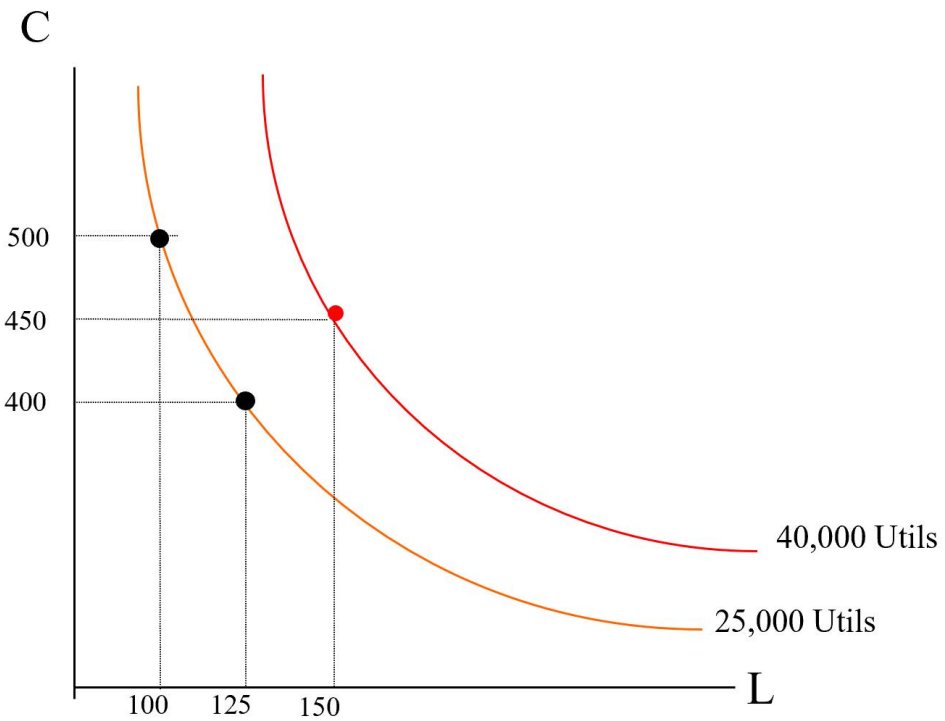
Source: Based on data from AMECO, European Commission.

Utility

- $U = aln(C) + bln(L)$, where C is consumption and L is Leisure
- U = f(C, L)=ln(C)+0.5*ln(L)
- 1. For C=100, L=10, U=4.60+5 = 9.60
- 2. For C=100, L=12, U=4.60+6 = 10.60
- 3. For C=140, L=10, U=4.94+5 = 9.94
- 4. Also, For C=90, L=10.2, U=4.50+5.10=9.60

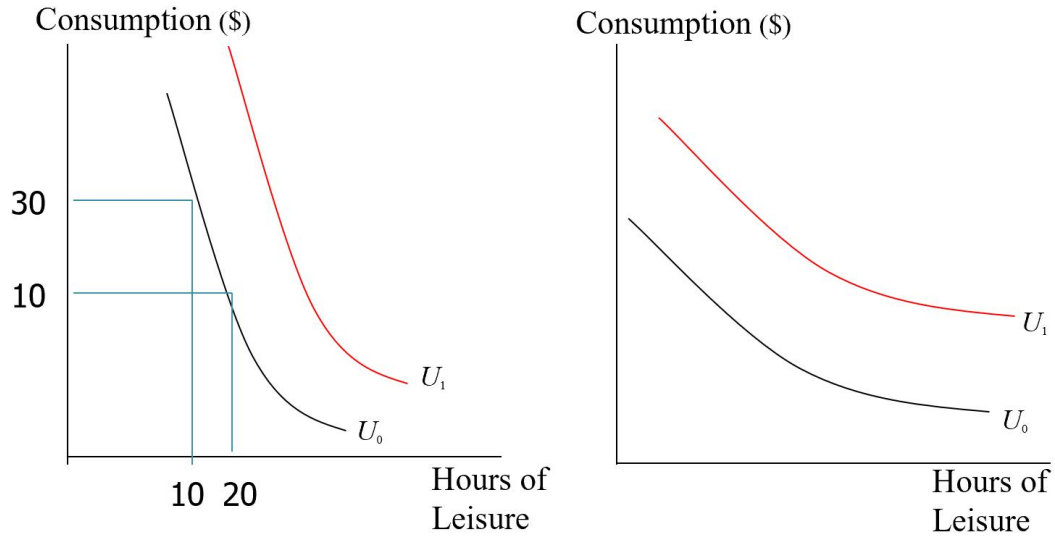
Indifference Curves

Indifference Curves



Relative Preference for Leisure

Differences in Preferences



- Workers with steeper indifference curves value their leisure relatively more than workers with shallower indifference curves.

