

Labor Market Vulnerability to COVID-19 in ECA

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Presentation based on two research projects

- Policy Brief: “Which Jobs Are Most Vulnerable to COVID-19? What an Analysis of the EU Reveals.”
 - Different measures of labor market vulnerabilities to COVID-19 in the EU
- Paper: “Who on Earth Can Work from Home?” (*World Bank Research Observer*, 36(1): 67-100, Feb 2021).
 - Amenability to work from home across the world accounting for internet access

Motivation and research question

- Drastic shock to labor markets in ECA and across the world.
- Unequal impact of COVID-19 across countries and workers.
- Telework and essential jobs have been more protected.

Research questions:

- Differential impact of the shock on labor markets between and within countries?
- What jobs are more vulnerable to the COVID-19 pandemic in ECA and beyond?
- What is the profile of workers that is more likely to be severely affected by the shock?

Databases

- 2018 EU-LFS microdata for EU countries, Switzerland and Norway
- 2019 ILO data at 2-digit occupation level covering 107 countries (49 ECA countries)

Why pre-COVID data?

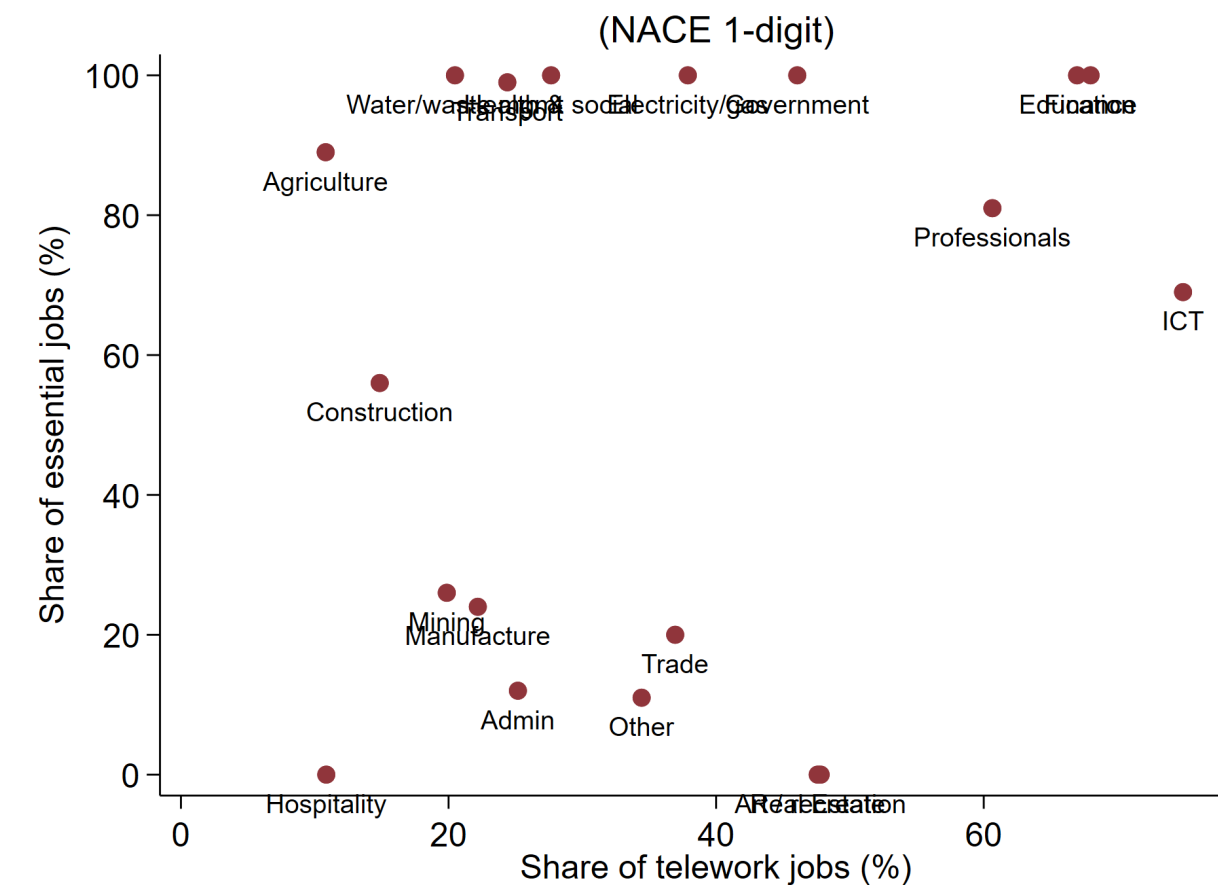
- Microdata availability with considerable lag
- COVID-19 was true shock: pre-covid distribution of labor across sectors and occupations determine the risk exposure to the shock
- Strong distributional impact across age, gender, education, income, type of contract, citizenship, etc.

