

# Remote working in Switzerland during the Covid-19 pandemic: which effects on the labour market?

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# The Research Topic

## AIM

- Investigate the spread of remote working in Switzerland before and during the Covid-19 pandemic.
- Estimate the correlation between firm-specific / individual-specific characteristics and the probability of observing remote (home) working during 2020.

## DATA AND METHODOLOGY

- Micro-data from two waves (2019 and 2020) of the Swiss Labour Force Survey (SLFS).
- Descriptive statistics and econometric model (Probit)

# Literature: Covid-19 and remote working

The economic literature that empirically investigates the effects of the COVID-19 pandemic on the labour market is rapidly increasing.

**Four main research directions** on remote working (RW) can be identified:

## 1. Identikit of teleworkers: who can work remotely?

(Alipour et al 2020; Avdiu and Nayyar 2020; Bank of Italy 2021; Barbieri et al. 2020; Basso et al 2020; Brynjolfsson et al 2020; Crowley and Doran 2020; Dingel and Neiman 2020; Gallacher and Hossain 2020; Garrote Sanchez et al 2021; Holgersen et al 2021; Ono and Mori 2021; Sostero et al 2020).

## 2. Effects of RW on income distribution, wages, job loss

(Ainaa et al 2021; Angelucci et al 2020; Bonacini et al 2020, 2021; Bank of Italy 2021; Gallacher and Hossain 2020; Irlacher and Koch 2021; Shibata 2020)

## 3. Effects of RW on workers' habits, well-being and productivity

(Alipour et al 2021; Baert et al 2020; Barrero et al 2021; Bhattacharya and Mittal 2020; Bloom 2020; Fana et al 2020; Ferreira et al 2021; Goździewska-Nowicka et al 2020; Jackowska and Luring 2021; Nagel 2020; Nilmar de Oliveira et al 2021; Okubo et al 2020; Restrepo and Zeballos 2020; Tavares et al 2020).

## 4. RW and “geography”: changing cities

(De Fraja et al 2021; Delventhal et al 2021; Espinoza and Reznikova 2020; Florida et al 2021; Soroui 2021; Mariotti 2021)