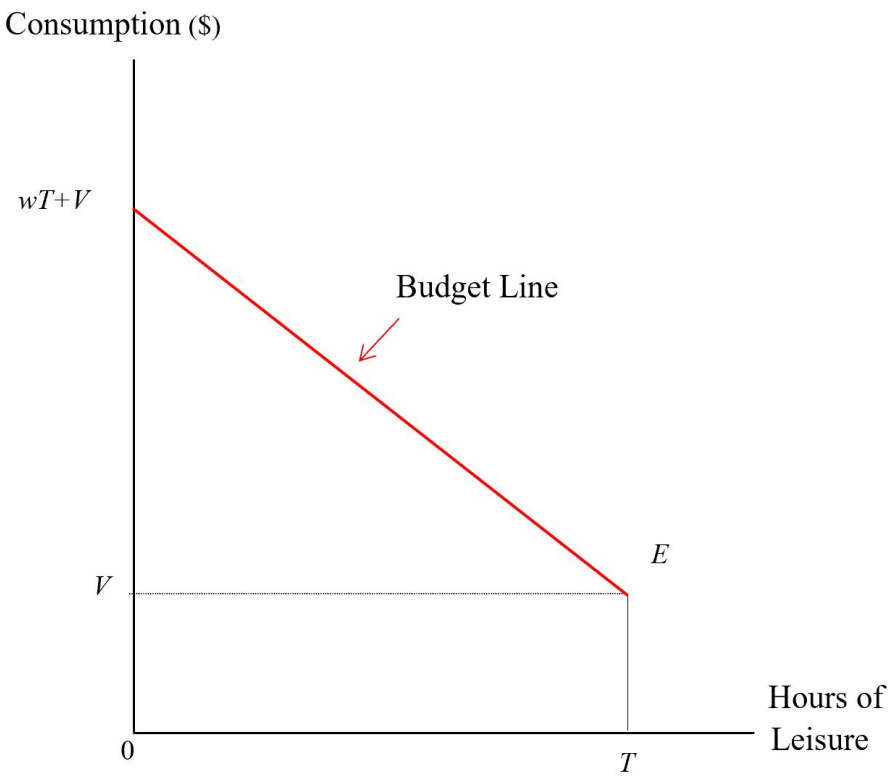
- Why? Steep means that if leisure increases by 10, consumption has to decrease by 20 (more) to guarantee the same utility. In other words, the individual is willing to afford high drop in consumption for the gain of higher leisure

Budget Contraint

- $C = wh + V$
- Consumption equals labor earnings (wages $\times$ hours) plus nonlabor income (V)
- $h = T - L$, Total available time
- Budget constraint sets boundaries on the worker's opportunity set of all the consumption baskets the worker can afford
- $C = w(T - L) + V$

