

SECTORAL REALLOCATION OF EURO AREA EMPLOYMENT AFTER THE COVID-19 SHOCK

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MACROECONOMIC POLICY RESPONSES TO COVID-19

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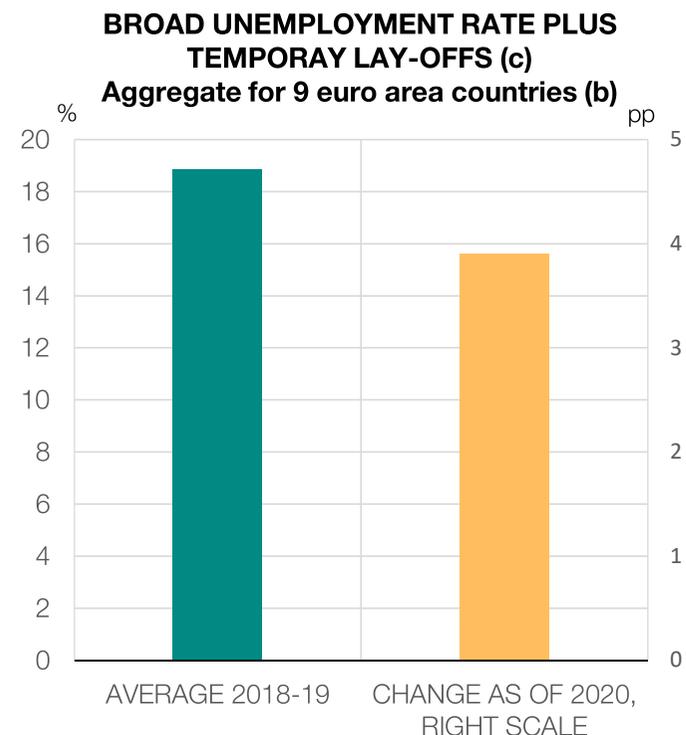
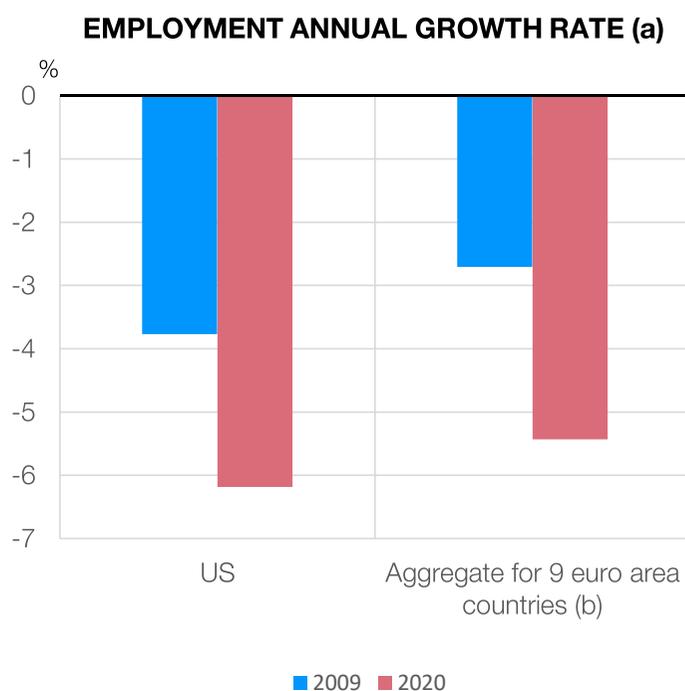
Work in progress. Thanks to Paula Ruiz for assistance with the data.

The views expressed in this presentation are those of the author and do not necessarily represent the views of the Bank of Spain and the Eurosystem.



- Motivation
 - Literature review
 - Aim
 - Data
 - Aggregated LFS evidence
 - LFS microdata evidence for Germany, France, Italy and Spain
 - Employment retention schemes in 2020-2021
 - Work ahead
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- Labour markets all over the world have been severely hit by the COVID-19 pandemic and associated containment measures. Both in the US and the euro area employment declined at a sharper rate than in the Global Financial Crisis.



Sources: OECD, Eurostat and Banco de España.

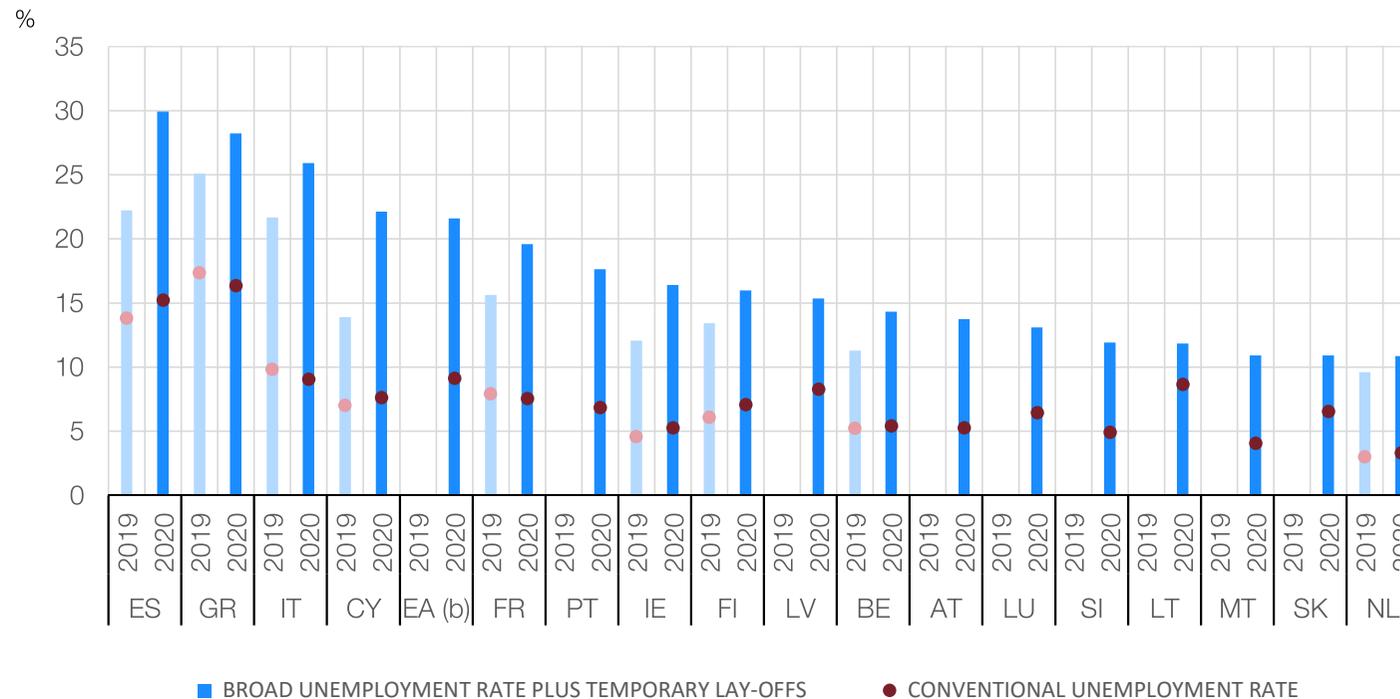
(a) Workers absent due to temporary lay-offs are excluded.

(b) France, Italy, Spain, Netherlands, Belgium, Finland, Greece, Ireland and Cyprus.

(c) Sum of the broad unemployment rate (total number of unemployed, persons working part-time who wish to work more hours and economically inactive persons who are available for but not seeking work or seeking not available for work, all as a percentage of the extended labour force including inactivity as defined above) plus temporary lay-offs also as a percentage of the extended labour force.

- If absences from work owing to temporary lay-offs are included, the euro area broad unemployment rate exceeded 20% in 2020, with levels of 30% and 26% in Spain and Italy, respectively.

BROAD UNEMPLOYMENT RATE PLUS TEMPORARY LAY-OFFS (a)

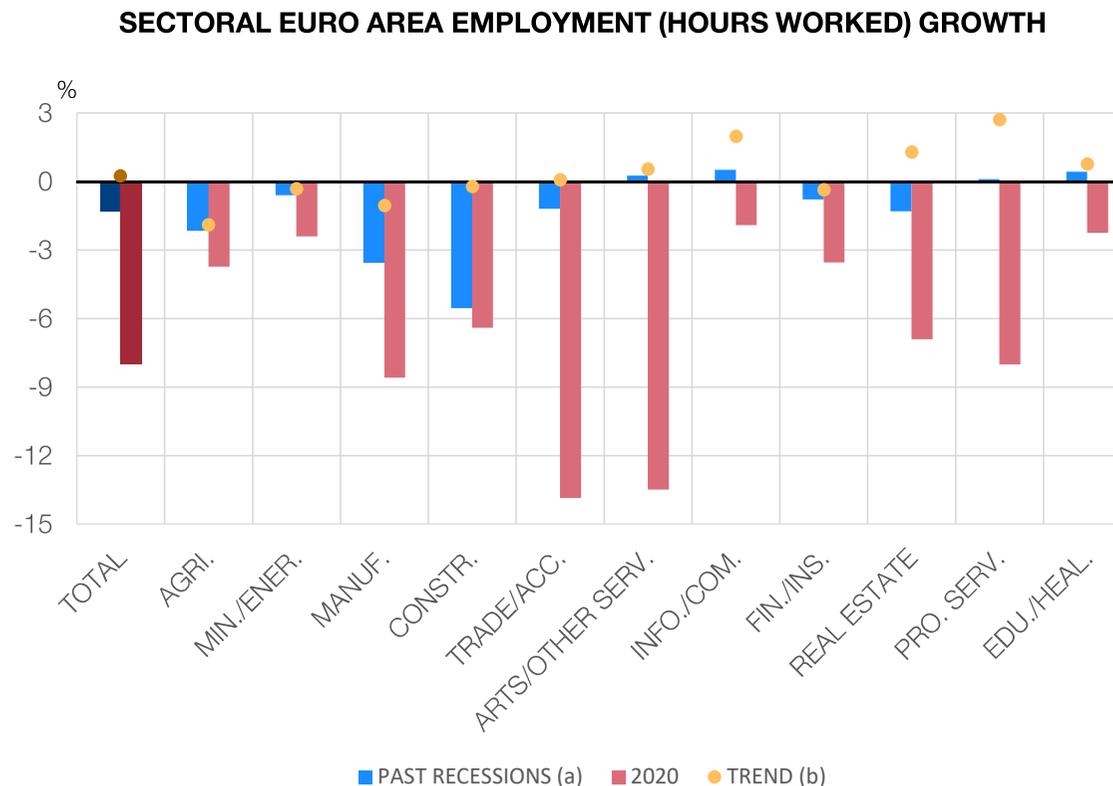


Sources: Eurostat and Banco de España.

(a) Sum of the broad unemployment rate (total number of unemployed, persons working part-time who wish to work more hours and economically inactive persons who are available for but not seeking work or seeking not available for work, all as a percentage of the extended labour force including inactivity as defined above) plus temporary lay-offs also as a percentage of the extended labour force.

(b) Except Germany and Estonia, whose data are not available.

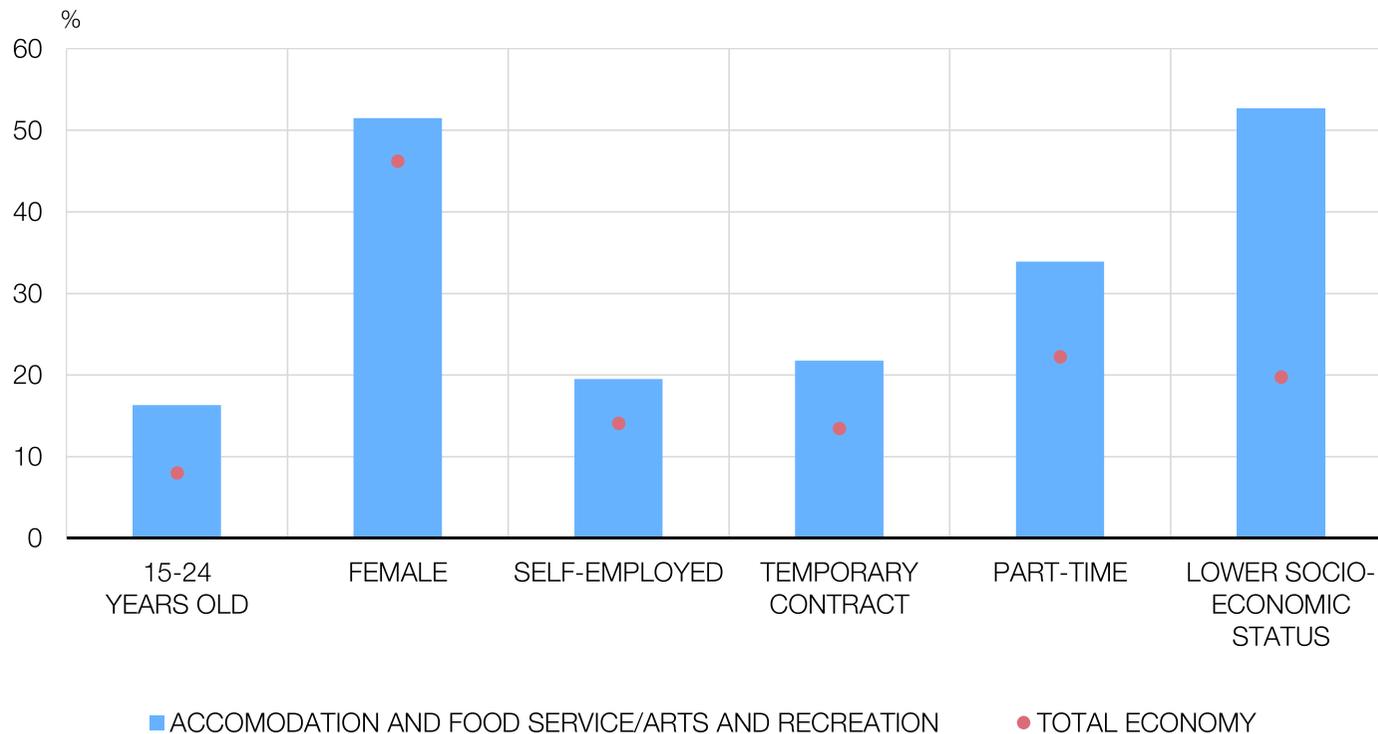
- COVID-19 shock has been highly asymmetric in its employment effects across sectors, with the most impacted different than in previous recessions, which still seem to accelerate preexisting structural trends.