Measures of vulnerability to COVID-19 labor market risks

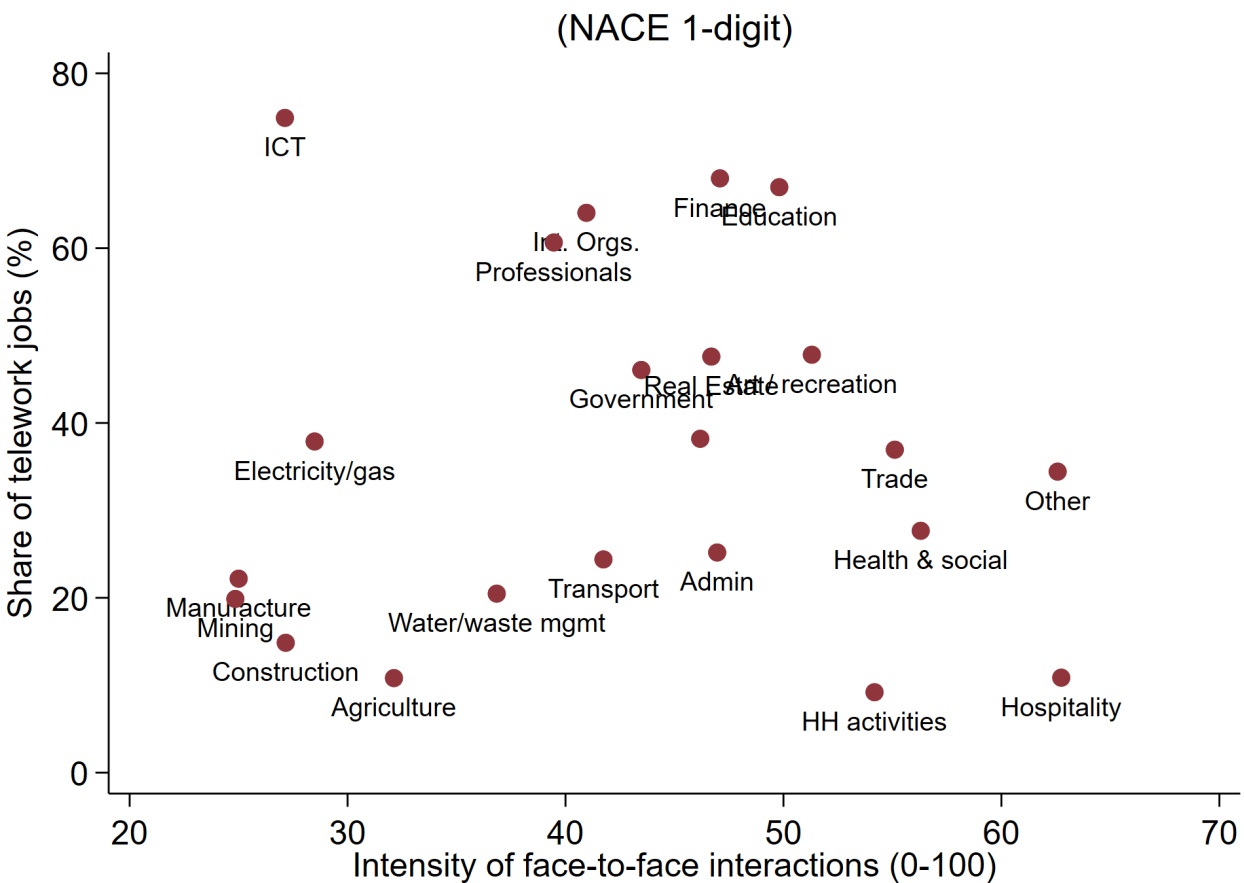
- Based on task content of jobs from US O*NET surveys and matched to ISCO:
 - Telework jobs (Dingel & Neiman 2020): can be performed from home.
 - Home-based work jobs (Garrote-Sanchez et al. 2020): telework jobs adjusted for internet access.
 - Essential jobs: exempt from government mandated mobility restrictions.
 - Jobs with frequent face-to-face (F2F) interactions (Avdiu & Nayyar 2020)