# **Telework before the Covid-19 pandemic in EU: empirical evidence**

# Eurofound: Percentage of workers doing telework and ICT-based mobile work (2015)

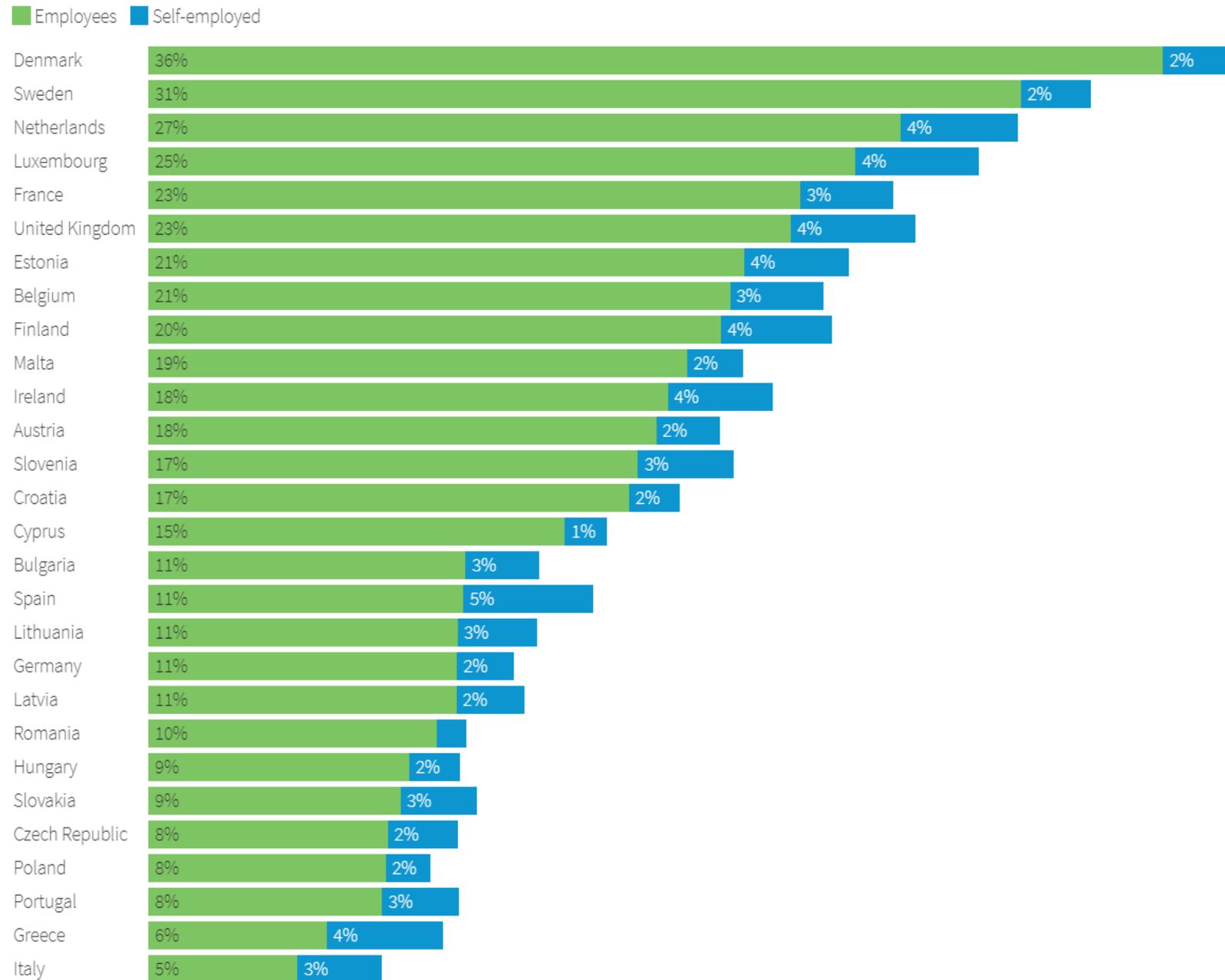
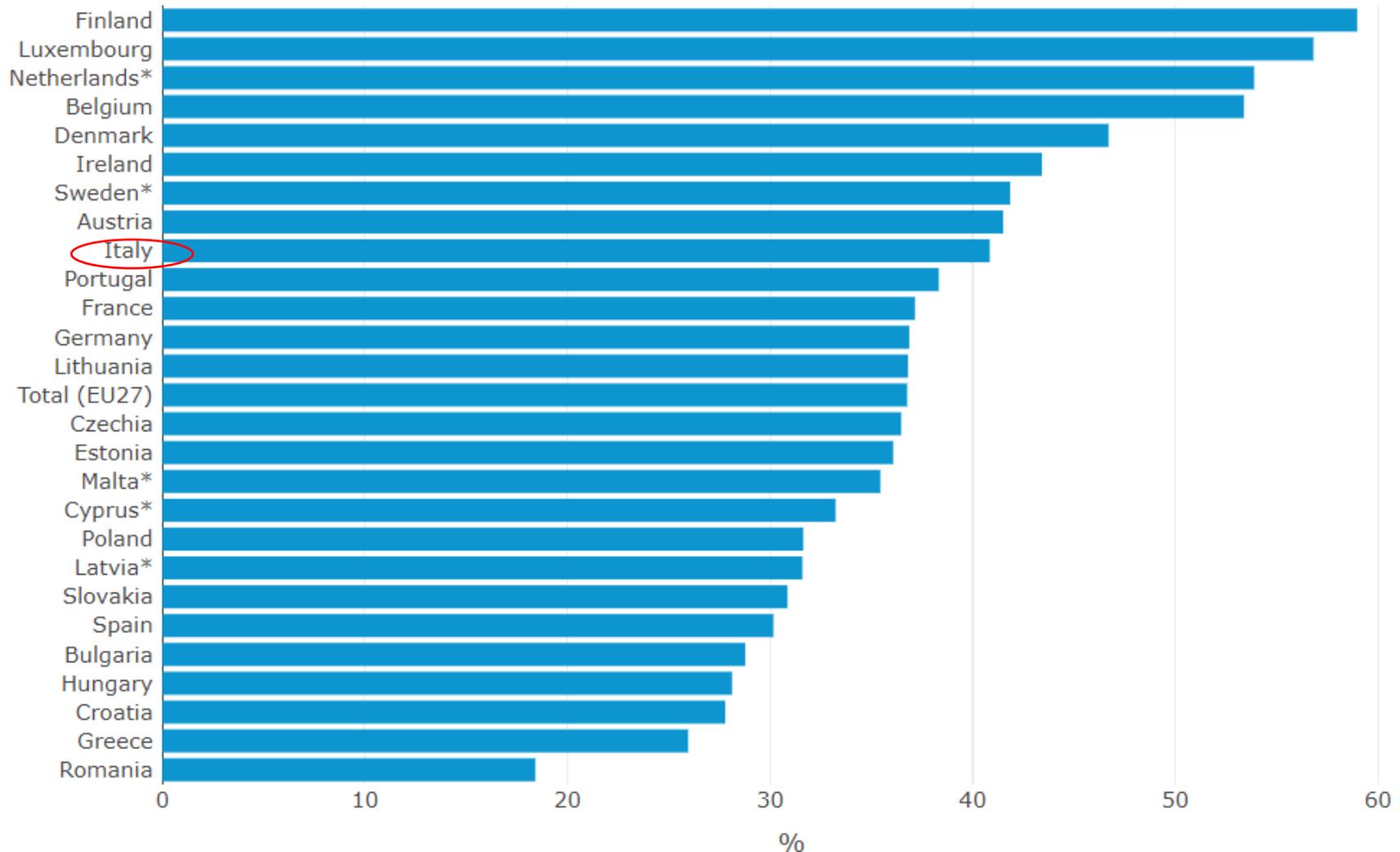