Sources: Eurostat and Banco de España.
 (a) 2008-2009 and 2012-2013 average.
 (b) 1996-2020 average.

- The asymmetric sectoral effects of the COVID-19 shock may translate into inequalities in the labour market impacts of the pandemic across demographic groups.

SHARE OF CERTAIN GROUPS IN TOTAL EURO AREA EMPLOYMENT AND IN THAT OF THE MOST VULNERABLE SECTORS (2019)



Source: Eurostat and Banco de España.

- Botelho et al. (2020) argue that **Covid-19 is a purely exogenous shock** and could lead to **lower reallocation needs** than an economic crisis such as the great financial crisis. In the euro area, as it is to be expected that not all workers in short-time work schemes and on temporary lay-offs will be able to return to their previous jobs, **a further increase in unemployment is expected in the short term.**
 - Anderton et al. (2020) conclude that **labour reallocation will crucially depend on the duration of the crisis and possible structural shifts in demand.** The COVID-19 shock is boosting the automation and digitalisation process, and the skills content of existing jobs may need to be upgraded, which may increase the mismatch in the labour market.
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- Bluedorn et al. (2021) state that, based on past shocks, it seems likely that some of the uneven sectoral impact from the COVID-19 pandemic shock reflects a **longer lived labour reallocation shock** that is contributing to the unemployment rise.
 - Worker reallocation across sectors and occupations is more likely after an unemployment spell, but it comes at a high cost, as **average earnings fall for those who switch**.
 - **Job retention policies** are extremely powerful at reducing scarring and **mitigating the unequal impacts** of a pandemic shock across workers, while **reallocation policies supporting job creation** can help ease the adjustment to the more permanent effects of the COVID-19 shock on the labour market.
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- Barrero et al. (2020) stress that the COVID-19 pandemic has precipitated a **major reallocation shock** to the U.S. economy and discuss a number of aspects of policy that can retard creation responses to such shock.
 - They anticipate **permanent job losses** in three buckets: jobs lost due to COVID-induced **demand shifts**, jobs formerly at **marginal firms** that don't survive the pandemic and lockdown, and jobs lost due to the **intra-industry reallocation** triggered by the pandemic and post-pandemic concerns about the transmission of infectious diseases.
 - As the COVID-19 shock caused large, persistent shifts in demand patterns and business practices, the reallocative aspects of the shock imply that **many businesses should not return to pre-COVID employment levels**, and they will not do so with employment-retention subsidies of indefinite duration.
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- Davis and Haltiwanger (1999) review evidence from studies that span thirteen countries. **Employment shifts between regions and industries** account for less than **10 percent of excess job reallocation** in half the studies and 10 to 20 percent in the rest.
 - Bick and Blandin (2020) assess the extent of downward nominal wage rigidity at the onset of the pandemic, finding that **wage reductions** were widespread, but were more common for **job-switchers and recalled workers**.
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- To assess the **extent and character of this reallocation shock** for the euro area economy (and by country).
 - To consider **implications for the labour market outlook and for policy responses** to the pandemic.
 - Effects on labour participation, unemployment rate, wages, inequality...
 - Impact of the short-time work schemes and temporary lay-offs
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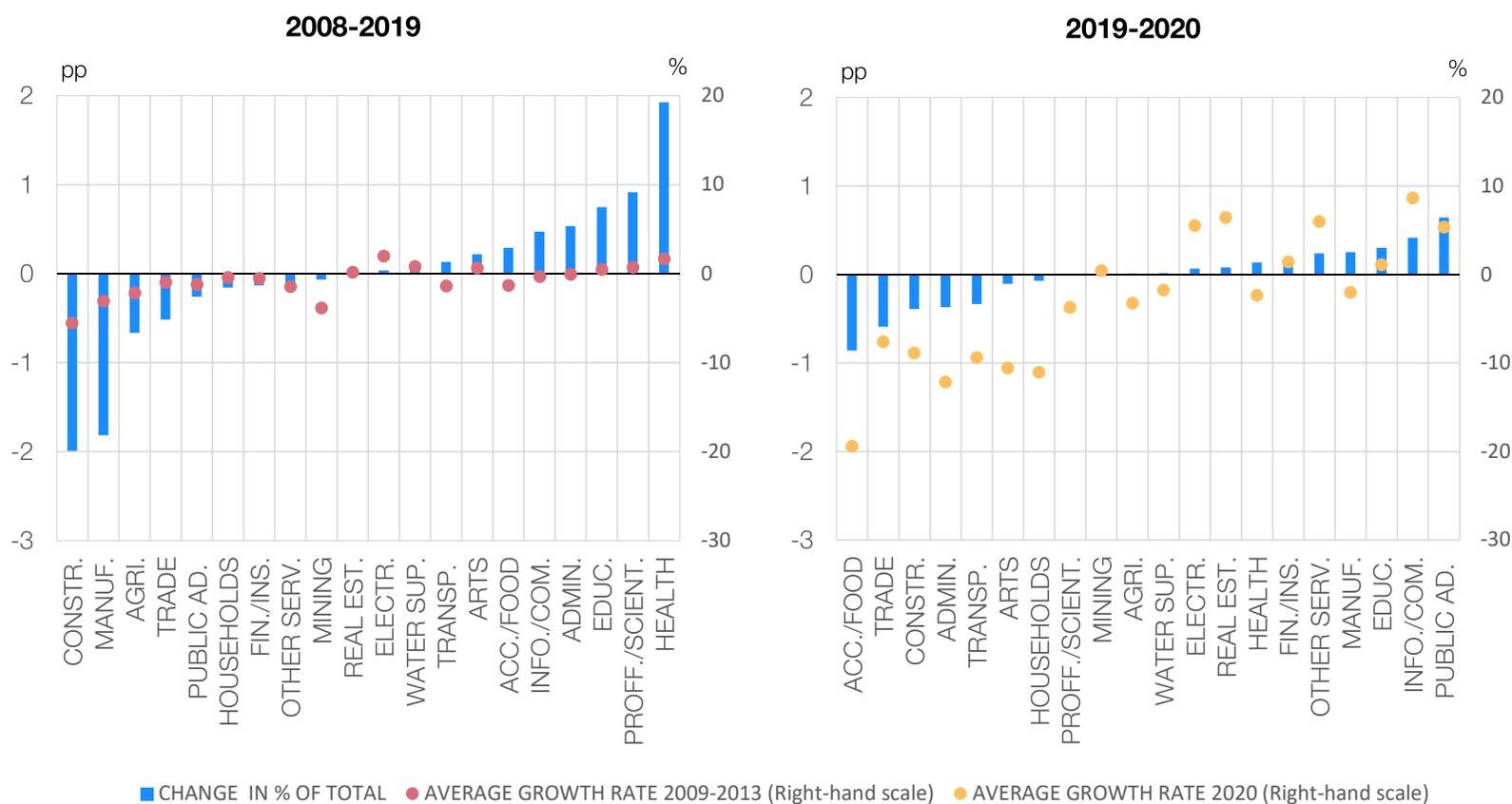
- Aggregated LFS data published by Eurostat do not provide employment flows by sector or job-to-job transitions .
 - They could be approximated from the **EU-LFS microdata** (available in an harmonized way for all 19 EMU countries, except for Germany in 2020).
 - They do not contain the information which would allow tracking people across waves (the quarterly variables of length of service and time out of work, available since 2008, and the **annual retrospective information** can be used instead).
 - Single-digit sectoral information.
 - They do not allow for the analysis of transitions from employment retention schemes.
 - Available one year later than the reference period: 2020 data will not be released until end September 2021.
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- **National LFS microdata** (panel data, allowing analysis of all flows -including those from employment retention schemes- and available with a shorter lag with respect to the reference period).
 - Dependent on the collaboration of experts from other NCBs.
 - In principle, not available for all EMU countries (also not available for Germany in 2020).
 - Possible methodological differences between countries.
 - **Administrative (national) registers** (continuous panel data with usually larger sample size and more disaggregated sectoral information, but available with a longer delay with respect to the reference period - 3 years for the detailed French data).
 - **LinkedIn** data on Industry transitions include additional (and probably more timely) information to that provided by the official statistics, but biased towards knowledge-intensive service sectors and possibly referred to a shorter period.
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AGGREGATED LFS EVIDENCE: EMPLOYMENT BY ECONOMIC ACTIVITY

- Could the effects on the sectoral composition of employment after the Covid-19 shock recovery be larger than in the previous business cycle?

SECTORAL EURO AREA EMPLOYMENT (HOURS WORKED)

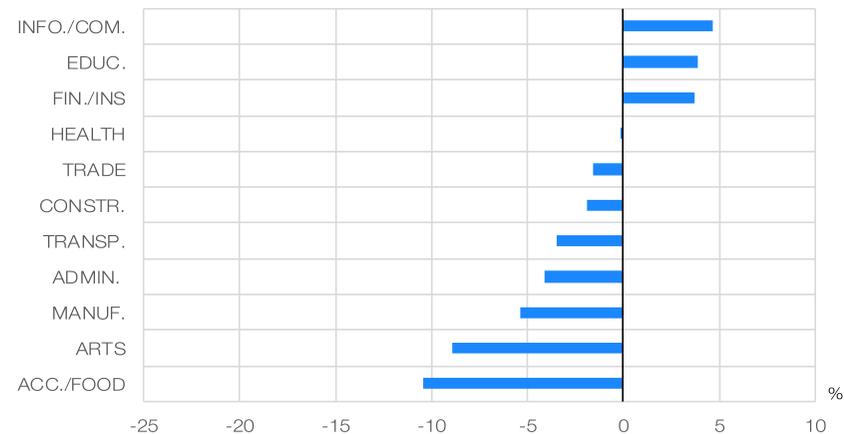


Sources: Eurostat and Banco de España.