Measures of vulnerabilities do not have a high correlation across sectors

Telework vs Essential Jobs

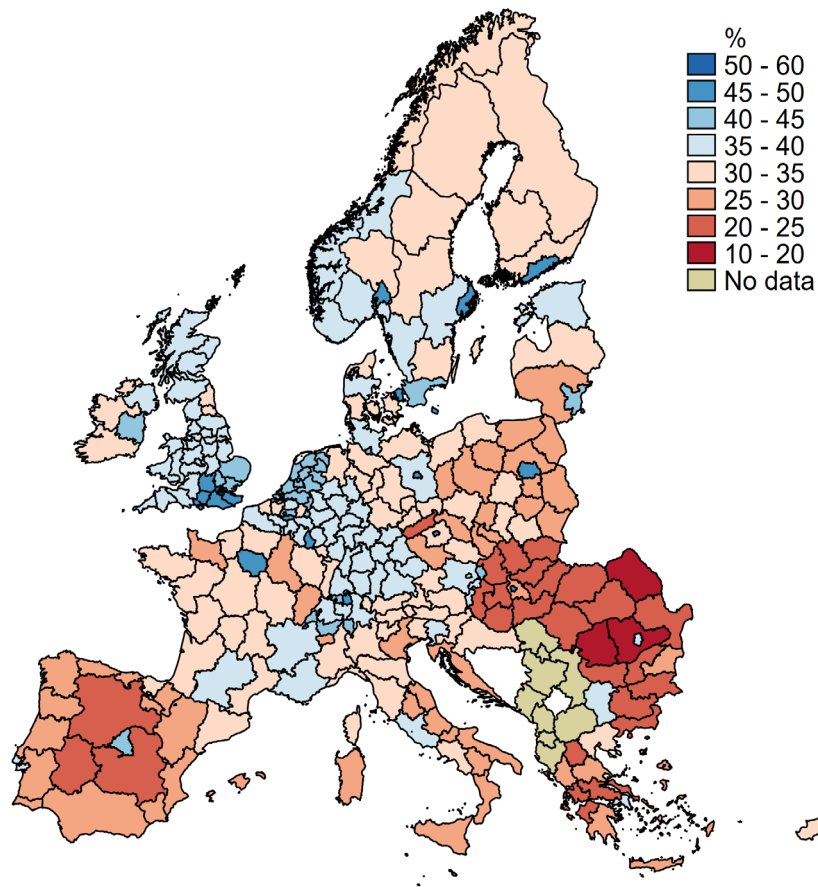


Telework vs F2F jobs

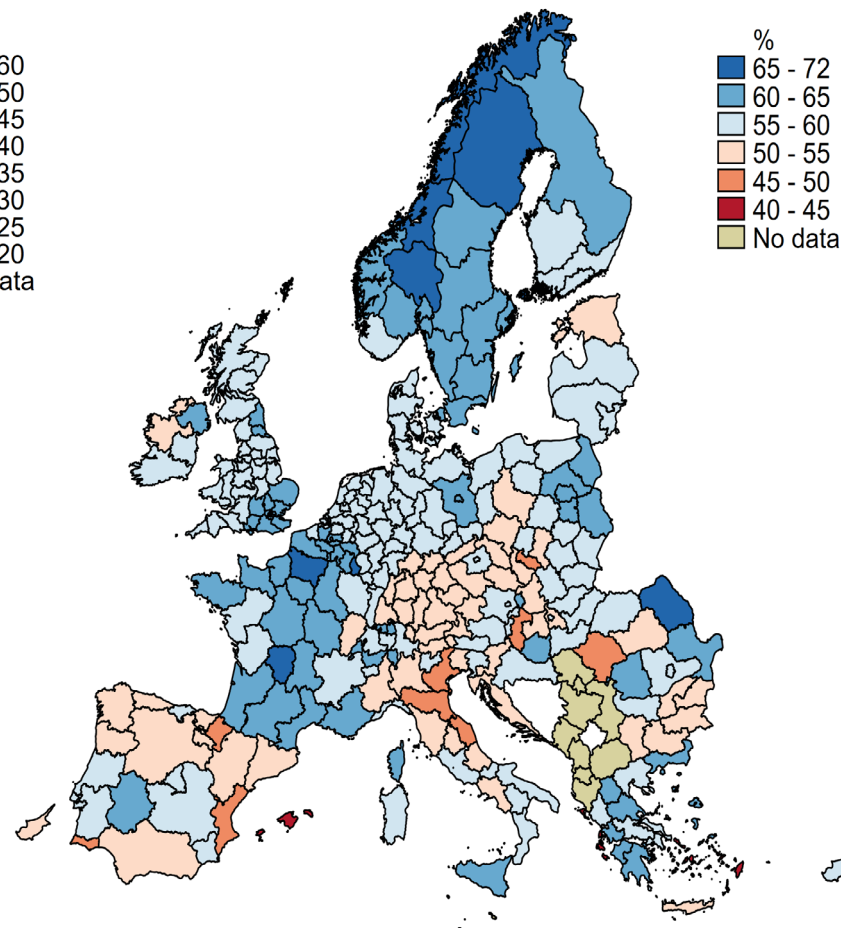


Vulnerability of a region depends on the measure used

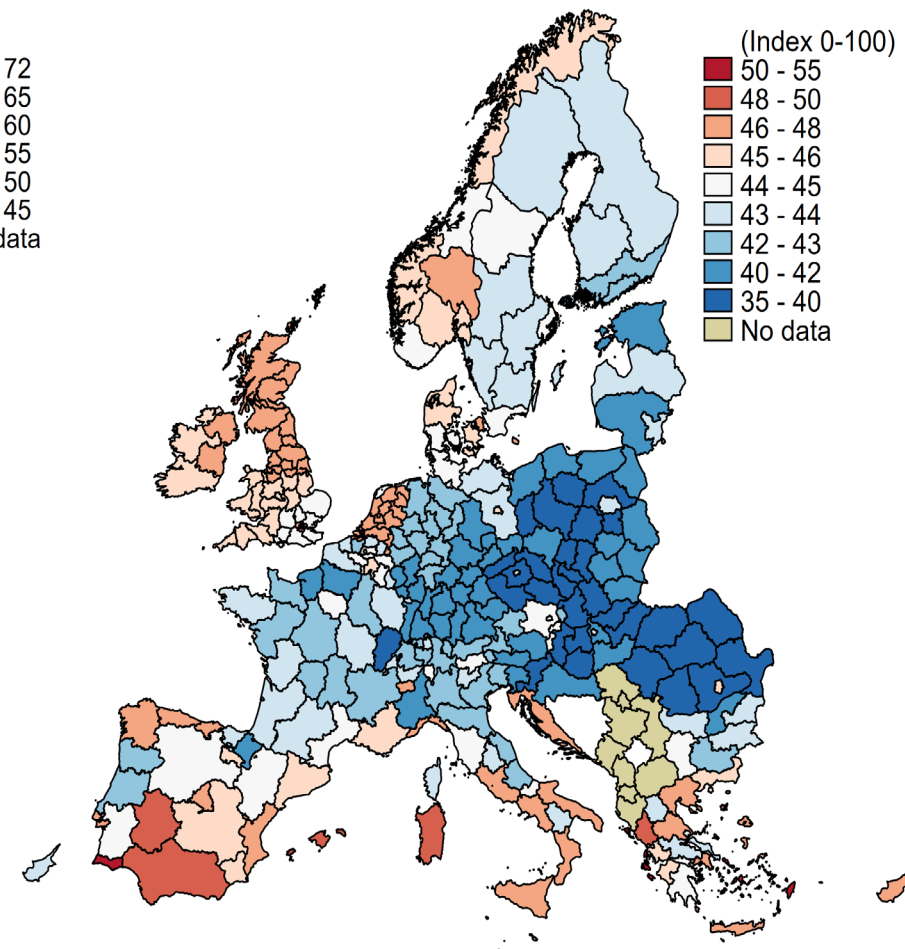