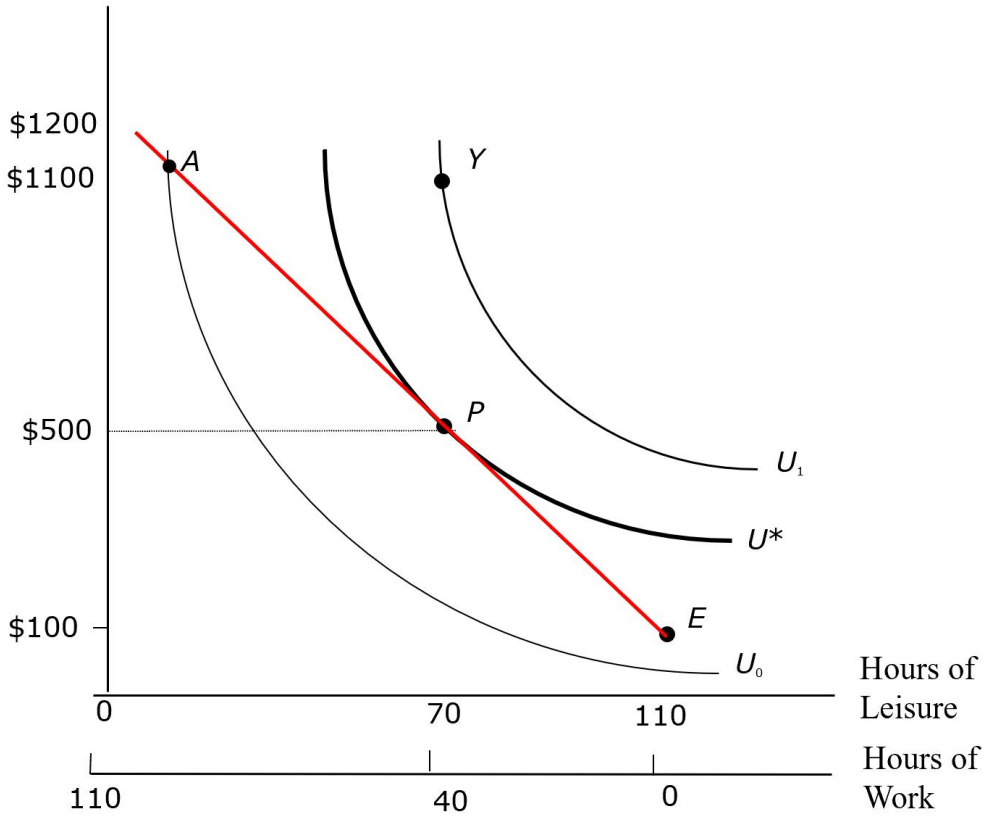
Budget Contraint

Graphing the Budget Constraint



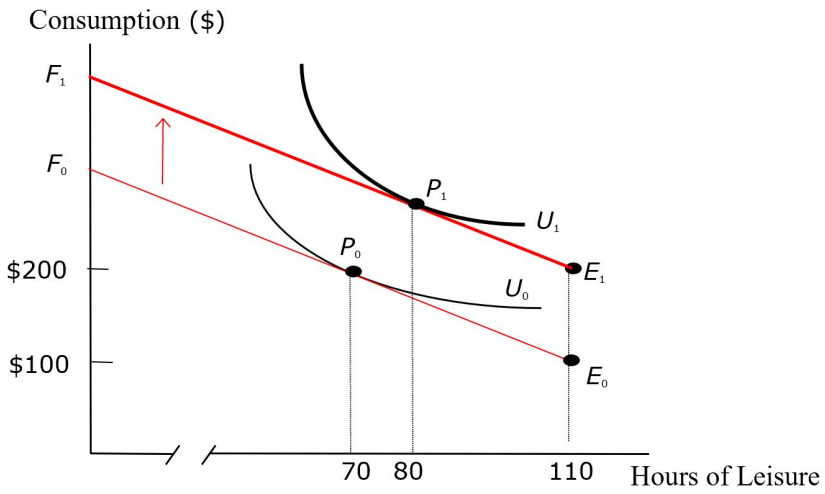
Consumption Choise

Optimal Consumption and Leisure



Change in Non-Labour Income

Exercise 1: The Effect of a Change in Nonlabor Income on Hours of Work

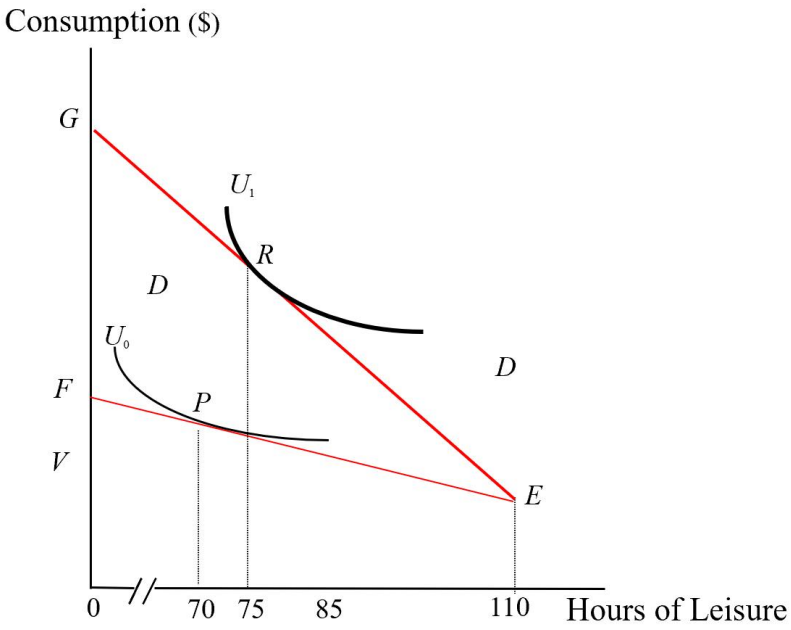


An increase in nonlabor income leads to a parallel, upward shift in the budget line, moving the worker from point P_0 to point P_1. If leisure is a normal good, hours of work fall.

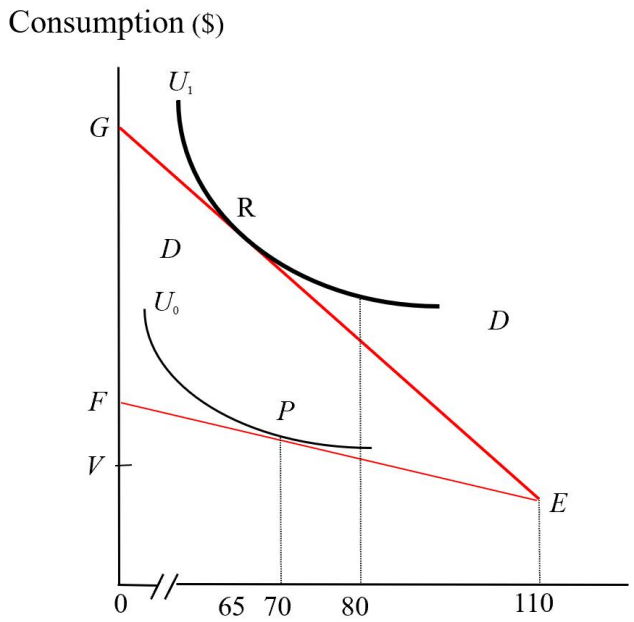
Change in Non-Labour Income

- **WHY?**
- Effect 1: Higher income induces the individual to consume more, this is unambiguous.
- Effect 2: Since my income increased I do not need to work the same amount because I can know consume even more with less work. This happens because the opportunity set of the individual increased for constant (any) wage. This is called INCOME EFFECT to leisure.

Exercise 2 - Change in the Wage Rate - Case 1



Exercise 2 - Change in the Wage Rate - Case 2



Example 2. Explanation

- Why? What the individual is thinking
- **Stage 1**: An increase in wage expands the opportunity set of the individual because now for any time that can allocate to work receives higher amount of money. This means that income increases. Due to this, consumption increases and because leisure is a normal good, leisure time increases as well. (INCOME EFFECT).

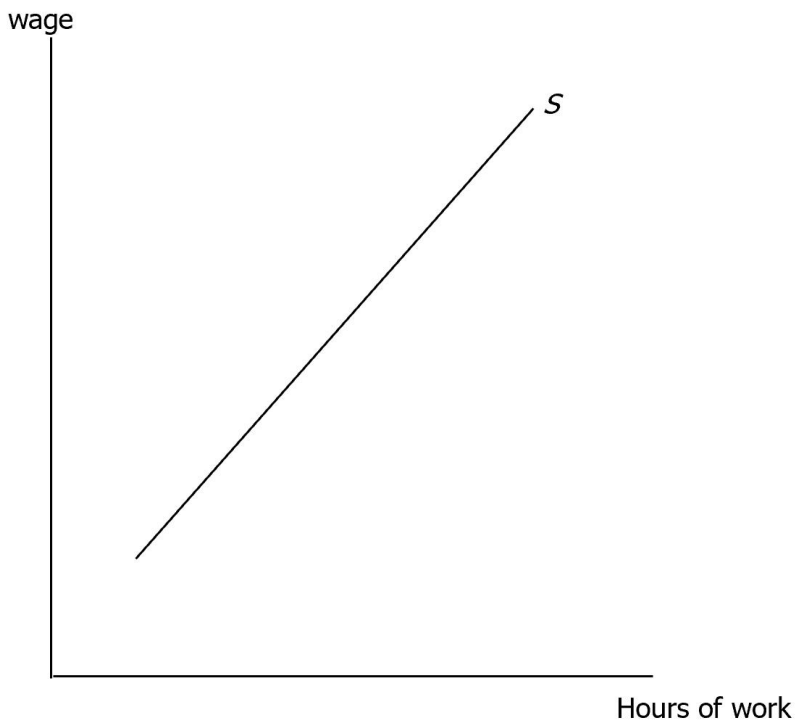
Example 2. Explanation

- Why? What the individual is thinking
- **Stage 2**: An increase in wage makes the opportunity cost of not working high (if he works, now he just receives more money i.e. higher paid workers dislike leisure). This means that leisure becomes relatively expensive and makes agents to decrease leisure time. This is called SUBSTITUTION EFFECT. That decrease on leisure increases hours of work, thus income increases and consumption increases.
- Result 2. **Consumption increases in both stages**. **Leisure hours change is ambiguous**. If the income effect is higher than the substitution effect leisure increases and vice versa.

