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## EU labour mobility

- Internal labour mobility concerns movements in the working age population (i.e. departures and arrivals) between regions within the EU.
- In the former EU15, only about 0.1% of the working age population changes its country of residence in a given year
- Compared to other nationalities, Europeans apparently need strong incentives to seek employment abroad.
- Conversely, in the US, about 3% of the working age population moves to a different state every year.
- There are a number of differences between the US and the EU, including language, culture, labour legislation and the fact that the US is a federal state.

# Labour mobility in EU: a historical perspective

- The period from the late 1950s to the early 1970s saw strong economic growth in most of the EU. However, intra-EU labour mobility remained quite low.
- The accession to the Union of Spain and Portugal in 1986 did not change this.
- Firstly the importance of labour mobility has been highlighted in the context of the EU monetary union.
- A monetary union requires a shock-absorption capacity, including increased labour mobility to even out divergences (Delors, 1989, Mundell, 1961 and De Grauwe, 2000)

# Labour mobility in EU: a historical perspective

- However, despite the formal right to free movement the EU was characterized by a lack of mobility.
- In response to these concerns, the EU undertook a number of initiatives designed to turn “free movement of workers” from a formal right to one that appeared a realistic prospect to EU citizens.
- Freedom of movement in the US is as old as the country itself, while it has only become a recent possibility in the EU.

## Labour mobility in EU: a historical view (cont.)

- The EU's enlargement in 2004 (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia) and 2007 (Romania and Bulgaria) pushed mobility to the top of the EU agenda.
- The accession of the new member states, including a number of members of the former Soviet bloc radically changed the dynamic of intra-EU labour mobility.
- Given the very large and persistent disparities in wage and income levels, there was clearly a possibility of much larger intra-EU flows.
- Enlargement did indeed increase mobility. Overall, the number of EU citizens residing in another EU country rose from 1.6% in 2004 to 2.8% by the end of 2012 (European Commission, 2013a).
- The main drivers were economic, the vast majority of migrants moved for work, attracted by either higher wages or greater job opportunities.

## Labour mobility in EU: a historical view (cont.)

- More recently, the 2008 Great Recession started pushed into economic difficulties some Eurozone countries, resulting in further changes in intra-EU migration flows.
- The crisis strongly reduced Eastern EU10 annual outflow figures, sometimes by more than one-half.
- Opportunities for foreign workers declined, particularly in the collapsing construction sector.
- In particular, out-migration has increased substantially from a number of countries where unemployment and/or youth unemployment is high: in particular Spain, Italy and Greece.

## Differences between intra-EU mobility and migration of third-country nationals (TCN)

- Intra-EU migration is made possible by **EU free movement laws**, part of the ambition to put into place a European Single Market that guarantees the free movement of goods, capital, services, and people.
- In contrast, immigrants from third countries (TCNs) need to fulfil specific requirements to be allowed to gain access to, work and study in the EU, specified by national rules.
- Mobile EU citizens formally have the same rights and duties as the native citizens in the Member State of destination, and they should not be treated differently in comparison to the native citizens.
- In contrast, the rights of TCNs depend on the type of residence permit granted.

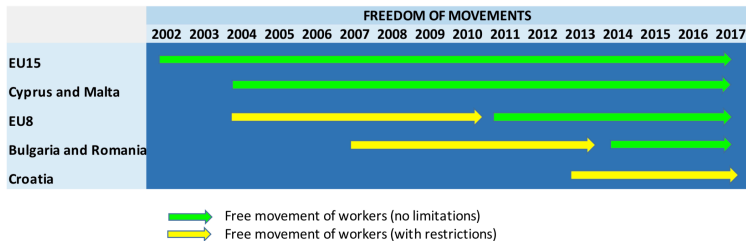
# Where does the EU's freedom of movement come from?

- In 1941 the US president announced the four fundamental principles of human existence: freedom of speech, freedom of worship, freedom from want, freedom from fear.
- In 1993, Europe took inspiration from those principles for the launch of the common market.
- In line with the real concerns of people Europe stated the principles of: freedom movements of goods, of services, of people and of capital.
- The European economic area is now a fact.

<https://www.youtube.com/watch?v=bhZ-jVPzrEA>



# EU citizenship and Freedom of movement



# Free movement of workers

- The free movement of workers is a cornerstone for the EU.
- Both employees and employer have benefits: workers travel to places where employers need their skills.
- The number of **mobile workers** has grown from 8 million in 2004 to 14 million in 2014.
- At the beginning of the EU mobile flows were mainly from South to North.
- Nowadays the flows have changed: EU citizens move to multiple Member States for shorter periods

## Free movement of workers

- Labour condition for national and mobile workers are the same (wages, social security contributions and pension schemes).
- **Posted workers** formed a special category: sent by an employer by one Member State to temporarily work in another Member State.
- Therefore posted workers follow the rules for the free movement of services.