Share of telework jobs



Share of essential jobs

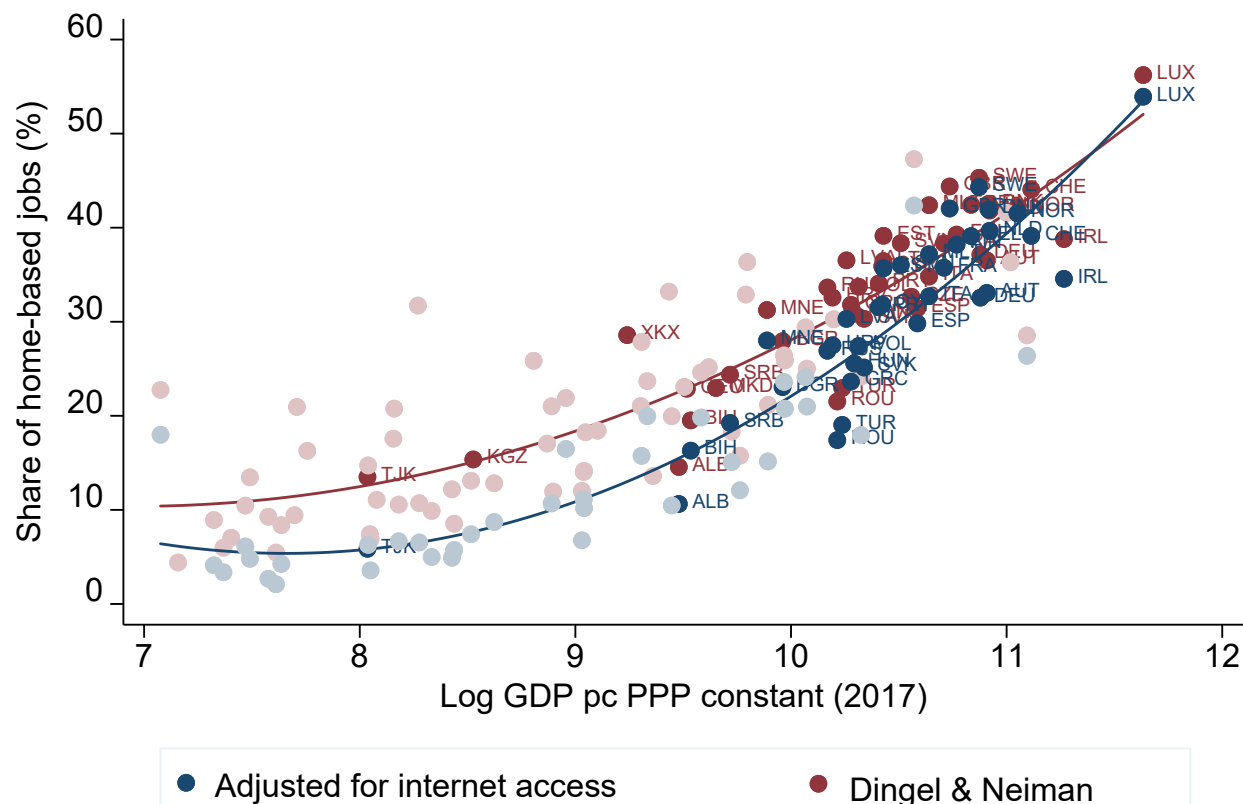


Job face-to-face intensity



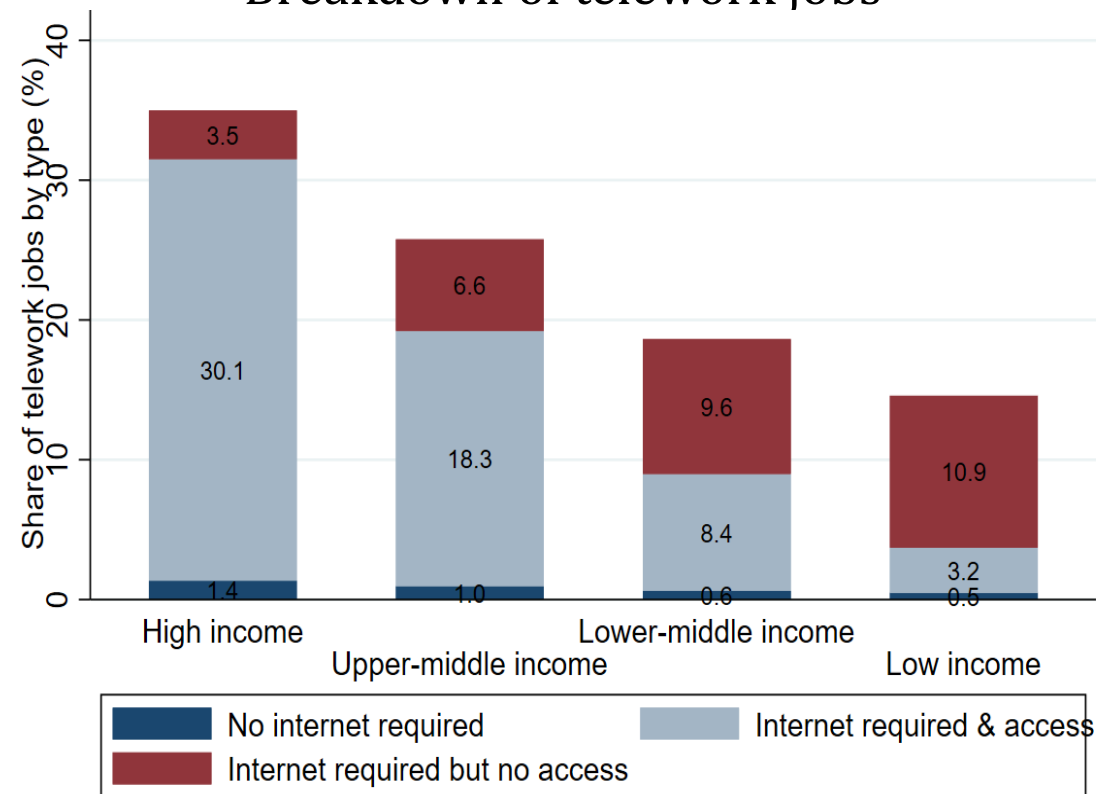
Poorer countries in ECA and worldwide have a lower share of telework jobs and internet access exacerbates those disparities.