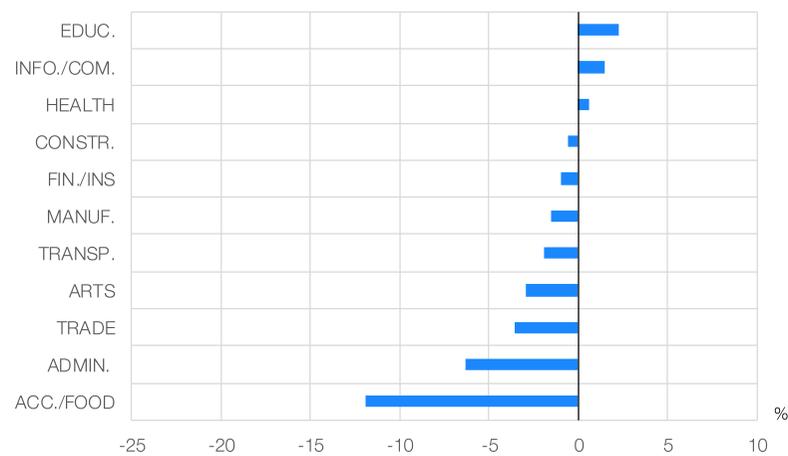
AGGREGATED LFS EVIDENCE: HETEROGENEITY ACROSS COUNTRIES

ANNUAL GROWTH RATE OF EMPLOYMENT BY SECTOR (HOURS WORKED), 2020

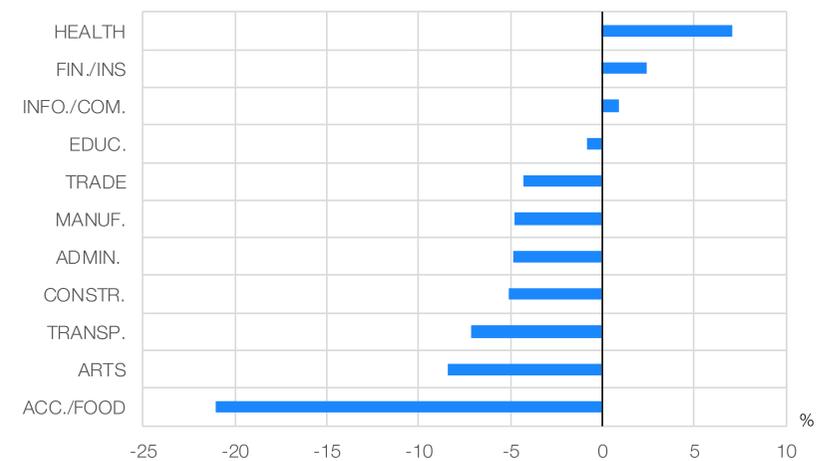
France



Italy



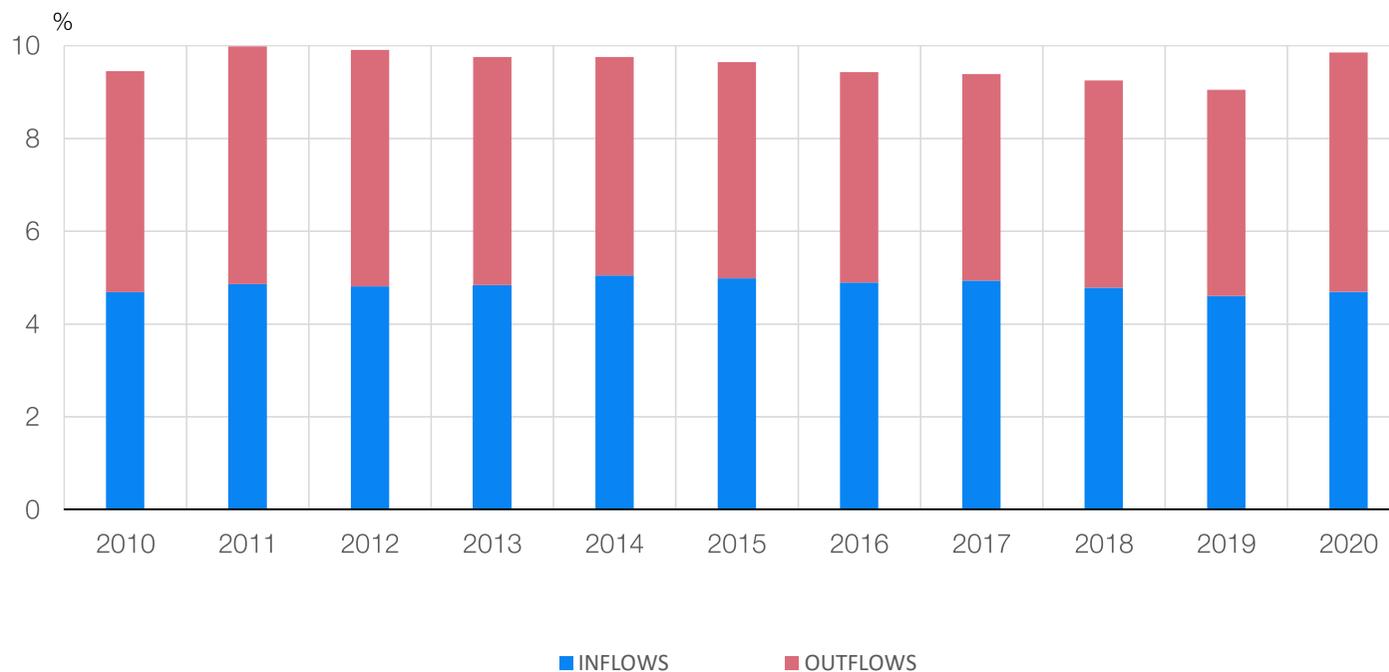
Spain



Sources: Eurostat and Banco de España.

- Flows out of employment exceeded in 2020 those observed in the previous recession, while inflows kept broadly unchanged.

FLOWS INTO AND OUT OF THE EURO AREA EMPLOYMENT (a)

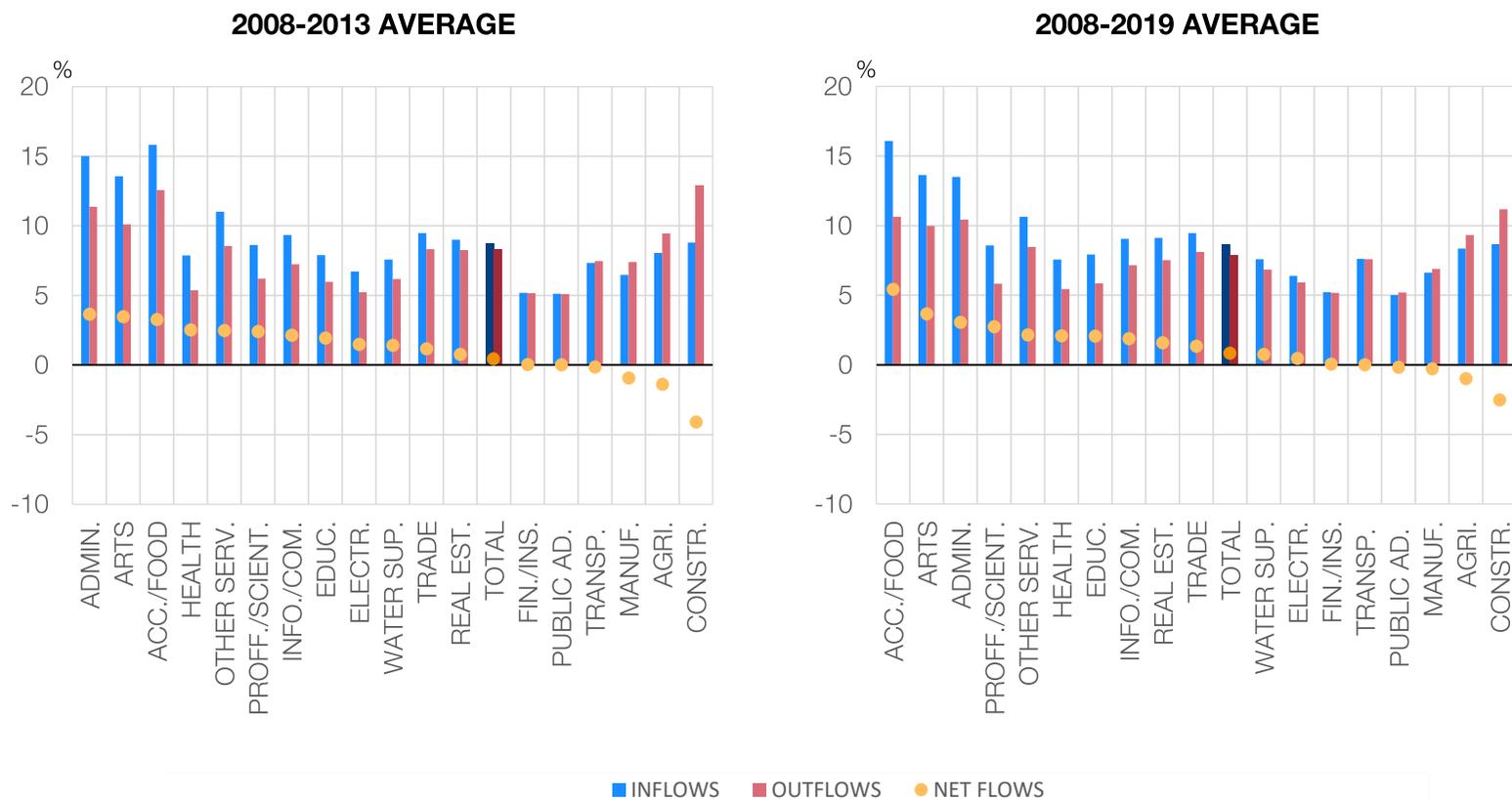


Sources: Eurostat and Banco de España.

(a) Except Germany, Estonia, Luxembourg, Cyprus and Malta. Percentage of total employment.

- The sectors that lost the most employment during the 2008-2013 recession hardly recovered it until 2019.

FLows INTO AND OUT OF THE SECTORAL EMPLOYMENT IN THE 4 LARGEST EURO AREA COUNTRIES Percentage of employment



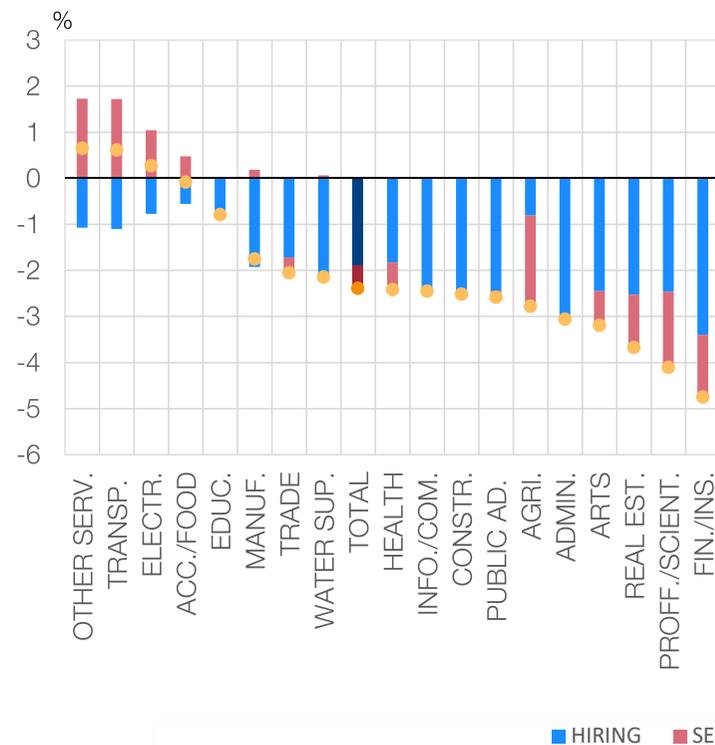
Sources: Eurostat and Banco de España.

ANNUAL TRANSITIONS: TOTAL REALLOCATION BY SECTOR

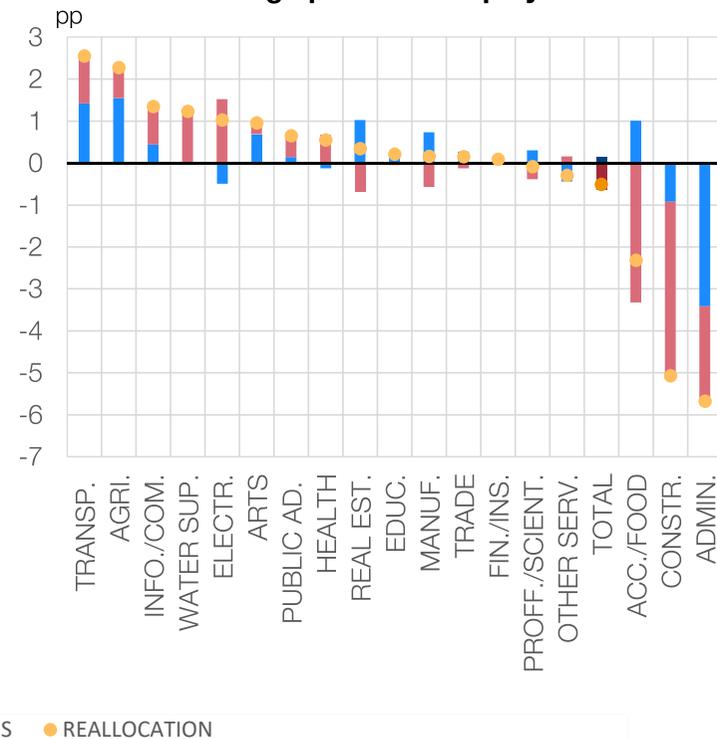
- Reallocation fell during the recession driven by hiring but then recovered in most sectors mainly due to an increase in the percentage of employment separations.