<https://www.youtube.com/watch?v=LwZJf04petg>

# The importance of labour mobility

- In a time of serious concerns regarding the future of Europe, labour force mobility becomes a high priority challenge (Krieger and Fernandez 2006).
- In the ongoing discussion of European regional development and growth, European policy makers have maintained their focus on the importance of increasing geographical labour mobility.
- Not only it plays a fundamental role as a crucial mechanism for addressing the strong and increasing demand for skilled labour, but it represents also a key driver for **reducing discrepancies** between supply and demand in European labour markets, in light of the increasing globalization and rapid technological change (European Commission, 2010).

# Migration and commuting

- Although migration has been traditionally seen as a way of addressing **labour mismatch**, inter-regional migration rates are usually low even within the same country.
- On the contrary, commuting rates in Europe are generally higher and growing over time (Green et al., 1999; Renkow and Hoover, 2000).
- Many factors have contributed to this development, such as
  - ▶ lower migration propensity,
  - ▶ the increased participation of women in the labour force,
  - ▶ higher education levels
  - ▶ greater specialization among workers,
  - ▶ improved infrastructure
  - ▶ the availability of faster travel modes

# Migration and commuting

- Moreover,
  - ▶ important changes in working and family lives,
  - ▶ the increase of dual-earner households
  - ▶ the great diffusion of more flexible labour contracts,
  - ▶ the growth in flexible working practices
  - ▶ the diffusion of information technologies

have led to a trend towards longer, and more geographically diverse journey-to-work flows.

- Therefore, commuting could represent an excellent instrument to improve **the functionality** of labour markets.

# Commuting

- Evidence shows that **commuting distance increases labour supply**, particularly among females and that an increase in commuting facilitates labour market matching and stimulates employment in more disadvantaged areas (OECD Economic Surveys: Hungary 2014).
- In addition, commuting may serve as a mechanism to **overcome poor local access to suitable jobs**, reducing over-education and improving job satisfaction (van Ham et al., 2001)
- Finally, by offering a chance to unemployed workers who cannot find a job in the local area, commuting **reduces underemployment and long-term unemployment** (van Ham et al., 2001).

# Commuting

- However, in countries with large economic disparities, increased commuting may lead to an additional **loss of skilled labour** and associated human capital in regions with unhealthy markets with detrimental consequences for the local economies (Regional Australian Institute, 2013).



## The role of job uncertainty in inter-regional commuting: the case of Italy (Parenti & Tealdi, 2019)

- Commuting in Italy is a particularly relevant phenomenon.

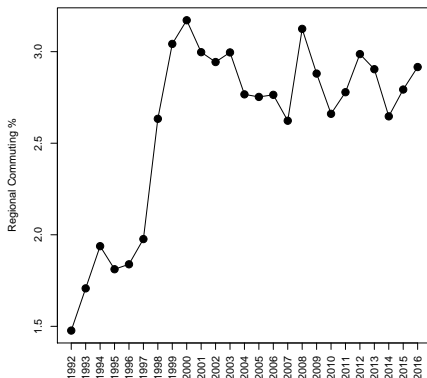


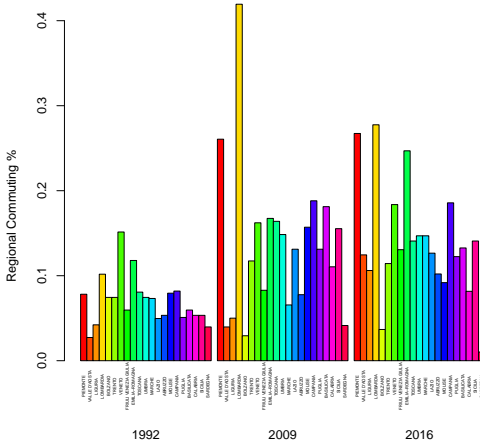
Figure: Regional commuting rates 1992-2016. Source: European Labour Force  