Telework jobs with & without internet adjustment



23.9% of all jobs can be done from home versus **18.7%** when considering internet access
Larger bias in lower income countries

Breakdown of telework jobs

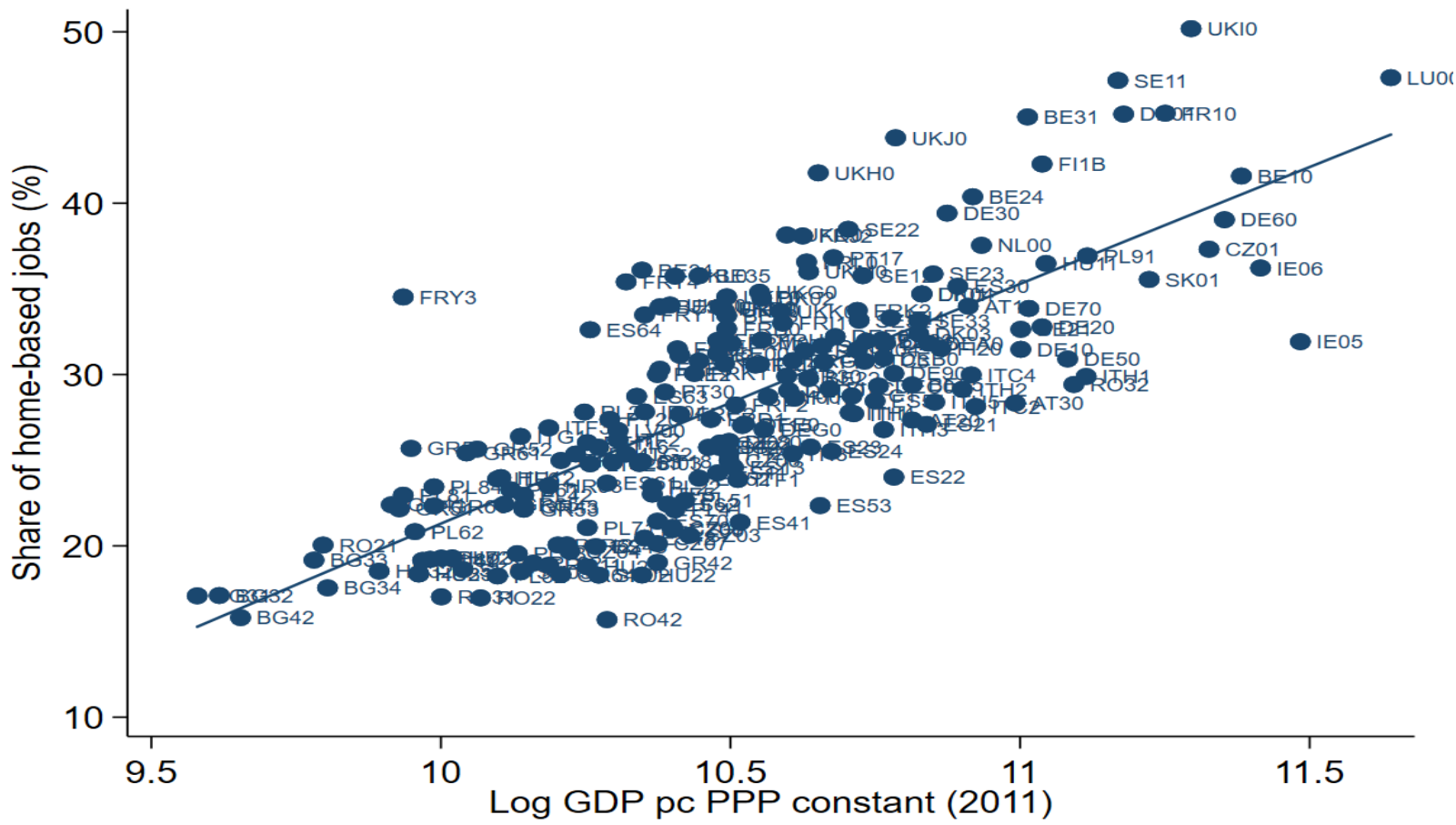


Lower income countries face a double disadvantage: **low teleworkability** and **larger constraints to internet access**.



Risks of increasing income inequalities also observed by NUTS2 sub-divisions.