Chart: Eurofound • Source: European Working Conditions Survey 2015

# **Telework as a result of the Covid-19 pandemic in EU: empirical evidence**

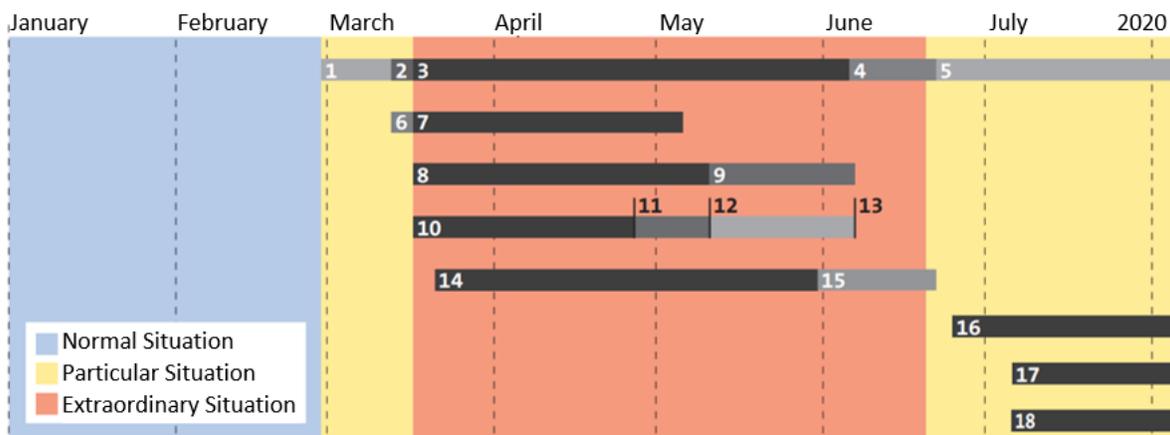
# Remote working AS A RESULT OF Covid-19

The figure shows 'Yes' for respondents in the EU27 when asked: **Have you started to work from home as a result of the COVID-19 situation?** Slovenia is excluded from the data for this question because of a translation issue.