# Commuting in Italy

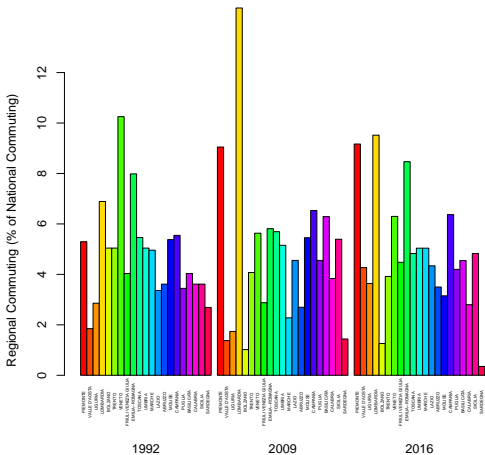
- Studies have found that
  - ▶ the high quality of life in small and medium sized cities,
  - ▶ the traditional strong attachment of Italians to the place where they were born
  - ▶ the morphological configuration of the countrymake commuting in Italy a common practice.
- The so-called *voting with your feet* process, useful for analyzing the quality of life based on the territorial re-distribution of the residents does not seem to apply to the Italian case and residential patterns tend to remain stable.

# Regional commuting rates by region

- Disparities across regions, with an overall significant increasing trend.

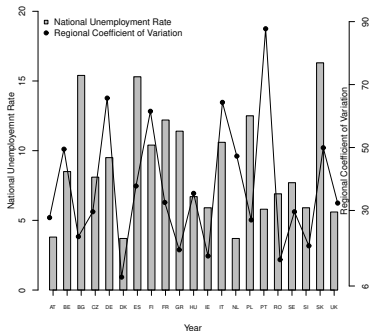


# Regional commuting rates by region as percentage of national commuting

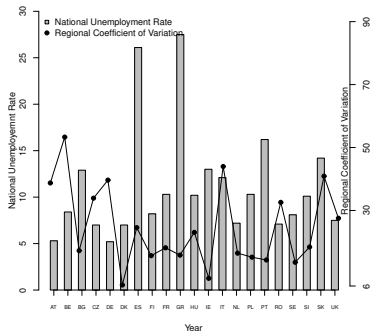


# Why Italy?

- Italy is considered one of the countries in Europe with larger disparities among regions.



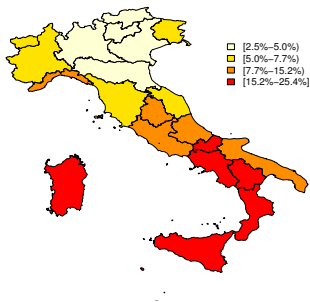
(a) 1992.



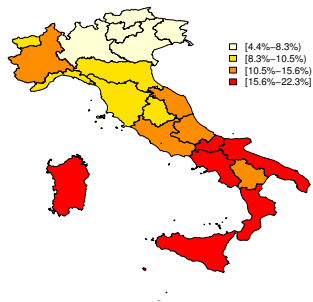
(b) 2013.

## Why Italy?

- Regional unemployment rates range from 2.5% to 25%, with remarkable differences between the North and the South of the country.



(a) 1992

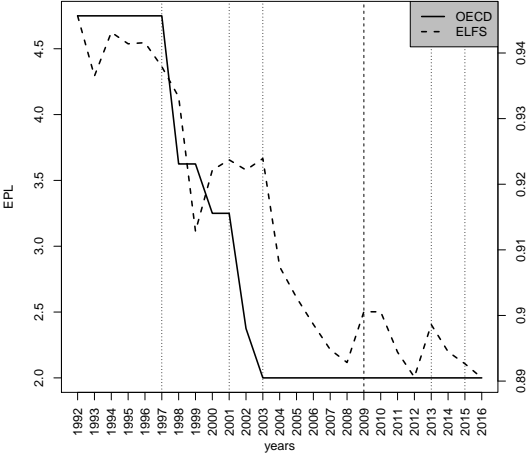


(b) 2013

# Why Italy?

- Studies have shown that **opportunities** exist for under-performing regions to benefit from close proximity to regions with healthy labour markets only if labour mobility (temporal or permanent) is facilitated across regions.
- In contrast, increased mobility may **exacerbate** the departure of skilled human resources and associated capital in regions with poor labour markets.
- In Italy, a number of recent labour market reforms (1997, 2001 and 2003) have increased **labour market flexibility** and significantly lowered the employment protection legislation associated with temporary contracts.

# EPL Index of temporary contracts





# Why Italy?

- By promoting the utilization of temporary contracts, by changing the labour market structure and practices and by increasing job uncertainty, these reforms might have had an important impact on the individual **commuting decision**.
- This is particularly relevant as important **asymmetries** in the utilization of temporary contracts have been identified across Italian regions, potentially altering the incentives of individuals to look for jobs in other regions.