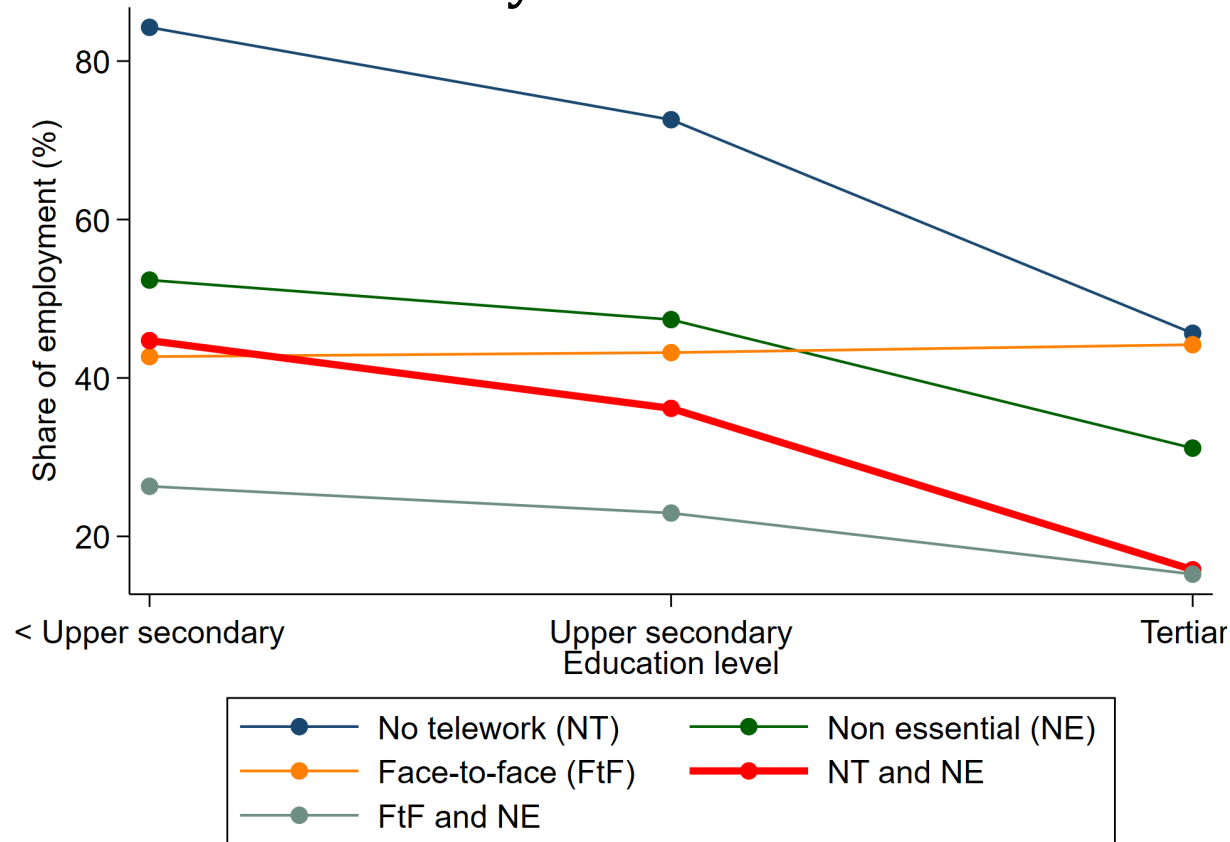
Share of home-based work across NUTS2 Europe regions



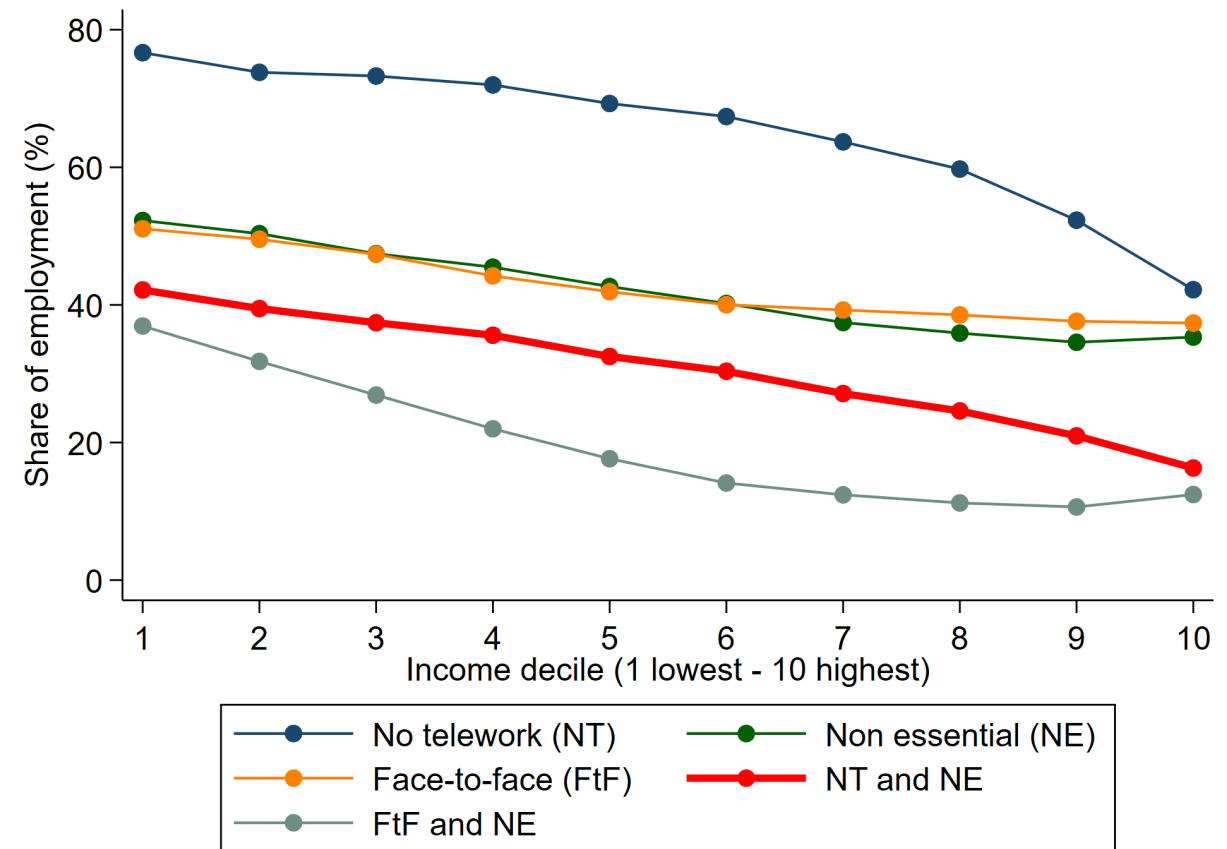
Large inequality across individuals, with low-skilled low-income workers facing the largest vulnerabilities