EMPLOYMENT REALLOCATION IN THE 4 LARGEST EURO AREA COUNTRIES

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment

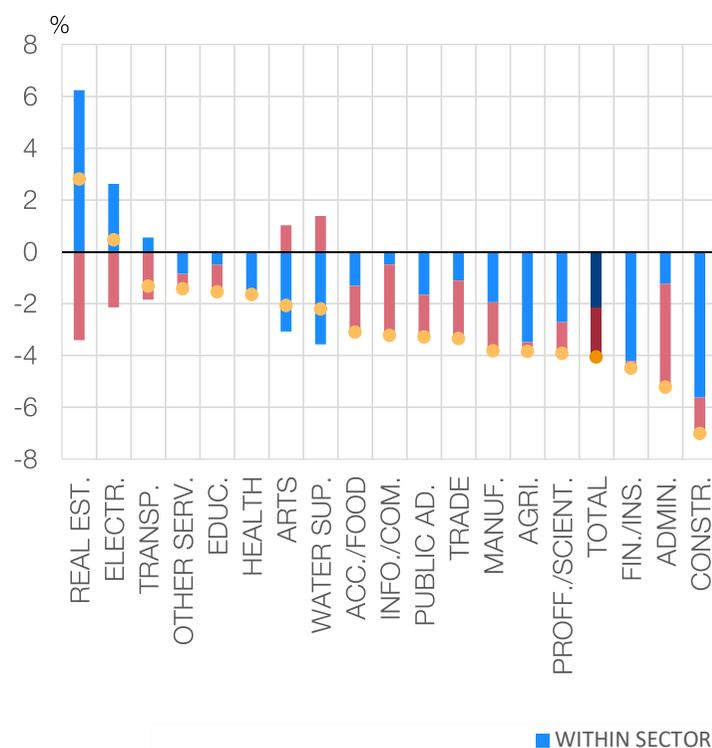


JOB-TO-JOB ANNUAL TRANSITIONS: WITHIN AND BETWEEN SECTORS

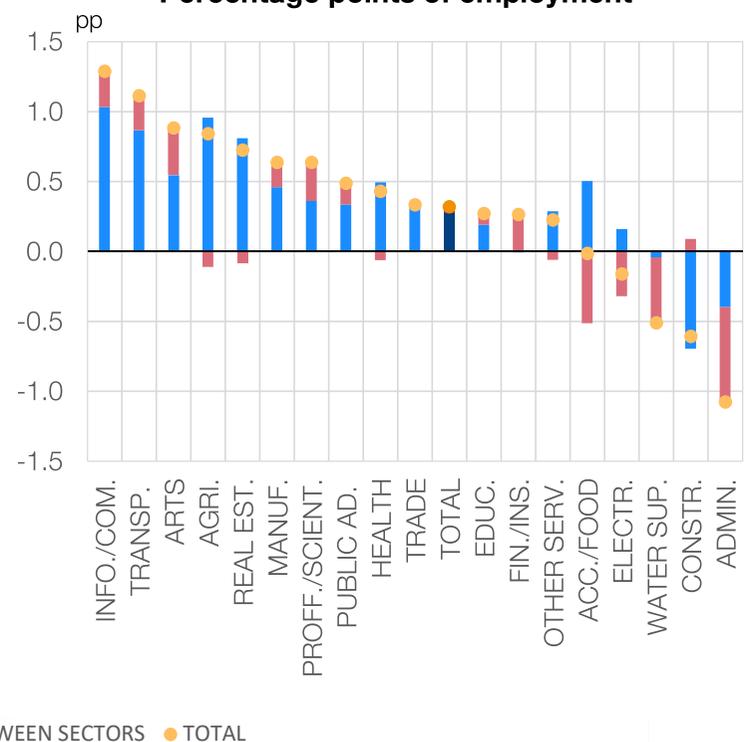
- Both within and between sectors job-to-job transitions fell during the recession, while during the recovery mainly the former led to more than compensate that fall.

JOB-TO-JOB TRANSITIONS IN THE 4 LARGEST EURO AREA COUNTRIES By sector of destination

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



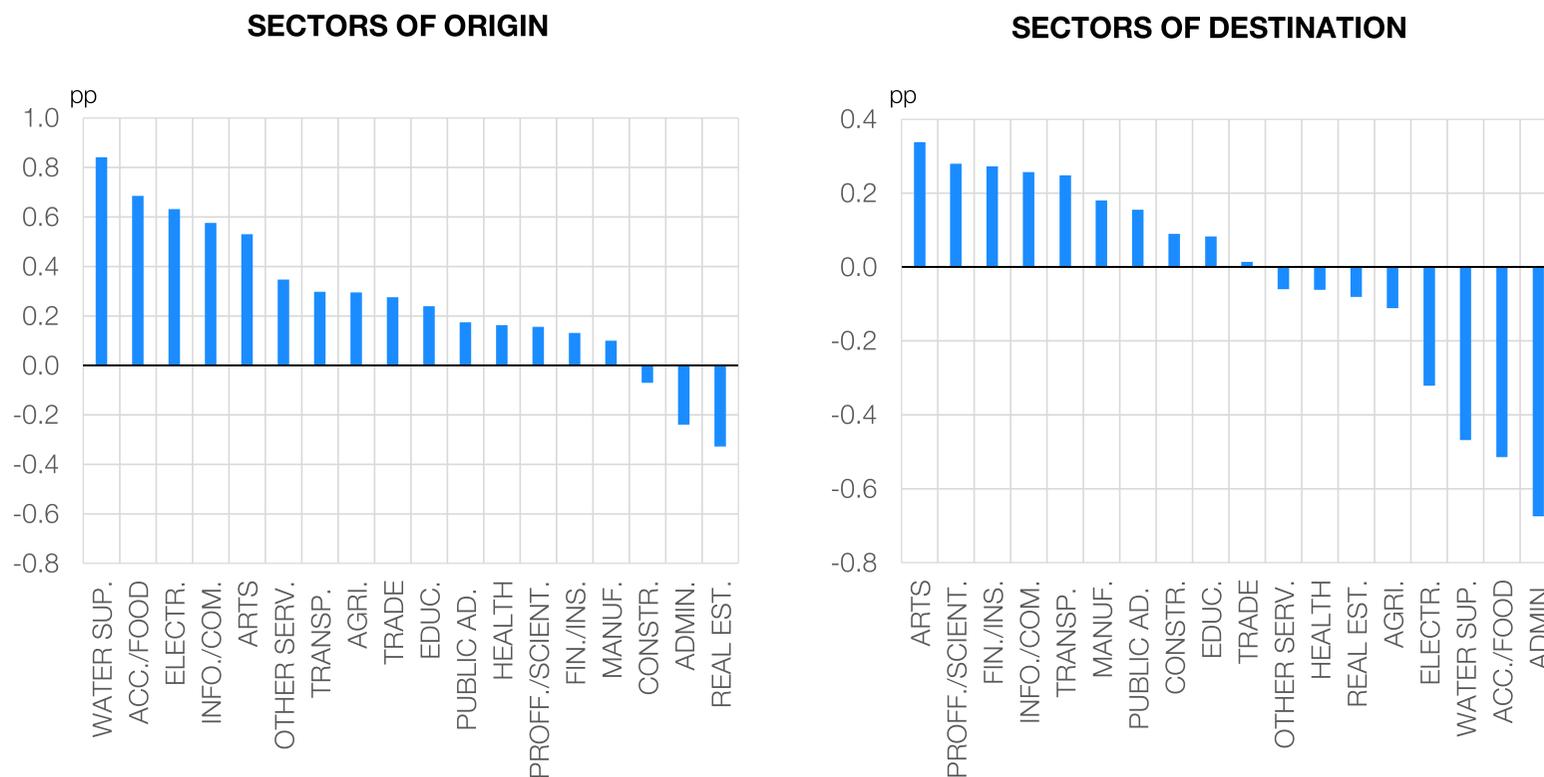
2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment



JOB-TO-JOB ANNUAL TRANSITIONS BETWEEN SECTORS: ORIGIN AND DESTINATION

- Most of sectors more than offset in the recovery their fall in the recession as origin of job-to-job transitions to other sectors. This was not the case as sectors of destination.

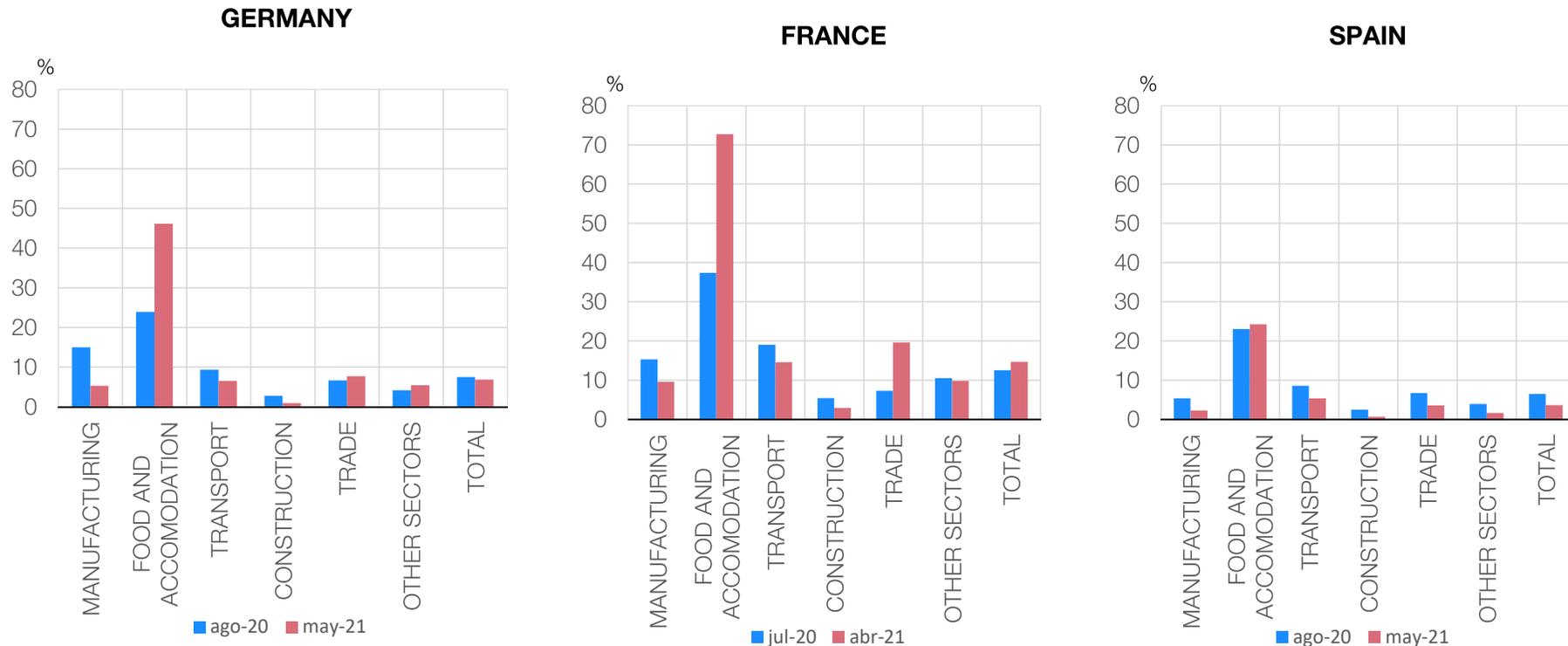
JOB-TO-JOB TRANSITIONS BETWEEN SECTORS IN THE 4 LARGEST EURO AREA COUNTRIES 2014-2019 average MINUS 2008-2013 average (percentage points of employment)



EXTENT OF THE EMPLOYMENT RETENTION SCHEMES

- Job retention schemes played an important role at the onset of the COVID-19 pandemic, allowing workers to resume work after the lockdown. However, they may decrease the allocative efficiency of the economy when used on a large scale for an extended period of time (Giupponi and Landais, 2018).

PERCENTAGE OF EMPLOYEES UNDER JOB RETENTION SCHEMES



Sources: Ifo Institute, Ministry of Labour of France, Ministry of Inclusion, Social Security and Migrations of Spain and Banco de España.

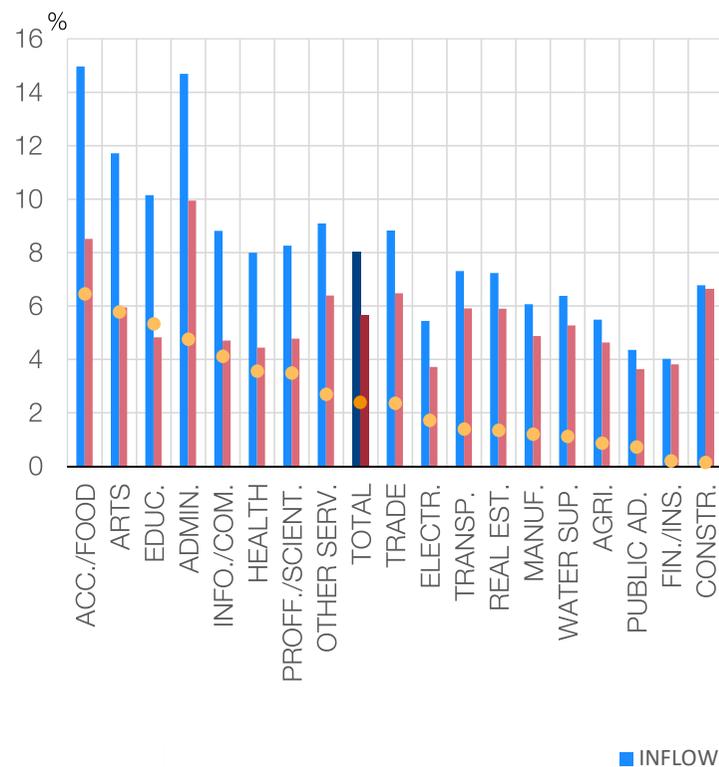
- **2020 hiring, separation and reallocation rates by sector** (in particular job-to-job transitions) and compare across periods/countries.
 - Analysis on the use of **furlough schemes** as a temporary employment adjustment mechanism in the COVID-19 crisis.
 - Breakdown by workers characteristics and sectors.
 - Comparison with the Global Financial Crisis.
 - Probability of workers furloughed resuming effective employment
 - Correlation with **aggregate labour market results**. Feedback/suggestions?
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THANKS FOR YOUR ATTENTION