Implications

- In countries with high unemployment benefits people are less willing to work. This means (we will see later on) higher wages, high labour cost
- In countries that people care more about consumption an increase in wage will results in higher labour hours
- In countries that people case more about leisure an increase in wage may will results to the opposity results, or at least, higher wages will not boost employment.
- Integration can lead to a more efficient allocation of labour.

Labour Supply when Subsititution Effect is Higher



Profit Maximization

- Firms Maximize Profits P=Y-wL-rK
- How do they decide how many people to employ

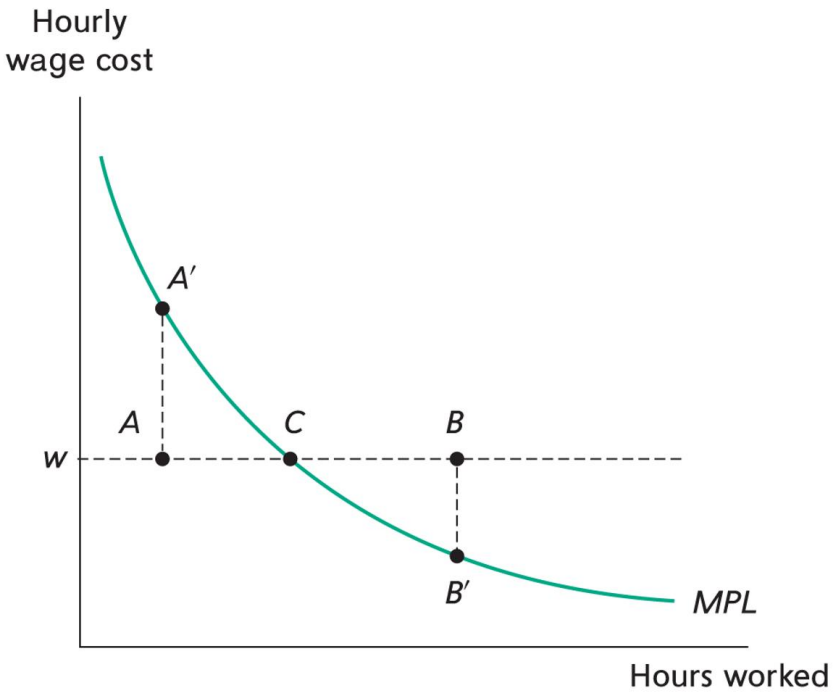
Labour Demand in Numerical Example

N employees	Total sales	Value of MP of an employee	Total labor cost	Marginal cost of employee	Profit
0	0	0	0	0	0
1	100,000	100,000	14,404	14,404	85,596
2	141,421	41,421	28,808	14,404	112,613
3	173,205	31,784	43,212	14,404	129,993
4	200,000	26,795	57,616	14,404	142,384
5	223,607	23,607	72,020	14,404	151,587
6	244,949	21,342	86,424	14,404	158,525
7	264,575	19,626	100,828	14,404	163,747
8	282,843	18,268	115,232	14,404	167,611
9	300,000	17,157	129,636	14,404	170,364
10	316,228	16,228	144,040	14,404	172,188
11	331,662	15,434	158,444	14,404	173,218
12	**346,410**	**14,748**	**171,848**	**14,404**	**173,562**
13	360,555	14,145	187,252	14,404	173,303
14	374,166	13,611	201,656	14,404	172,510

Labour Demand

- Labour demand from firms: balancing cost (wages + contributions) and benefit (marginal productivity of labour).

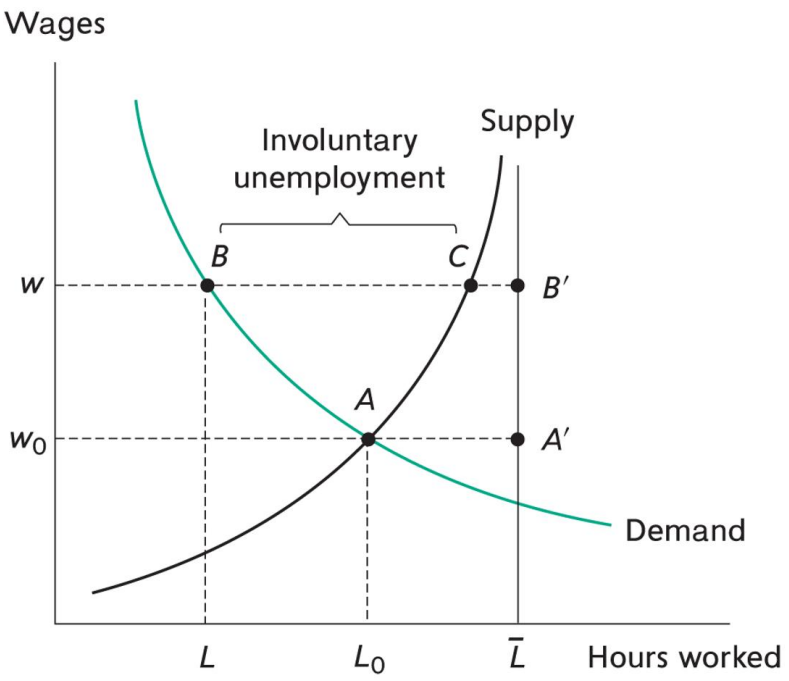
Figure 8.3 Labour demand



Labour Market Equilibrium and Minimum Wages

- Labor market equilibria A versus B.