Vulnerability measures in the EU

a. by education



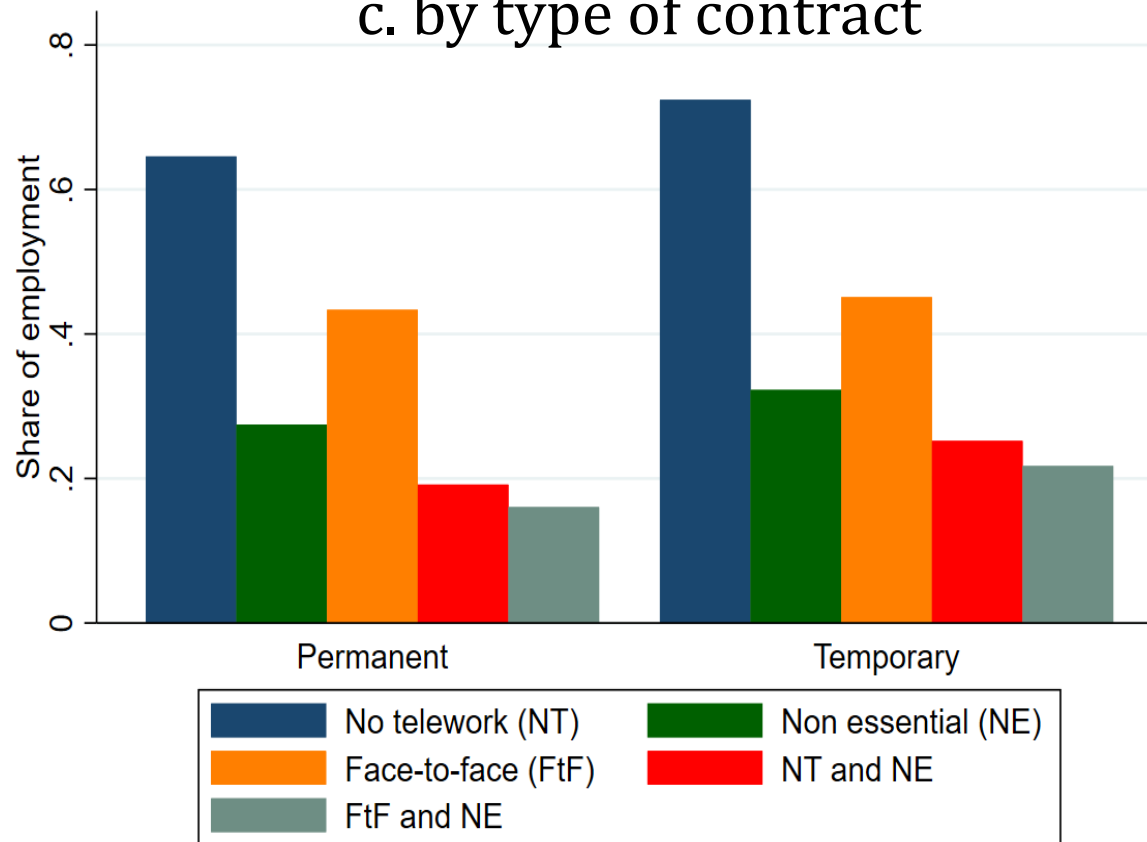
b. by income



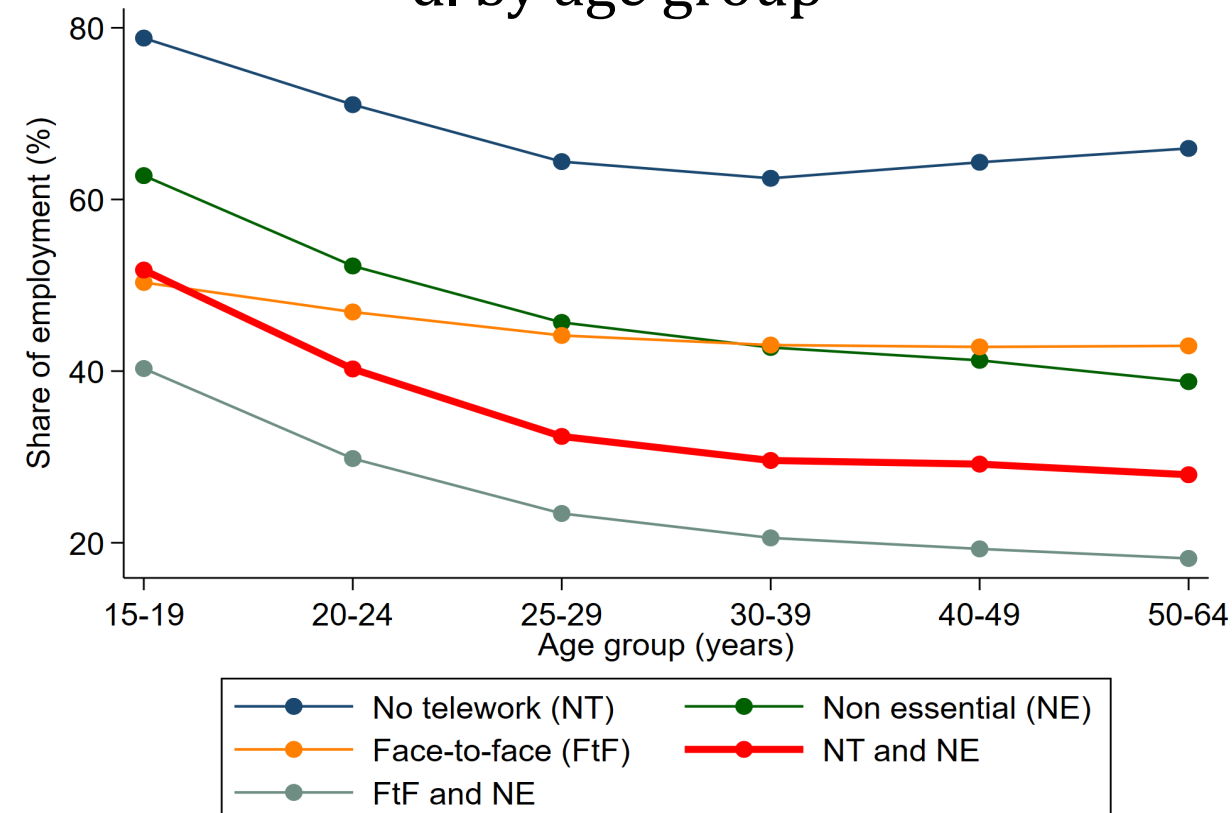
Labor market vulnerabilities to the COVID-19 shock are also concentrated among younger workers and those with temporary contracts

Vulnerability measures in the EU

c. by type of contract



d. by age group



Education is the strongest determinant of ability to work from home

Country/Region	EU	EU	EU	EU	Turkey	Turkey	Turkey	Turkey
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age 25-34	0.117*** (0.006)			0.015*** (0.005)	0.143*** (0.016)			0.059*** (0.007)
Age 35-44	0.128*** (0.007)			0.040*** (0.005)	0.109*** (0.015)			0.098*** (0.009)
Age 45-54	0.109*** (0.006)			0.050*** (0.005)	0.069*** (0.014)			0.110*** (0.010)
Age 55-64	0.109*** (0.007)			0.060*** (0.006)	0.089*** (0.016)			0.150*** (0.013)
Female		0.097*** (0.008)		0.069*** (0.007)		-0.127*** (0.023)		-0.069*** (0.013)
Secondary			0.132*** (0.006)	0.140*** (0.006)			0.079*** (0.012)	0.118*** (0.013)
Tertiary			0.443*** (0.009)	0.438*** (0.009)			0.470*** (0.031)	0.478*** (0.030)
Temporary				-0.030*** (0.003)				-0.022** (0.008)
Constant	0.214*** (0.009)	0.273*** (0.008)	0.104*** (0.004)	0.070 (0.064)	0.115*** (0.016)	0.300*** (0.032)	0.037*** (0.005)	-0.005 (0.013)
Observations	1,244,093	1,244,093	1,242,384	1,205,261	104191	104191	104191	104191
R-squared	0.008	0.017	0.213	0.257	0.022	0.031	0.352	0.375
Region FE	NO	NO	NO	YES	NO	NO	NO	YES