**What has happened in Switzerland?**

# Measures and rules applied at the federal level until July 2020



Source: Baruffini and Stricker (2021) on ETH Zürich – Center for Security Studies (2020)

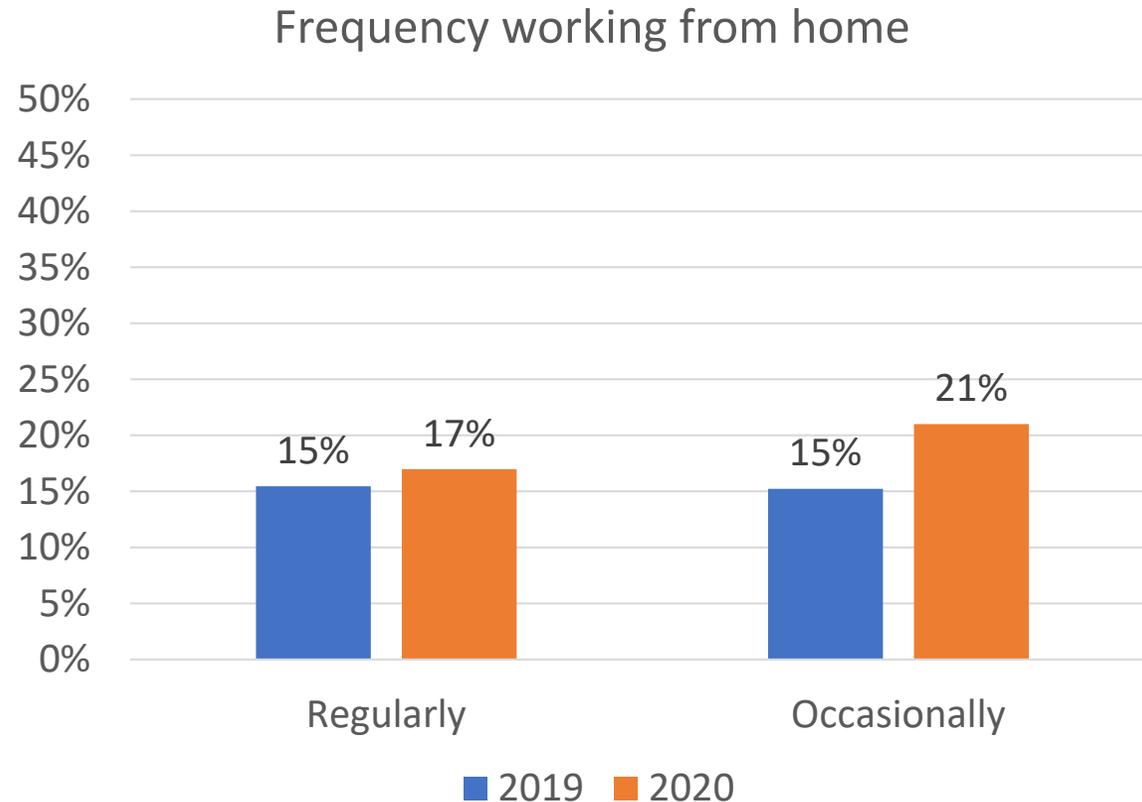
RED “Extraordinary situation”: allows the central government to take immediate decisions which must be applied in the overall country.

Rules for organized events		
1	28.2. – 12.3.	Prohibition of events with more than 1000 participants
2	13.3. – 16.3.	Prohibition of events with more than 100 participants
3	17.3. – 5.6.	General prohibition of events
4	6.6. – 21.6.	Prohibition of events with more than 300 participants
5	22.6. – 1.10.	Prohibition of events with more than 1000 participants (II)
Border Closure		
6	13.3. – 16.3.	Partial closure of the Swiss-Italian border
7	17.3. – 14.6.	Partial closure of the borders with Germany, France, Italy and Austria
Rules for education and schooling		
8	16.3. – 10.5.	Prohibition of classes in presence at every educational level
9	11.5. – 6.6.	Prohibition of classes in presence for the levels of secondary education II and tertiary education
Measures for shops and establishments		
10	17.3. – 26.4.	Closure of all publicly accessible establishments at exception for essential shops (grocery shops, drug stores, post offices, banks, public administration, ...)
11	27.4.	Reopening of hairdressers, hardware stores and market gardens
12	11.5.	Reopening of shops, markets, restaurants and museums
13	6.6.	Reopening of night clubs and leisure establishments
Prohibition of personal meetings		
14	20.3. – 30.5.	Prohibition of assemblies with more than 5 persons
15	31.5. – 21.6.	Prohibition of assemblies with more than 30 persons
Further rules and important measures		
16	25.6.	Launch of the SwissCovid application
17	since 6.7.	Mask requirement in public transportation
18	since 6.7.	Mandatory quarantine at entry from risk zones