Figure 8.4 Demand and supply



Rigitities and Unemployment

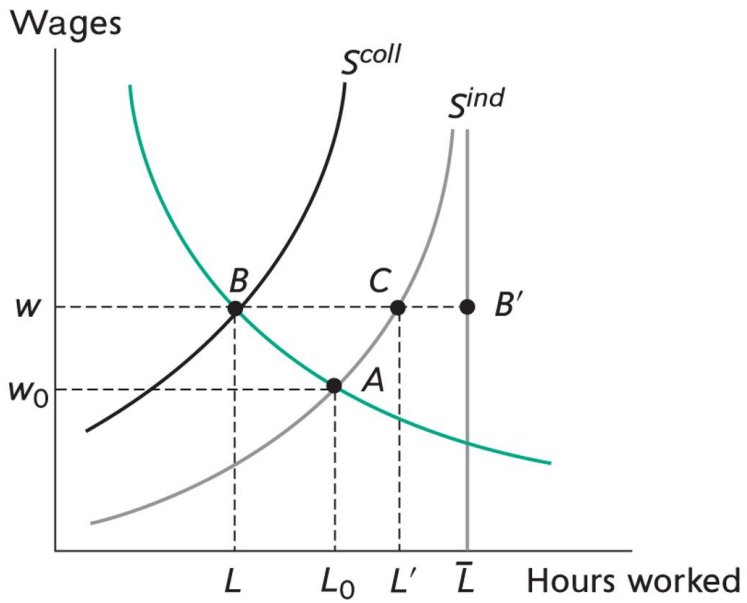
- Notice that:
- Point A: equilibrium with perfectly flexible labour market = full employment (with only voluntary unemployment).
- Point B: equilibrium with involuntary unemployment, due to: salaries are collectively negotiated; agreements hold for long periods thus, labour markets reacts slowly to changing conditions; wage contracts are often regulated; conditions for hiring and firing are also regulated; unemployment benefits.
- $\rightarrow$ Labour market rigidities lead to involuntary unemployment.

Labour Unions/Unemployment Benefits

Most crucial feature is collective labour negotiations:

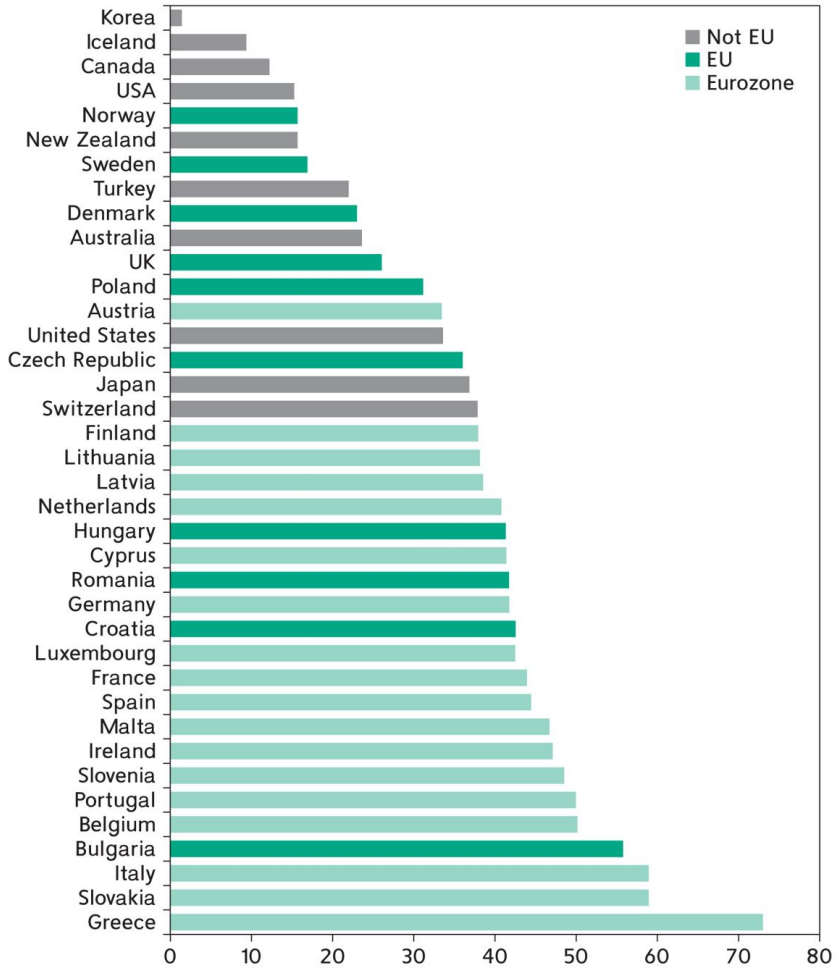
→ Collective supply curve is above individual supply curve.

Figure 8.5 The role of collective negotiations



Long-term Unemployment

Figure 8.6 Long-term unemployment, 2017

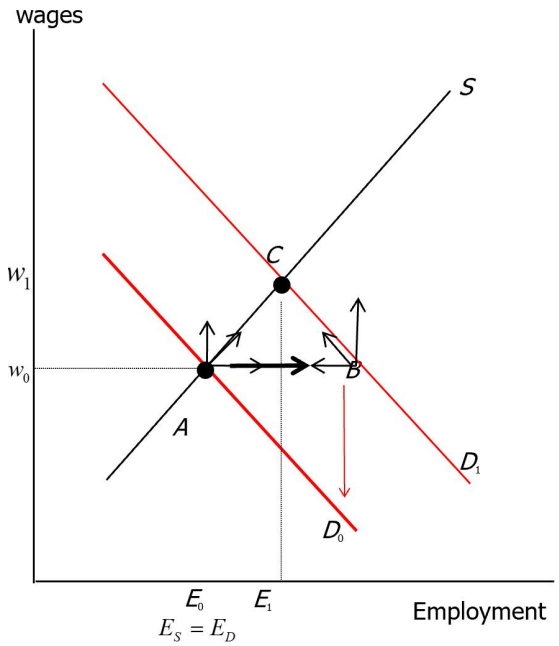


Note: Percentage of unemployed who have been unemployed for more than one year.