Predictive power of vulnerability measures on actual employment outcomes

- **Cross country:** Working hours in lower-middle-income countries dropped by 23.3% yoy in 2020Q2, vs. 15.5% in high-income countries (ILO, 2020).
- **Within country:** Drastically higher employment reduction in 2020Q2 among less educated and younger workers.
- **Validation exercise:** yearly employment growth rates in 2020Q2 in the EU are strongly correlated with measures of job vulnerability.

VARIABLES	(1) Yoy_emp 20q2	(2) Yoy_emp 20q2	(3) Yoy_emp 20q2	(4) Yoy_emp 20q2	(5) Yoy_emp 20q2
Telework jobs (DN,2020)	0.095*** (0.008)				
Hbw jobs		0.109*** (0.009)			
Telework_non_ict			0.067* (0.037)		
Telework_ict_internet			0.114*** (0.013)		
Telework_ict_no_internet			-0.036 (0.072)		
Essential jobs (FM, 2020)				0.030*** (0.008)	
F2F jobs (AN, 2020)					-0.070*** (0.017)
Constant	-6.046*** (0.429)	-6.093*** (0.429)	-5.965*** (0.439)	-3.670*** (0.444)	0.545 (0.822)
Observations	1,892	1,892	1,892	1,892	1,892
R-squared	0.066	0.068	0.068	0.007	0.008

Conclusion

- **Covid-19 pandemic exacerbated pre-existing income inequalities**
 - ❖ **Across countries and regions in ECA and worldwide**
 - Rich countries and regions faces the largest increases
 - ❖ **Within countries**
 - Those who are already vulnerable are also the least likely to work from home
 - Low-paid, young, **unskilled** workers on temporary contracts are at most at-risk
- **Need of large-scale policies to counterbalance**



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