# Determinants of commuting

- The existing literature on labour mobility has suggested many potential determinants of the individual decision to commute.
- In particular, the latter depends on both **individual** and **job** characteristics, as well as on **macroeconomic** determinants and the quality of **infrastructure**.

## Individual characteristics

- **Gender:** women are less keen to commute, particularly long-distance (-).
- **Marital status:** married workers are less likely to move due to the higher direct cost of moving as well as the higher likelihood of losing ones job or experiencing a drop in income (-).
- **Age:** older workers are more likely to commute since they might have accumulated firm-specific or sector-specific human capital which is not transferable and/or are home-owners and have family obligations (+).
- **Education:** highly educated individuals are more efficient at gathering information and high-skill jobs are more spatially disperse than low-skill jobs (+).

## Job characteristics

- **Employment type:** self-employed workers have great flexibility in working hours and workplace location (+).
- **Tenure:** workers with longer job tenure tend to accumulate more sector-specific and firm-specific human capital which reduces their likelihood to change jobs (-).
- **Working hours:** working full-time or having flexible working hours are expected to increase the willingness to accept a job far away from the residence (+).
- **Type of job:** holding a temporary contract implies that the worker must constantly seek new job opportunities to balance out this job instability (+).

## Job characteristics (cont.)

- **Occupational level:** the return on investment in workplace mobility is higher for jobs which require a high skill level (+).
- **Sector:** given the uneven spatial distribution of jobs among sectors workers in different sectors might have different propensities to commute (+/-).
- **Firm size:** larger firms have higher ability to recruit from a larger territory and to subsidize commuting more than their smaller counterparts (+).

## Macroeconomic (regional) determinants and infrastructure

- **Unemployment rate:** a high level of unemployment in the region of residence is associated with higher uncertainty about the possibility to find a job locally (+).
- **Share of temporary contracts:** a high share of temporary contracts will force workers to travel further from their residence to obtain jobs with better terms and conditions (+).
- **Transportation means:** as the quality of infrastructure increases, the commuting rate is higher and longer travel to work journeys are undertaken (+).

# Dataset

- The ELFS (European Labour Force Survey) provides *individual* level data on measures of mobility as well as socio-economic information:
  - ▶ **commuting**: place of work and place of residence being located in two different *non-adjacent* Italian NUTS2 regions
    - ★ The NUTS (Nomenclature of Units for Territorial Statistics) is a geo-code standard for referencing the subdivisions of countries for statistical purposes.
    - ★ The NUTS2 level for Italy corresponds to the first-level administrative division of the country (so called “regioni”);
  - ▶ **individual characteristics** (age, marital status, gender, education, ...)
  - ▶ **job and firm characteristics** (occupation, contract, flexibility, sector, firm size, ...)

# Dataset

- ISTAT (Italian Institute of Statistics): information on **regional** unemployment rate
- ELFS: to compute the **regional** share of temporary contracts
- ISTAT database ASTI (Atlante Statistico Territoriale delle Infrastrutture): information on several features of **regional** infrastructures (roads, railways and airports)



# Sample

Individuals within the working age population (16-64 years old) who are employed:

- 64,726 individuals in 1992
- 51,254 individuals in 2009
- 42,401 individuals in 2016

## Empirical strategy

- The decision to commute (either 0 or 1) is regressed on wide set of variables (individual, job, regional characteristics) to study the role of uncertainty on inter-regional commuting in Italy in the period 1992-2016.
- For reasons of confidentiality it is not possible to follow the individuals over time and only **25 cross-sections** of data are considered.
- To account for nesting in the data structure (individuals in regions), as commuters are located within regions, a **multilevel approach** is adopted.
- This allows us to do hypothesis testing at three different levels: **lower-level direct effect, cross-level direct effect and cross-level interaction effect.**
- Although the dependent variable is dichotomous (the probability to commute long-distance), a **linear probability model (LPM)** is estimated.