Technology and Human Capital

- Human capital (years of schooling) increases the productivity
- Human capital as measured, among others, by years of schooling, affects the productivity of workers.
- Subject to the response of demand for labor, an increase in human capital increases the marginal revenue and the firms demand more workers. – Positive effect on employment
- Subject to the response of equilibrium: Demand for more workers leads to higher wages
- The final outcome is generally positive on wages and on employment but.... can be reversed for some reasons.

Technology and Human Capital



An increase in the productivity of workers shifts up the demand curve (from D_0 to D_1). **Employment increases and wages increases**.

How ?

Step 1: An increase in productivity increases marginal revenue at the same cost, so firm increases the demand for labour at the same wage. Shift **from A to B**.

Step 2: At point B we have higher demand than supply thus, workers ask for higher wages and they succed in an **increase in the wage**.

Step 3: a) Demand side: An increase in the wage increases cost and production gets lower (scale effect) and also the price of labor is relatively higher than other inputs (substitution effect), so *labour demand decreases.*

b) Supply side: The increase in the wage increases the income of workers which in turn increases leisure and reduces labour supply (income effect). At the same time, the increase in the wage makes the cost of staying at home high and decreases leisure and increases labour supply (substitution effect). Here the substitution effect dominate and *labour supply increases.*

According to step 2 and Step 3 we have a movement from B and A, toward to C which is the new equilibrium.

Technology and Human Capital

Table 1. Technological progress doesn't reduce hours worked: effect of TFP growth on hours worked

	1995-2017	Exlcuded 2008-2009	1995-2017	Exlcuded 2008-2009
Dependent variable:	Total hours worked growth	Total hours worked growth	Average hours worked per person employed growth	Average hours worked per person employed growth
	(1)	(2)	(3)	(4)
Total hours worked growth lagged	0.33 ***	0.32 ***		
	(0.04)	(0.04)		
Average hours worked per person employed growth lagged			-0.15***	-0.16***
			(0.04)	(0.04)
Total factor productivity growth	0.16***	0.07	0.07***	0.07**
	(0.04)	(0.04)	(0.02)	(0.02)
Constant	0.14***	0.45***	-0.34***	-0.35***
	(0.095)	(0.10)	(0.05)	(0.06)
Observations	583	527	583	527
R-squared adjusted	0.42	0.37	0.10	0.06
Number of countries	28	28	28	19

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The sample includes euro-area countries except EE, CY, LV, MT, SI, SK. Wage growth is measure by the rate of change of nominal compensation per employee.
Source: DG ECFIN AMECO database and Eurostat LFS.

Immigration in Europe

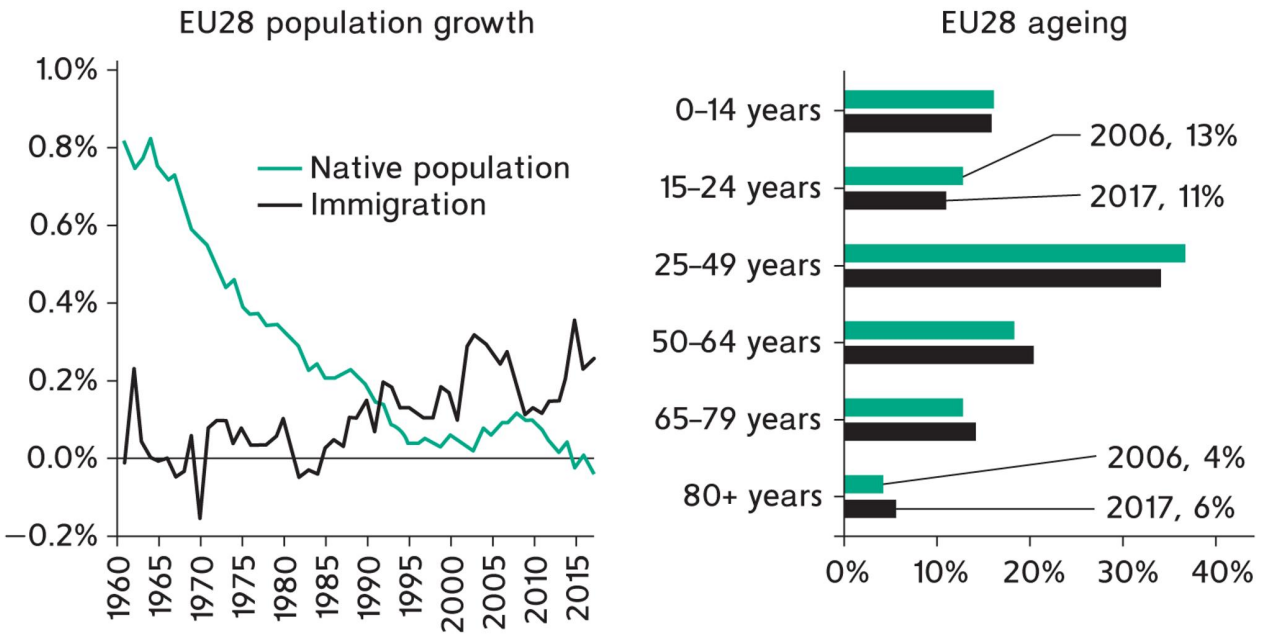
- Europe has switched from net emigration to net immigration because of spectacular growth during the late 1950s and the 1960s.
- Migration has become a hot-button issue in Europe.
- The 2004 and 2007 enlargements brought 12 countries (EU12) and about 100 million new citizens into the EU with the expectation of massive migration

Immigration in Europe

- As a result, most EU15 nations negotiated long transition periods during which EU12 citizens cannot move freely into their labour markets.
- But countries that opened their borders, such as Ireland, Sweden, and the UK, report no or little increase in net inflows. On average, Europeans do not do much migrating: the overall outflow of people, what is called emigration, of EU citizens has been quite stable over the last 10 years – equal to about two-tenths of 1 per cent of the population per year.