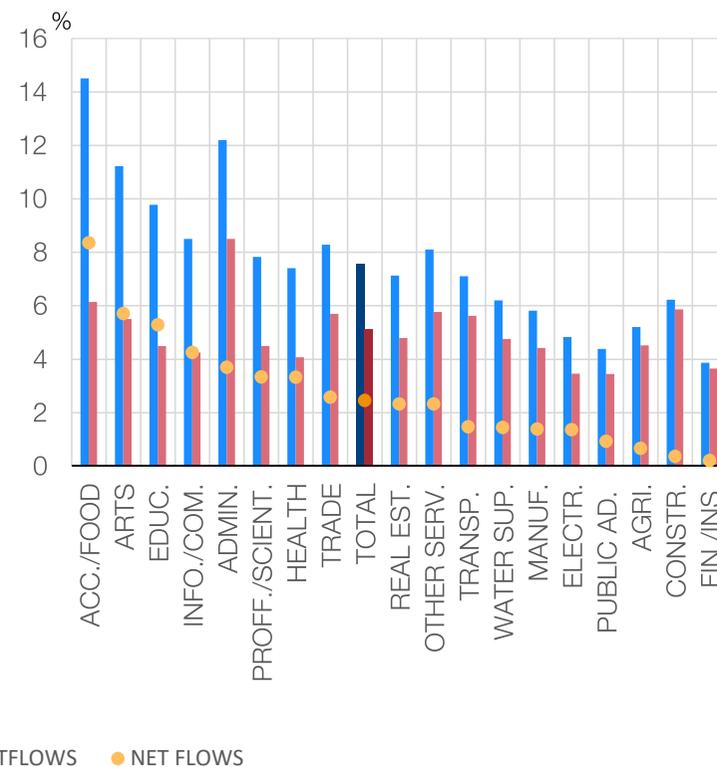


FLOWS INTO AND OUT OF THE SECTORAL EMPLOYMENT IN GERMANY Percentage of employment