# Descriptive statistics

	1992		2009		2016	
	NC	C	NC	C	NC	C
	99.40%	0.60%	99%	1%	99.10%	0.90%
Female	0.356	0.178	0.419	0.244	0.444	0.27
Single	0.335	0.51	0.373	0.502	0.398	0.503
Age 1624	0.124	0.199	0.057	0.101	0.044	0.071
Age 2534	0.278	0.369	0.195	0.326	0.152	0.296
Age 3549	0.393	0.305	0.472	0.354	0.438	0.395
Primary education	0.592	0.469	0.379	0.295	0.321	0.219
Secondary education	0.328	0.373	0.458	0.295	0.477	0.416
Tertiary education	0.08	0.158	0.163	0.252	0.203	0.365
Degree of urbanisation	1.935	2.147	1.932	2.095	2.023	2.061
Employee	0.716	0.834	0.742	0.896	0.762	0.867
Family worker	0.047	0.012	0.019	0	0.015	0
Start time	4.445	2.852	4.989	3.015	5.326	3.016
Full time	0.939	0.975	0.854	0.951	0.808	0.908
Temporary job	0.054	0.124	0.095	0.278	0.107	0.27
Temporary job 13months	0.008	0.015	0.011	0.045	0.018	0.066
Temporary job 412months	0.017	0.033	0.056	0.174	0.061	0.143
Temporary job $\geq 1$ year	0.007	0.012	0.02	0.03	0.014	0.018
Apprenticeship job	0.012	0.019	0.017	0.028	0.015	0.028
Flexible working hour	0.042	0.084	0.006	0.004	0.007	0.013
Highskilled whitecollar	0.24	0.335	0.394	0.462	0.349	0.556
Lowskilled whitecollar	0.291	0.261	0.234	0.217	0.305	0.191
Highskilled bluecollar	0.272	0.234	0.194	0.181	0.161	0.14
Lowskilled bluecollar	0.198	0.17	0.177	0.14	0.184	0.113
Firm size 110	0.569	0.424	0.291	0.163	0.329	0.192
Firm size 1119	0.083	0.103	0.144	0.157	0.115	0.119
Firm size 2049	0.142	0.188	0.139	0.166	0.127	0.177
Firm size $\geq 50$	0.205	0.285	0.255	0.427	0.262	0.39

# Results on individual characteristics

**Table 6.** Linear Probability Model: commuting with length of temporary contracts

	<i>Dependent variable: P(commuting)</i>		
	1992	2009	2016
Female	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Single	0.003*** (0.001)	0.002* (0.001)	0.002* (0.001)
Age 16-24	0.0002 (0.001)	-0.004* (0.002)	0.00001 (0.003)
Age 25-34	-0.001 (0.001)	-0.003** (0.001)	0.002 (0.001)
Age 35-49	-0.001 (0.001)	-0.004*** (0.001)	-0.001 (0.001)
Primary education	-0.001 (0.001)	-0.003 (0.001)	0.0001 (0.001)
Tertiary education	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)
Degree of urbanisation	0.002*** (0.0004)	0.002*** (0.001)	0.001** (0.001)

# Results on job characteristics

Employee	0.000 (0.001)	0.009*** (0.001)	0.005*** (0.001)
Family worker	-0.002 (0.002)	0.005* (0.003)	0.004 (0.003)
Start time	-0.0004*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Full-time	0.002 (0.001)	0.005*** (0.001)	0.003** (0.001)
Temporary job 1-3 months	0.0003 (0.003)	0.027*** (0.004)	0.015*** (0.003)
Temporary job 4-12 months	0.002 (0.002)	0.012*** (0.002)	0.007*** (0.002)
Temporary job ≥ 1 year	0.008* (0.004)	0.005 (0.004)	0.0002 (0.004)
Apprenticeship job*Age 16-24	-0.010*** (0.004)	-0.012** (0.005)	-0.003 (0.006)
Apprenticeship job*Age 25-34	-0.005 (0.005)	0.006 (0.006)	0.006 (0.006)
Flexible working hour	0.009*** (0.001)	-0.003 (0.005)	0.006 (0.005)
High-skilled white-collar	0.002** (0.001)	0.007*** (0.001)	0.010*** (0.001)
Low-skilled white-collar	0.002** (0.001)	0.004*** (0.001)	0.003** (0.001)
High-skilled blue-collar	-0.0003 (0.001)	0.003* (0.001)	0.001 (0.002)
Firm size 1-10	-0.004*** (0.001)	-0.006*** (0.001)	-0.005*** (0.001)
Firm size 11-19	-0.001 (0.001)	-0.004*** (0.001)	-0.003** (0.001)
Firm size 20-49	-0.001 (0.001)	-0.002 (0.001)	0.0003 (0.001)

## Results on regional characteristics

Rel. regional unemployment rate	0.006 (0.003)	0.007 (0.007)	0.016* (0.008)
Rel. regional temporary	0.002 (0.003)	0.008 (0.008)	-0.001 (0.011)
Rel. regional economic density	-0.0003 (0.0004)	-0.001 (0.001)	-0.001 (0.001)
Rel. regional highway network	0.001 (0.001)	0.0002 (0.001)	0.002 (0.003)
Observations	64726	51254	42401
Percent correctly predicted	99%	99%	99%
ones	5.8%	8.5%	10.9%
Pseudo R <sup>2</sup>	0.07	0.10	0.11

Note: Significance levels: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Estimated coefficients of dummies for years of residence, Usually working at home,

Never working at home, Looking for other job, Existence of second job and sectors are not reported.