Immigration in Europe

Figure 8.9 EU demographics



Source: Author's elaboration based on Eurostat data, and interpretation by Batsaikhan et al. (2018).

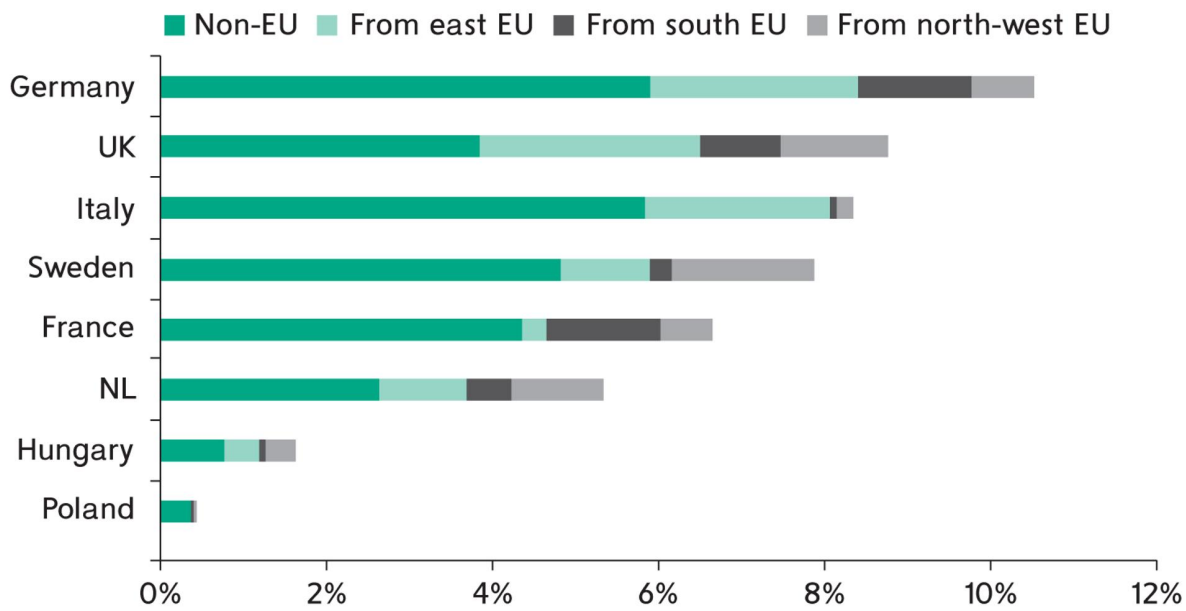
Immigration in Europe

Table 8.3 Intra-EU migration from Central and Eastern European nations, main destination countries, 2016

EU destination nation						
	Germany	UK	Italy	Austria	Ireland	France
Total number of migrants from Central and Eastern EU (millions)						
	2.0	1.7	1.4	0.4	0.2	0.2
Total from Central and Eastern EU (as a % of destination nation population)						
	2.5	2.7	2.2	4.1	4.9	0.3
Source nation's share (%) of all Central and Eastern EU migrants in destination nation						
Bulgaria	11.2	3.8	4.3	6.2	0.8	10
Croatia	13.9	0.2	1.3	19.2	0.4	1.8

Immigration in Europe

Figure 8.10 Source of migrant stock, end 2015 (% of population)



Source: Author's elaboration of data published in Batsaikhan et al. (2018). Note that east EU consists of the Central and Eastern European members, south EU consists of Italy, Portugal, Spain, Malta, Cyprus and Greece. The north-west EU is the pre-eastern enlargement EU15 less Italy, Greece, Portugal and Spain.

Immigration and Brain Drain

- As immigrants enter the labor market, the labor supply curve shifts to the right:
  - Total employment increases
  - Equilibrium wage decreases

Immigration and Brain Drain

- Immigration reduces the wages and employment of similarly-skilled native-born workers, but native-born workers may be able to increase their productivity by specializing in tasks better suited to their skills.
- Competing native workers will have lower wages; complementary native workers will have higher wages.

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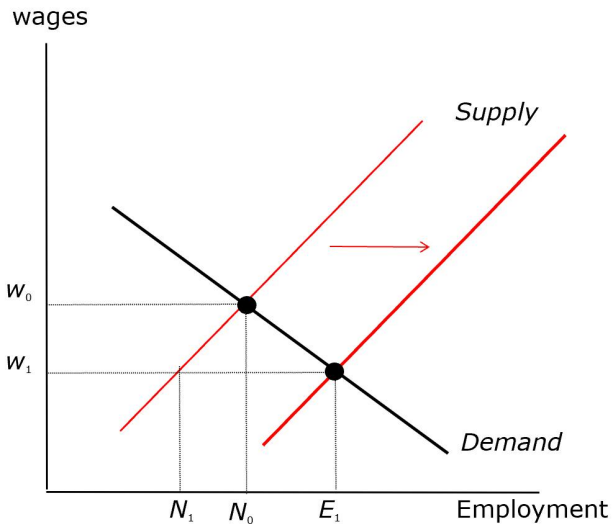
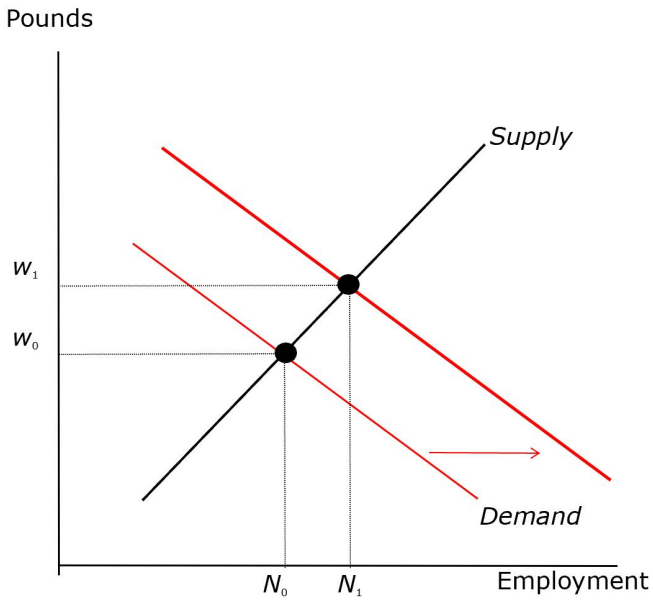
Perfect Substitutes