2008-2013 AVERAGE

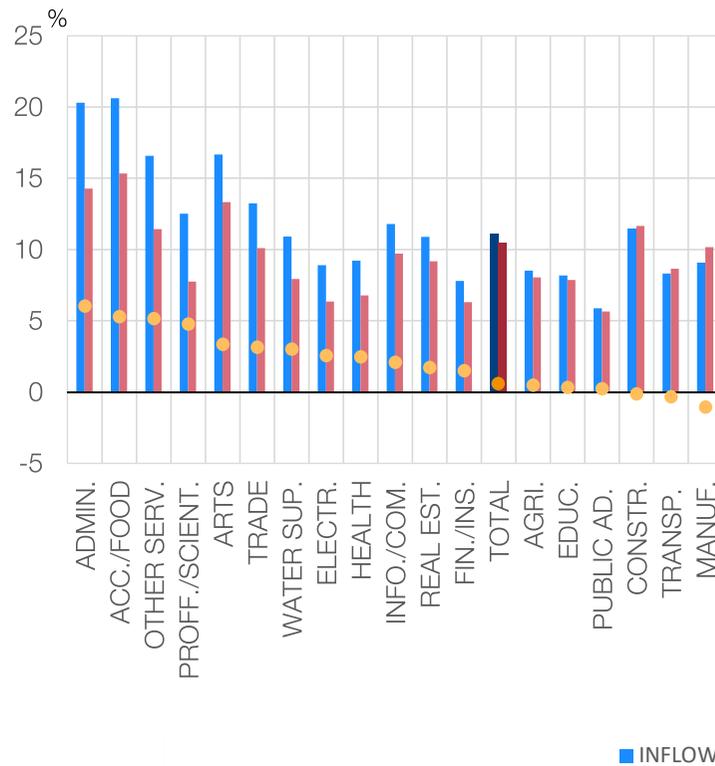


2008-2019 AVERAGE

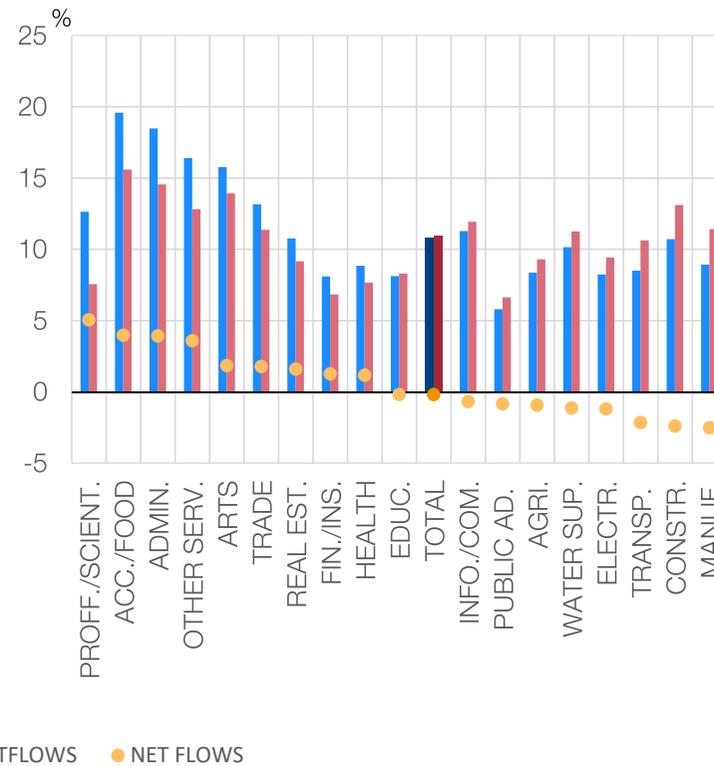


FLows INTO AND OUT OF THE SECTORAL EMPLOYMENT IN FRANCE Percentage of employment

2008-2013 AVERAGE

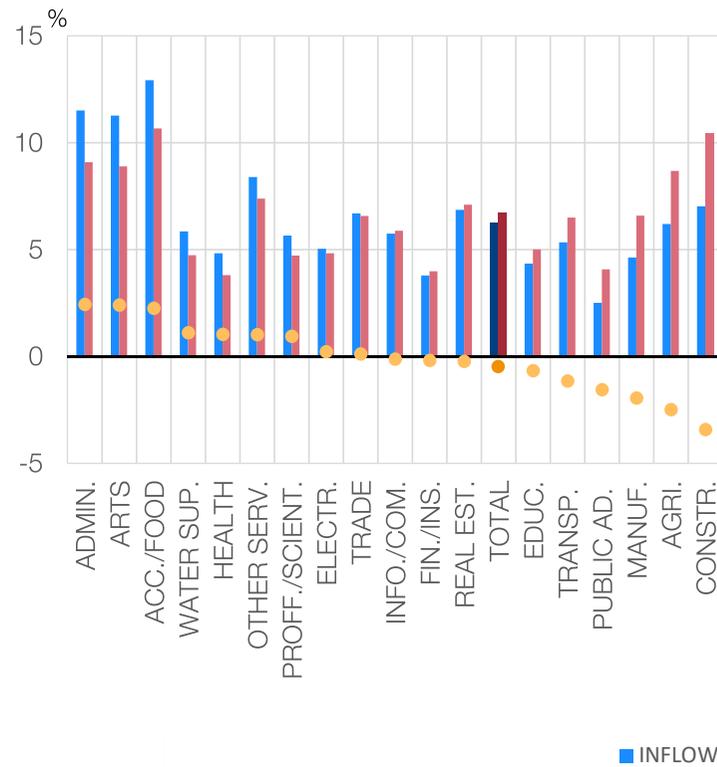


2008-2019 AVERAGE

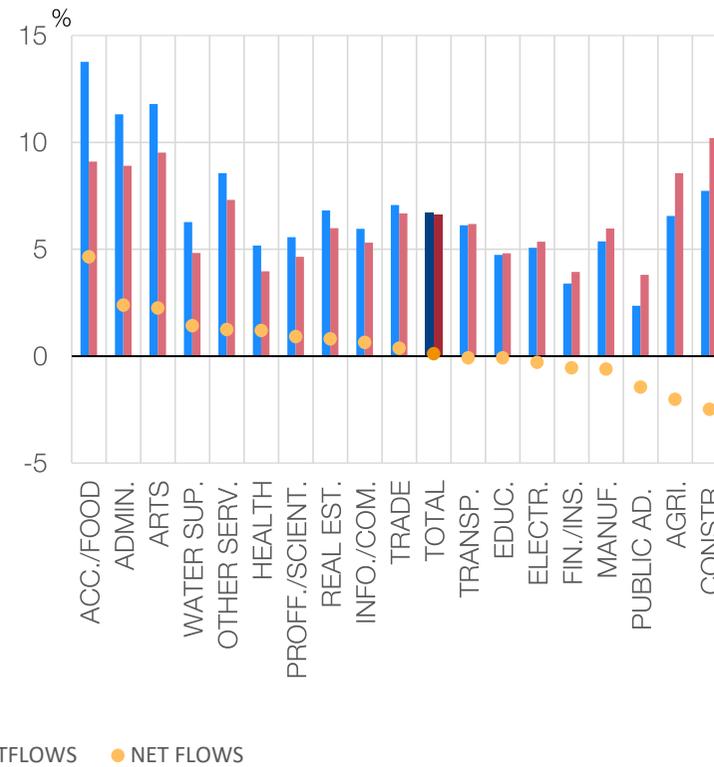


FLOWS INTO AND OUT OF THE SECTORAL EMPLOYMENT IN ITALY Percentage of employment

2008-2013 AVERAGE

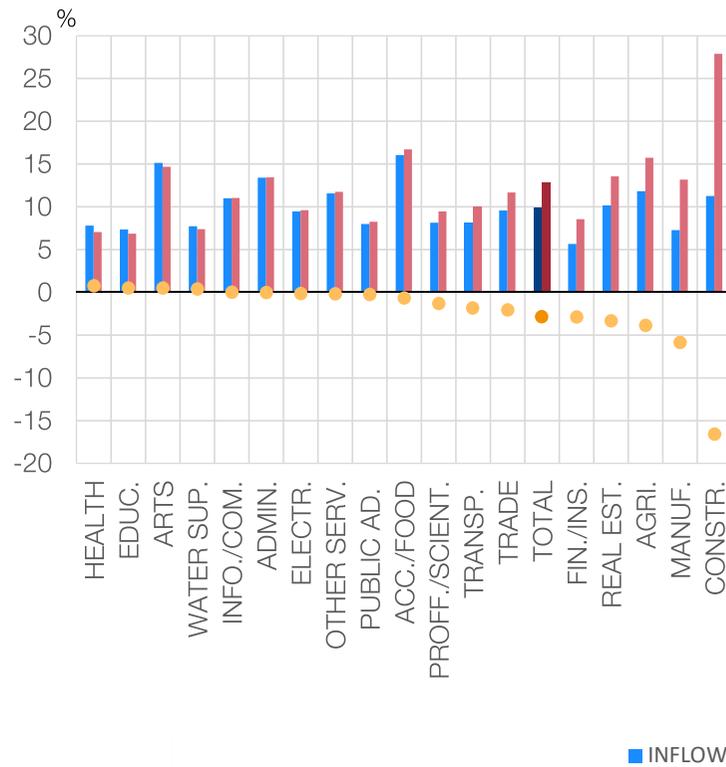


2008-2019 AVERAGE

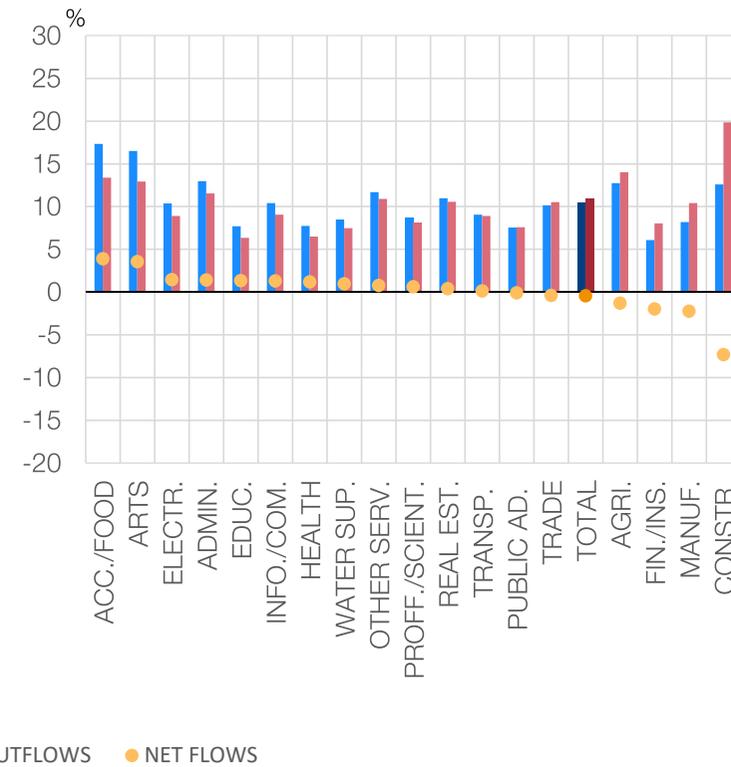


FLows INTO AND OUT OF THE SECTORAL EMPLOYMENT IN SPAIN Percentage of employment

2008-2013 AVERAGE



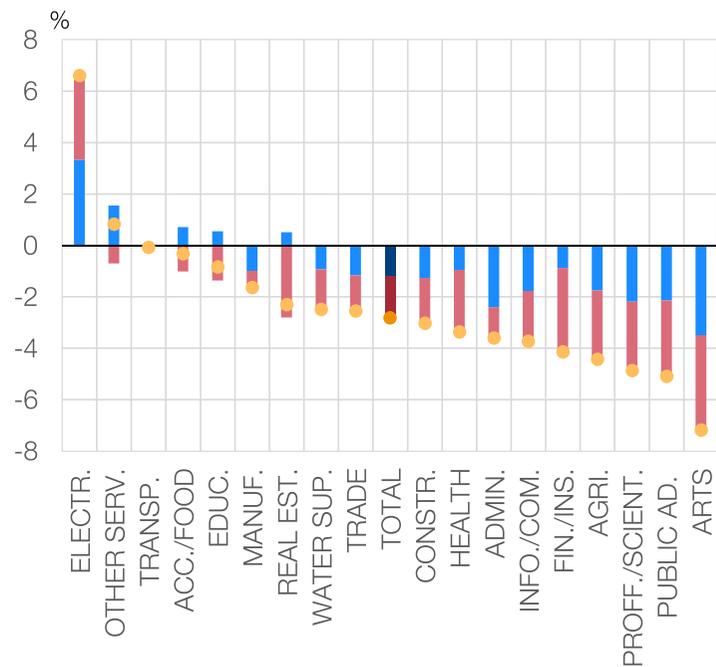
2008-2019 AVERAGE



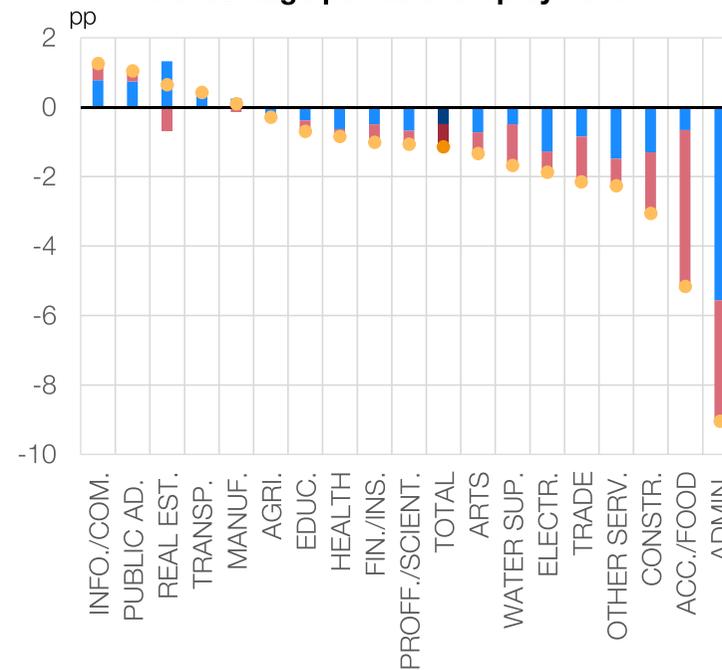
ANNUAL TRANSITIONS: TOTAL REALLOCATION BY SECTOR GERMANY

EMPLOYMENT REALLOCATION IN GERMANY

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



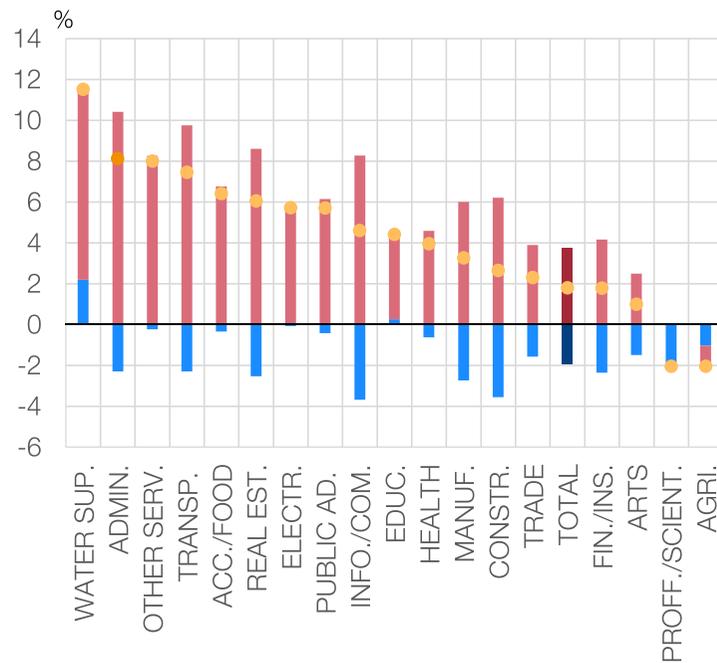
2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment



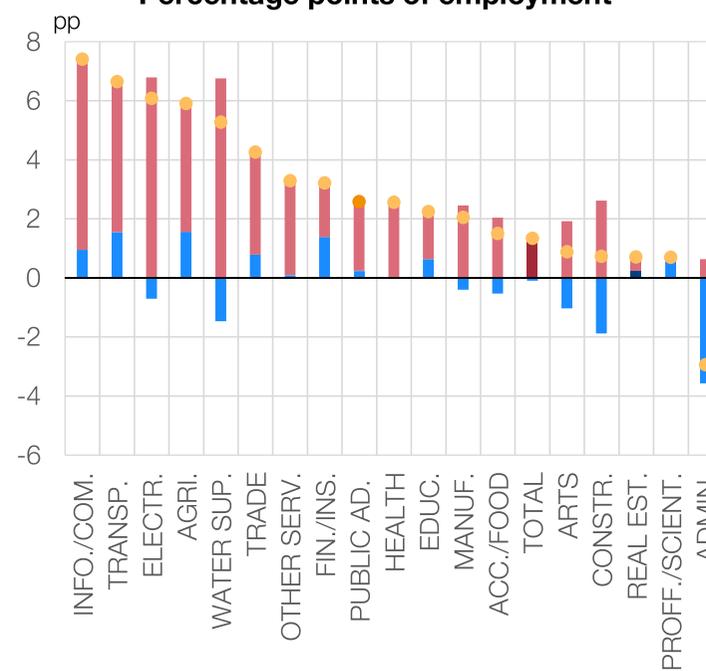
■ HIRING ■ SEPARATIONS ● REALLOCATION

EMPLOYMENT REALLOCATION IN FRANCE

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



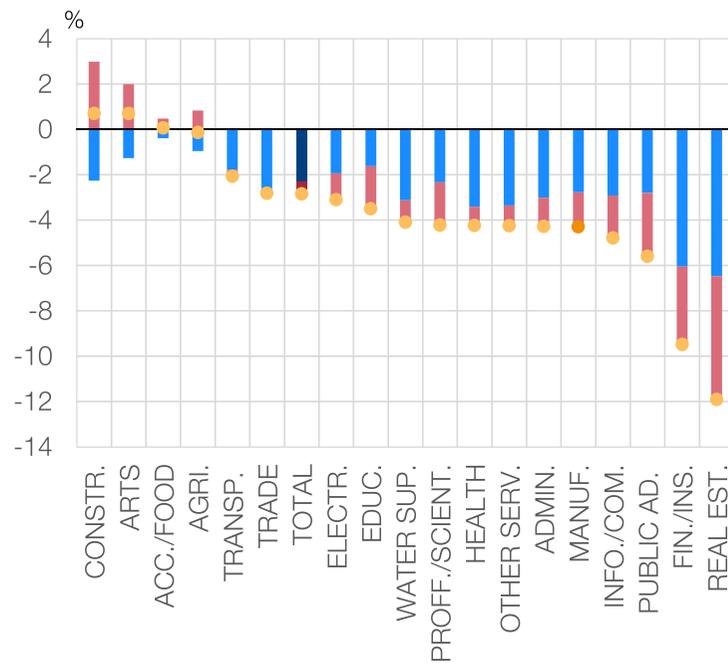
2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment



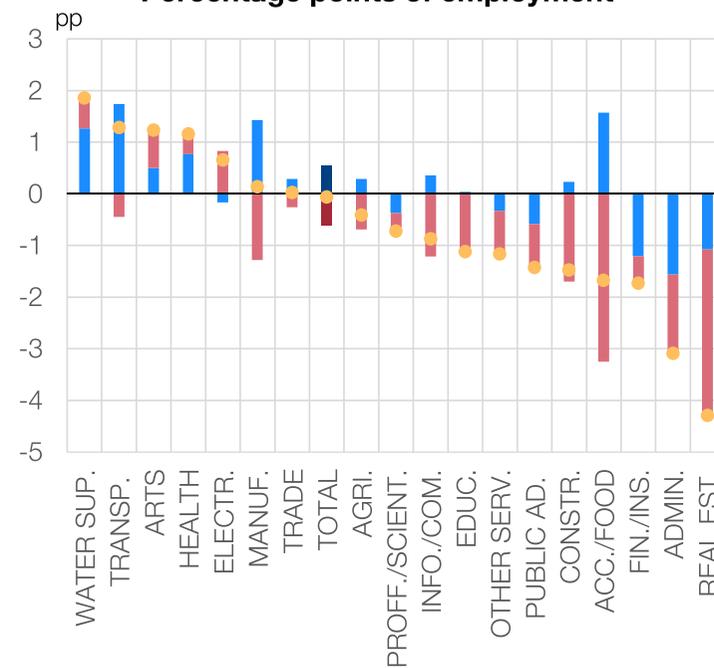
■ HIRING ■ SEPARATIONS ● REALLOCATION

EMPLOYMENT REALLOCATION IN ITALY

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment

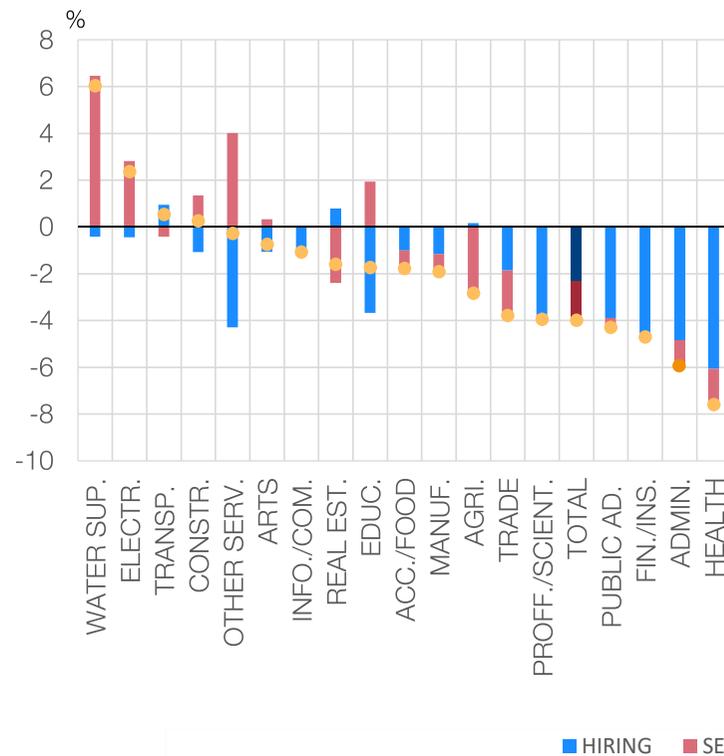


■ HIRING ■ SEPARATIONS ● REALLOCATION

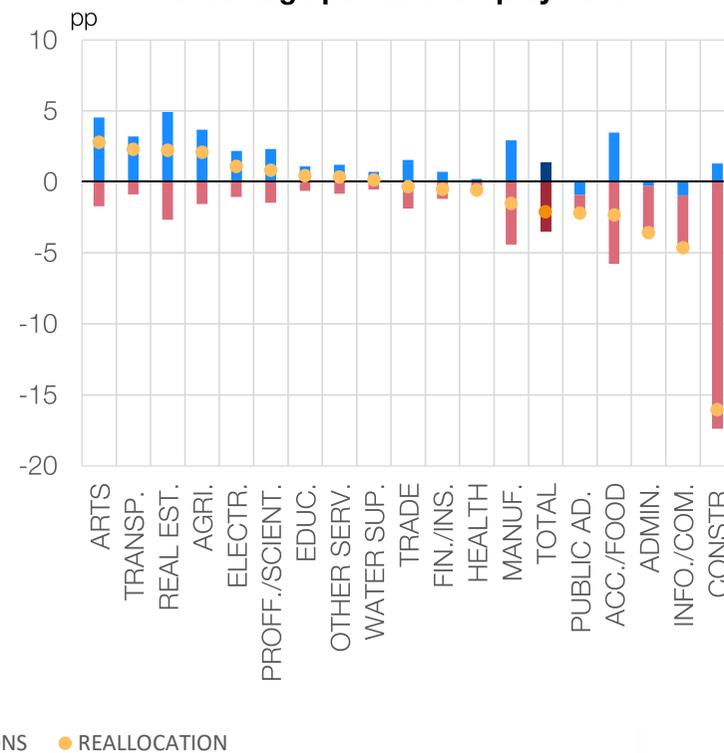
ANNUAL TRANSITIONS: TOTAL REALLOCATION BY SECTOR SPAIN

EMPLOYMENT REALLOCATION IN SPAIN

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



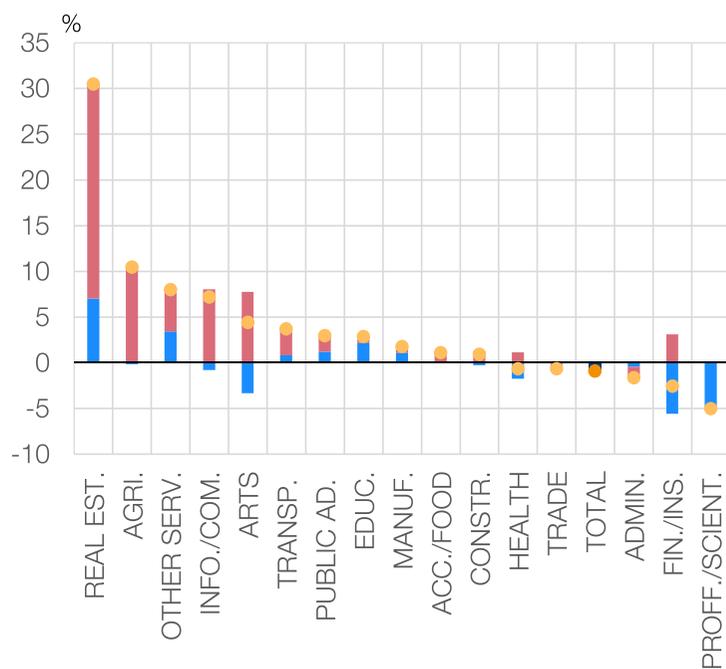
2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment



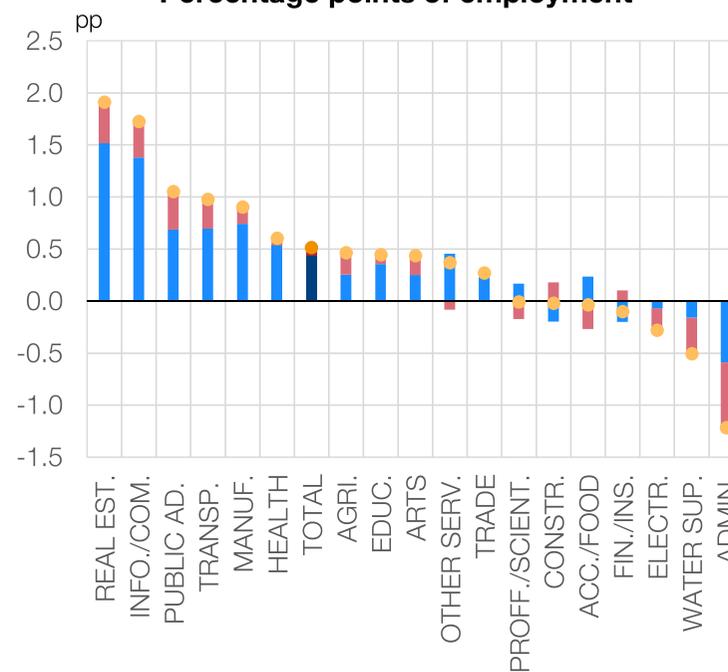
JOB-TO-JOB ANNUAL TRANSITIONS: WITHIN AND BETWEEN SECTORS. GERMANY

JOB-TO-JOB TRANSITIONS IN GERMANY By sector of destination

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment

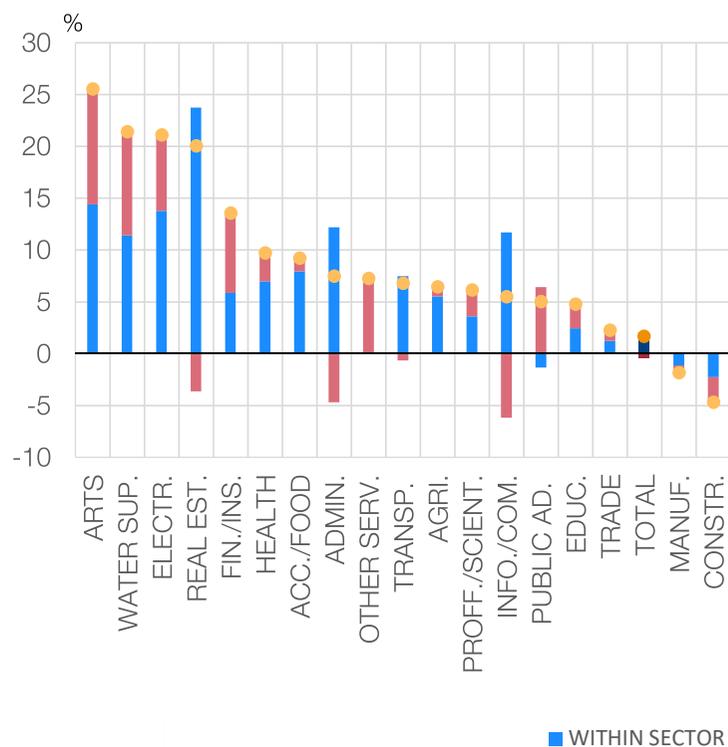


■ WITHIN SECTOR ■ BETWEEN SECTORS ● TOTAL

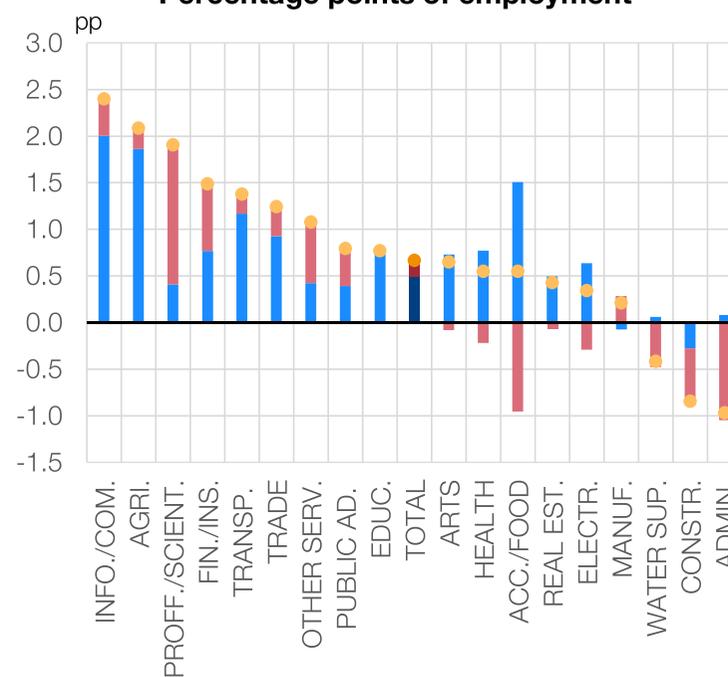
JOB-TO-JOB ANNUAL TRANSITIONS: WITHIN AND BETWEEN SECTORS. FRANCE

JOB-TO-JOB TRANSITIONS IN FRANCE By sector of destination

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



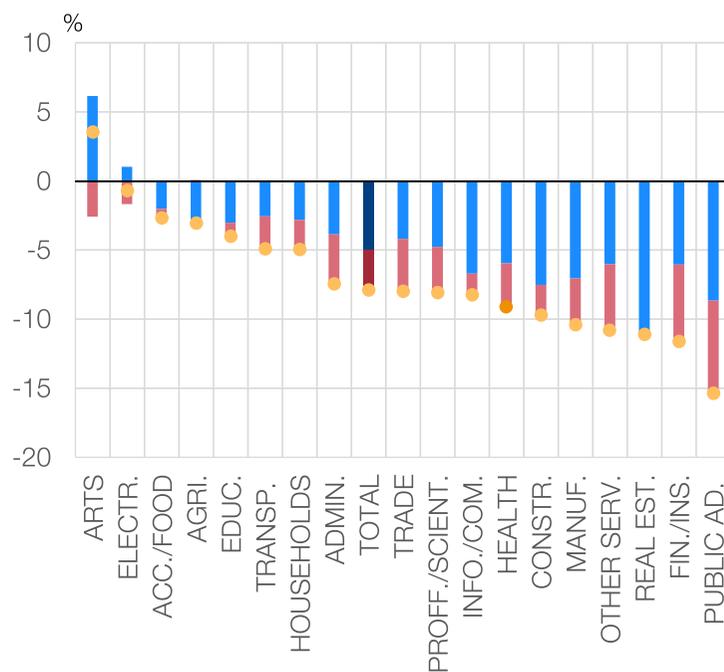
2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment



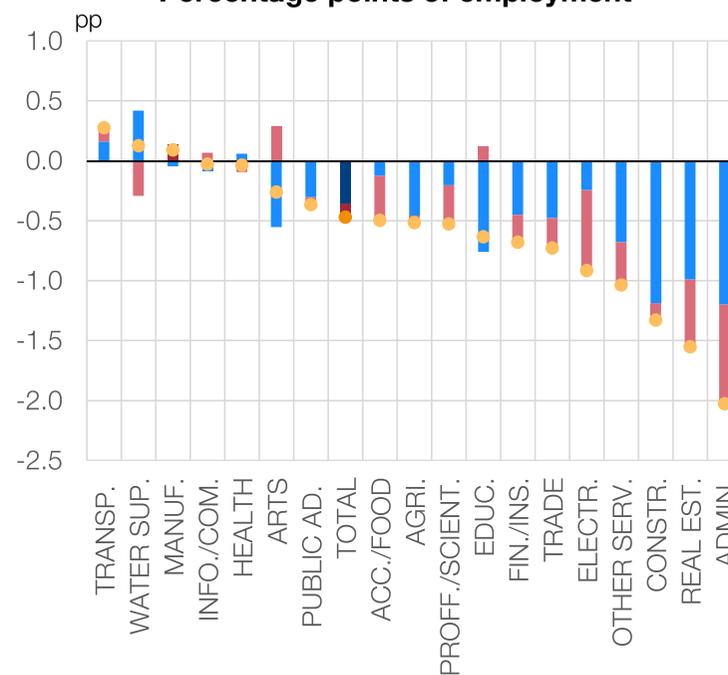
JOB-TO-JOB ANNUAL TRANSITIONS: WITHIN AND BETWEEN SECTORS. ITALY

JOB-TO-JOB TRANSITIONS IN ITALY By sector of destination

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment

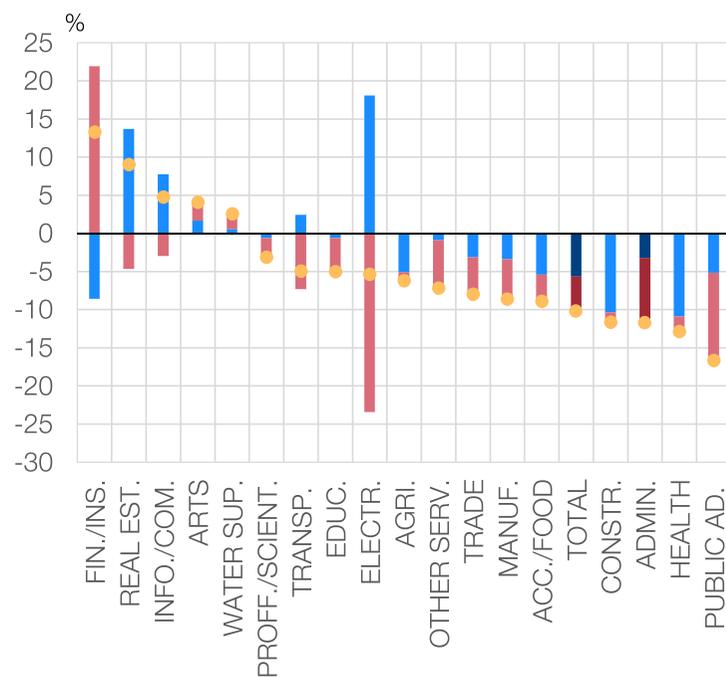


■ WITHIN SECTOR ■ BETWEEN SECTORS ● TOTAL

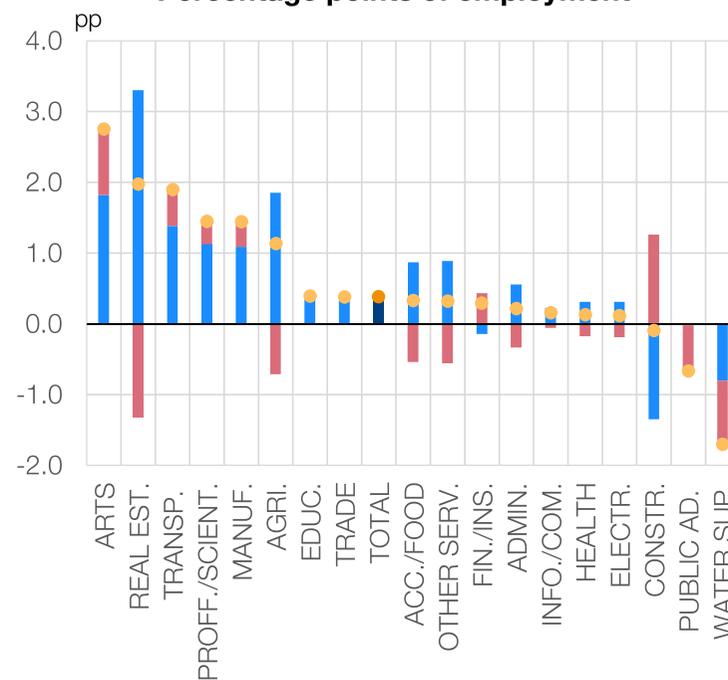
JOB-TO-JOB ANNUAL TRANSITIONS: WITHIN AND BETWEEN SECTORS. SPAIN

JOB-TO-JOB TRANSITIONS IN SPAIN By sector of destination

2009-2013 RATE OF CHANGE AND CONTRIBUTIONS



2014-2019 AVERAGE MINUS 2008-2013 AVERAGE
Percentage points of employment

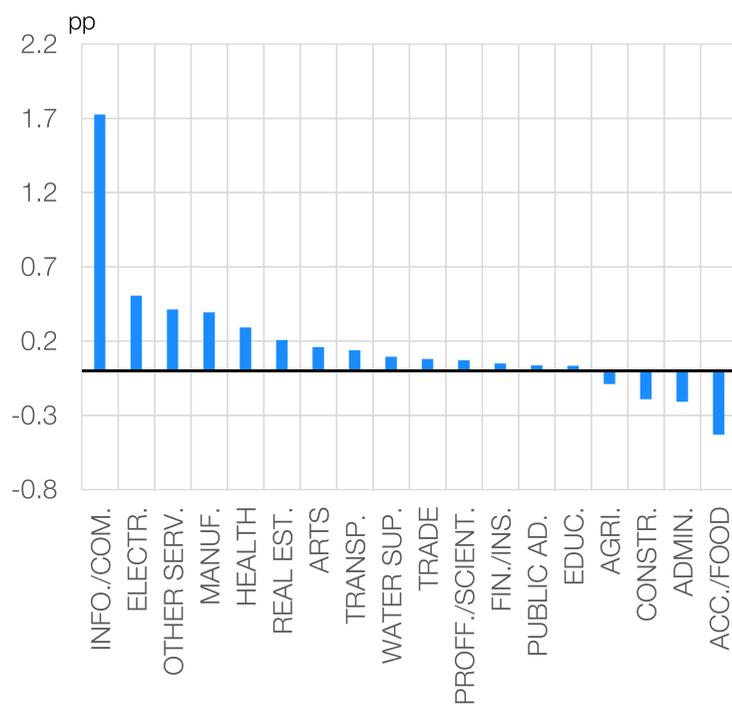


■ WITHIN SECTOR ■ BETWEEN SECTORS ● TOTAL

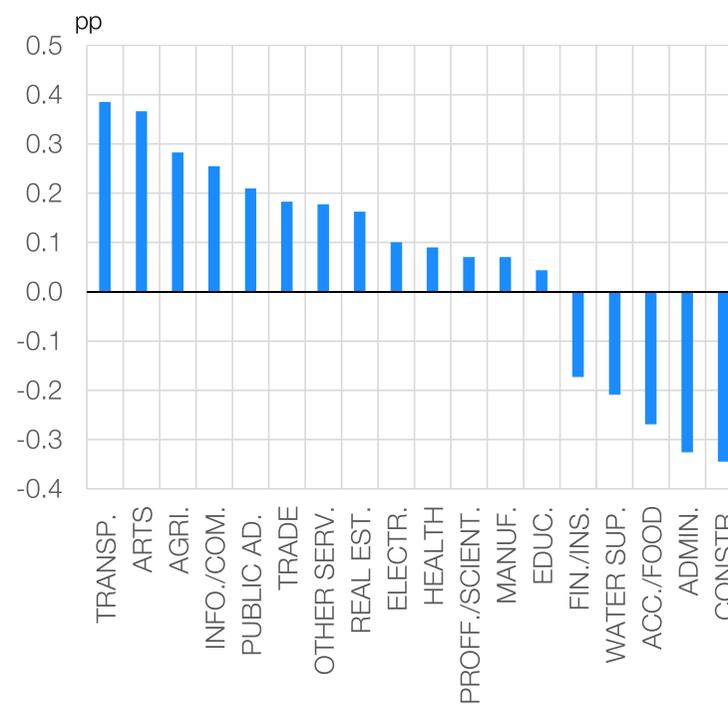
JOB-TO-JOB ANNUAL TRANSITIONS BETWEEN SECTORS: ORIGIN AND DESTINATION. GERMANY

JOB-TO-JOB TRANSITIONS BETWEEN SECTORS IN GERMANY 2014-2019 average MINUS 2008-2013 average (percentage points of employment)

SECTORS OF ORIGIN



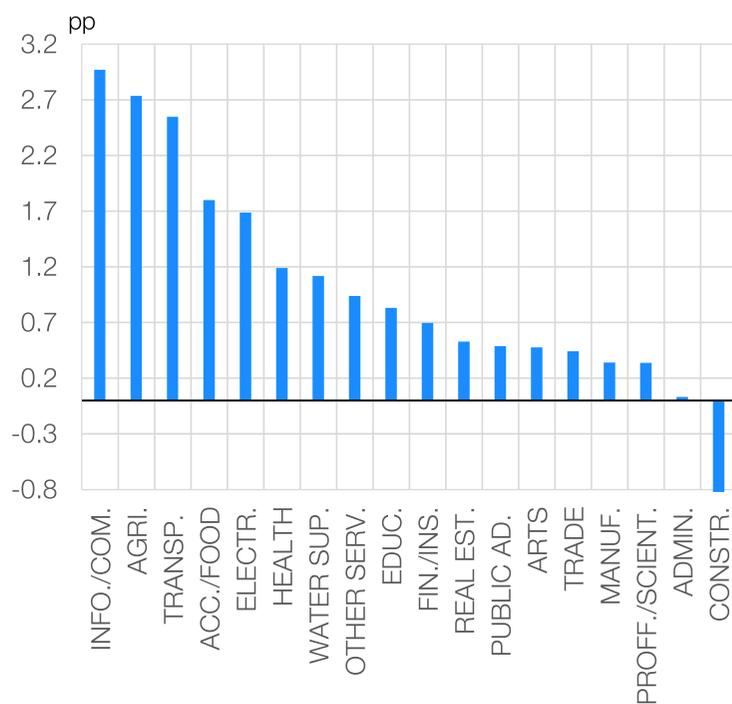
SECTORS OF DESTINATION



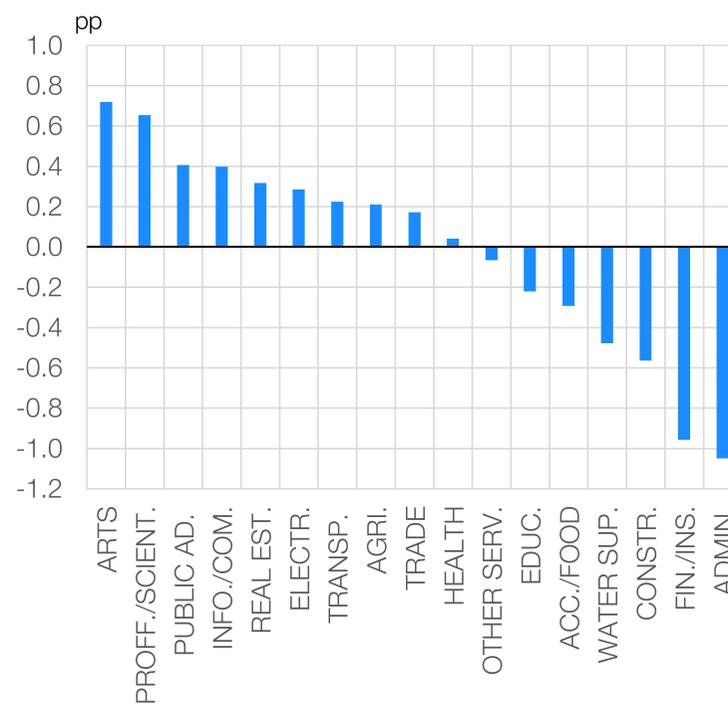
JOB-TO-JOB ANNUAL TRANSITIONS BETWEEN SECTORS: ORIGIN AND DESTINATION. FRANCE

JOB-TO-JOB TRANSITIONS BETWEEN SECTORS IN FRANCE 2014-2019 average MINUS 2008-2013 average (percentage points of employment)

SECTORS OF ORIGIN



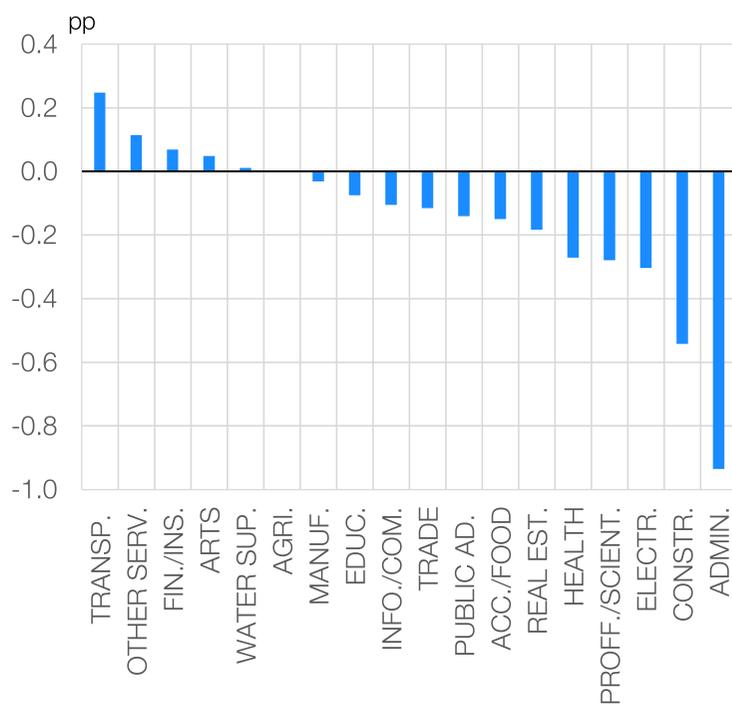
SECTORS OF DESTINATION



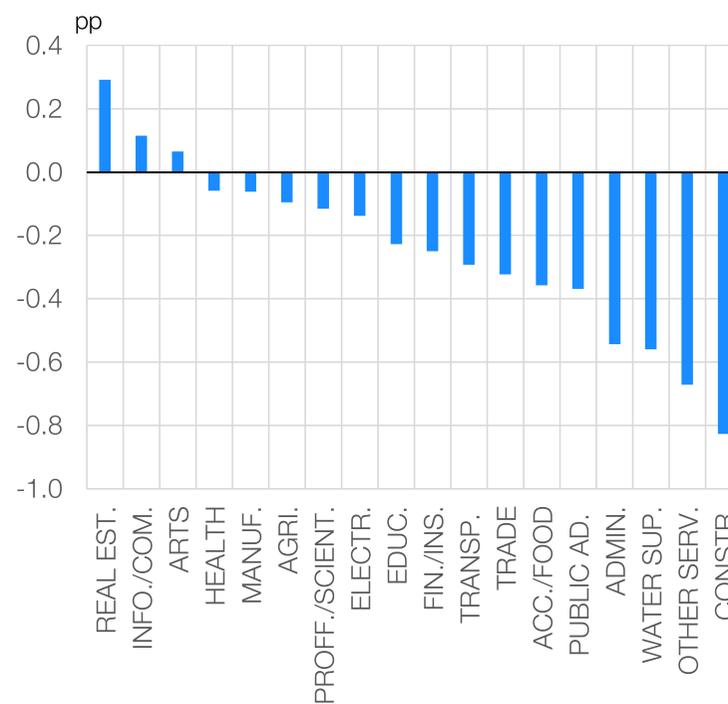
JOB-TO-JOB ANNUAL TRANSITIONS BETWEEN SECTORS: ORIGIN AND DESTINATION. ITALY

JOB-TO-JOB TRANSITIONS BETWEEN SECTORS IN ITALY
2014-2019 average MINUS 2008-2013 average (percentage points of employment)

SECTORS OF ORIGIN



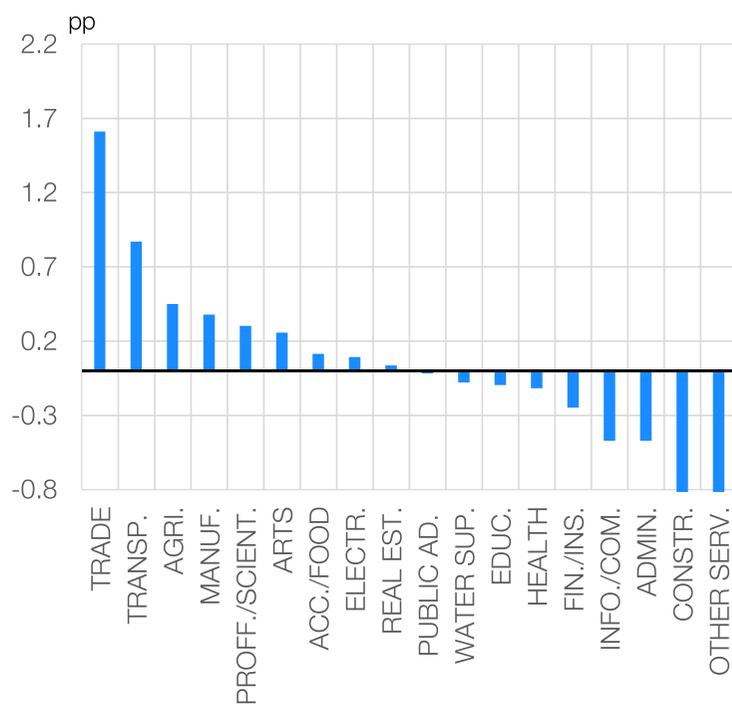
SECTORS OF DESTINATION



JOB-TO-JOB ANNUAL TRANSITIONS BETWEEN SECTORS: ORIGIN AND DESTINATION. SPAIN

JOB-TO-JOB TRANSITIONS BETWEEN SECTORS IN SPAIN
2014-2019 average MINUS 2008-2013 average (percentage points of employment)

SECTORS OF ORIGIN



SECTORS OF DESTINATION