## Results on cross-level interactions

**Table 7.** Regional temporary and apprenticeship

	Dependent variable: $P(\text{commuting})$		
	1992	2009	2016
Rel. regional temporary*Temporary job	0.003** (0.001)	0.012*** (0.001)	0.010*** (0.001)
Rel. regional unemployment rate	0.016* (0.003)	0.008 (0.007)	0.015** (0.006)
	Percent correctly predicted ones	99%	99%
	Pseudo R <sup>2</sup>	5.5%	10.0%
		0.07	0.10
Rel. regional unemployment rate*Temporary job	0.004*** (0.001)	0.011*** (0.001)	0.011*** (0.001)
Rel. regional temporary	0.003 (0.003)	0.008 (0.007)	0.010 (0.009)
		0.003	0.003
	Observations	64728	51254
	Percent correctly predicted ones	99%	99%
	Pseudo R <sup>2</sup>	5.5%	10.0%
		0.07	0.10
Rel. regional temporary $\leq 3$ months*Temporary job $\leq 3$ months	-0.0005 (0.002)	0.019*** (0.003)	0.010*** (0.003)
Rel. regional unemployment rate	0.006* (0.003)	0.009 (0.007)	0.016** (0.006)
	Observations	64728	51254
	Percent correctly predicted ones	99%	99%
	Pseudo R <sup>2</sup>	4.2%	6.0%
		0.07	0.10
		0.11	0.11

## Results on cross-level interactions

Rel. regional temporary 4-12 months*Temporary job 4-12 months	0.001 (0.001)	0.012*** (0.002)	0.006*** (0.0032)
Rel. regional unemployment rate	0.006* (0.003)	0.009 (0.007)	0.016** (0.006)
Observations	64728	51254	42401
Percent correctly predicted	99%	99%	99%
ones	4.5%	8.7%	10.2%
Pseudo R <sup>2</sup>	0.07	0.10	0.11
Rel. regional apprenticeship*Age 16-24*Apprenticeship job	-0.005* (0.003)	-0.009** (0.004)	-0.005 (0.004)
Rel. regional apprenticeship*Age 25-34*Apprenticeship job	-0.002 (0.004)	0.005 (0.005)	-0.001 (0.005)
Rel. regional unemployment rate	0.006* (0.003)	0.009 (0.007)	0.016** (0.006)
Observations	64728	51254	42401
Percent correctly predicted	99%	99%	99%
ones	4.2%	6.2%	9.9%
Pseudo R <sup>2</sup>	0.07	0.09	0.11



## Summary of results

- The individual decision to commute has **evolved** in the past twenty years, during a period of significant labour market turmoil.
- While individual characteristics have not changed as determinants of the commuting decision, **job characteristics** seem to have evolved.
- In more recent years, a **wider category** of workers is willing to undertake travel to work journeys compared to two decades ago.
- **Temporary workers** commute more than permanent workers, as they are exposed to a high degree of uncertainty about the location of their next job.
- **Higher labour market flexibility** leads to higher commuting, due to the higher uncertainty about the location of the next job which pushes workers to prefer commuting over migration.

## Policy implication

- During the last years, the EU highlighted the importance for the member countries to create a more flexible and mobile labour market.
- Consequently, the EU designed a policy aiming at promoting labour mobility within EU to ensure the best possible match between workers and employers (European Commission, 2010).
- The increased flexibilization of the labour market through the diffusion of temporary contracts could potentially **enhance** the supply of skilled labour in all parts of the country, reducing labour market segmentation and increasing efficiency.

## Policy implication (cont.)

- However, in countries like Italy, characterized by very large regional disparities, and where the intensive utilization of temporary contracts (particularly of very short duration) is concentrated in regions with higher levels of unemployment and lower economic growth, the economic consequences of the increased flexibility may be **detrimental**.
- By pushing skilled human resources away in search for better opportunities, the increased utilization of temporary contracts may cause **further human capital depletion** which may amplify current regional disparities.

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