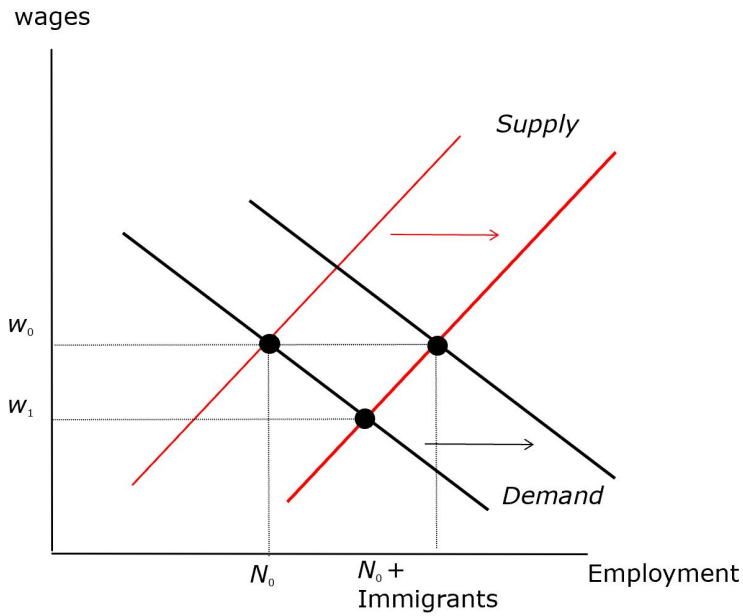
As immigrants and natives are perfect substitutes, the two groups are **competing in the same labor market**. Immigration **shifts out the labor supply curve**. As a result, the wage falls from w_0 to w_1, and total employment increases from N_0 to E_1. At the lower wage, the **number of natives who work declines from N_0 to N_1**.

Immigration of Skilled Workers



If immigrants and natives are **complements, they do not compete in the same labor market**. The labor market here denotes the supply and demand for native workers. Immigration makes natives **more productive**, shifting out the labor demand curve. This leads to a **higher native wage** and to an **increase in native employment.**

Long-Run Effects



Immigration initially shifts out the labor supply curve so the wage falls from w_0 to w_1. Over time, **capital expands as firms take advantage of the cheaper workforce**, shifting out the labor demand curve and restoring the **original wage and level of native employment**.

Sum up

- In each country, some lose and some gain from migration.
- What about each country? total wage earnings = wage rate w times the amount of labour; total capital earnings = triangle between MPL and w.
- In short, while migration creates winners and losers in both nations, collectively both nations gain, thanks to increased efficiency.

Sum up

- Migration improves the overall efficiency of the EU economy and the gains from this are split between Home and Foreign.
- Notice that unskilled workers complement skilled workers and capital and immigrants often have a skill mix that is very different from that of domestic workers: complementarity of migrants (instead of substitutes) and native factors of production provides a win-win situation.

Sum up

- Empirical studies find that one per cent rise in the supply of workers via migration changes the wages of native workers by between 1 and –1 per cent, with most studies putting the figure in the even narrower range of ±0.3 per cent.
- Complementarity versus substitutability issue: figures suggest micro-level matching when it comes to migration among EU15 nations.

Table 8.4 Education of EU15 residents by country of birth, 2017 (% of total)

	Low	Middle	High
Nationals	24	43	33
Immigrants from other EU15	24	33	43
Immigrants from non-EU28	37	33	30

Source: Author's elaboration of Eurostat online data.

Labour Market Reforms

- As recognised by the European Pillar of Social Rights, well-designed employment protection legislation and unemployment benefit systems are both essential for good labour market functioning. Striking the right balance between flexibility and security may favour economic resilience, by easing adjustment to shocks, while ensuring fairness and securing transitions
- After the crisis the most severely hit countries implemented comprehensive reforms of their labour market, combining measures to ease job protection with reforms of the unemployment benefits aimed at providing wider coverage while preserving job search incentives

Labour Market Reforms

- hiring subsidies for young employees were introduced in Italy at the time of the EPL reform in 2012. Although some of the effects may be due to the coinciding reduction of labour costs for young workers, the analysis suggests that the EPL reform had positive effects on the hiring rate.

Improvements

- In 2017 and in the first half of 2018, the improvements in the labour market continued at a steady pace both in the EU and the euro area. Unemployment continued to be on a declining path reaching in July 2018 the lowest rates since the start of the crisis

Labour Market in EU

- Two key results emerge: immigration is likely to raise employment and national income; immigration is unlikely to affect unemployment in either direction.
- These results provide a strong endorsement for the fundamental principle of freedom of movement of workers within the EU.
- Rigidities in EU explain long-term unemployment to US but this declines over time due to policies considering the trade-off between flexibility and security.

Improvements

- Still, there is low mobility within EU:
- restrictions for new EU members' nationals mobility;
- differing pensions systems;
- unemployment benefits;
- regulated professions;
- language,
- housing,
- health systems, etc.