## Data

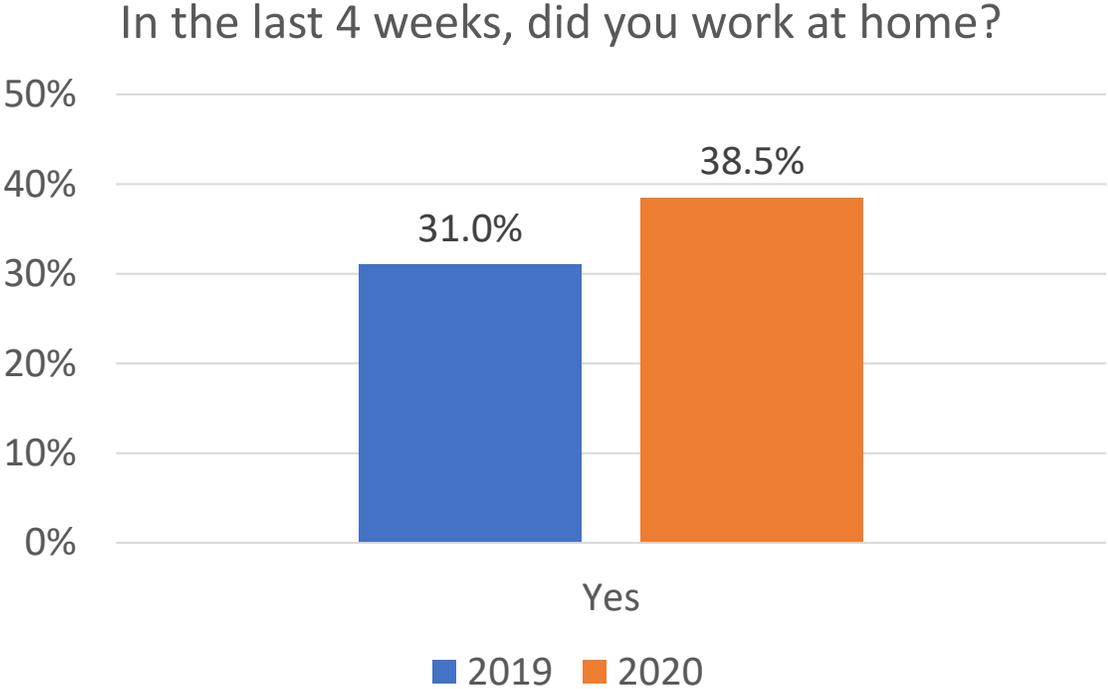
- Since 1991, the **Swiss Labour Force Survey (SLFS)** has been conducted yearly by the Swiss Federal Statistical Office.
- Main purpose: provide information on the **structure of the labour force** and employment behavior patterns.
- Survey based on **sampling of individuals** (aged 15 years and more), selected at random from the municipal and cantonal population official registers. The sample is stratified by Canton.
- The survey takes place **by telephone**. About 39'000 interviews every 3 months (in one year, there are **4 waves**: part of the data gathered in the preceding wave are included and asked to be confirmed + some new questions).  
Questions on the workplace: 4<sup>th</sup> wave (October).
- The **questions concern** the labour market situation (current or previous employment, unemployment, retirement, working conditions, place of work, occupation, salary, job seeking, professional mobility), education and training (including continuous education), household composition and demographic characteristics.

# Working from home in Switzerland: 2019 vs 2020



- In 2020, higher increase in the number of people occasionally working from home (+6%), in comparison to people regularly working from home (+2%)

# Working from home in Switzerland: 2019 vs 2020



➤ In 2020, 7,5% increase in the number of people working from home in the previous 4 weeks

# Working from home in Switzerland: 2019 vs 2020

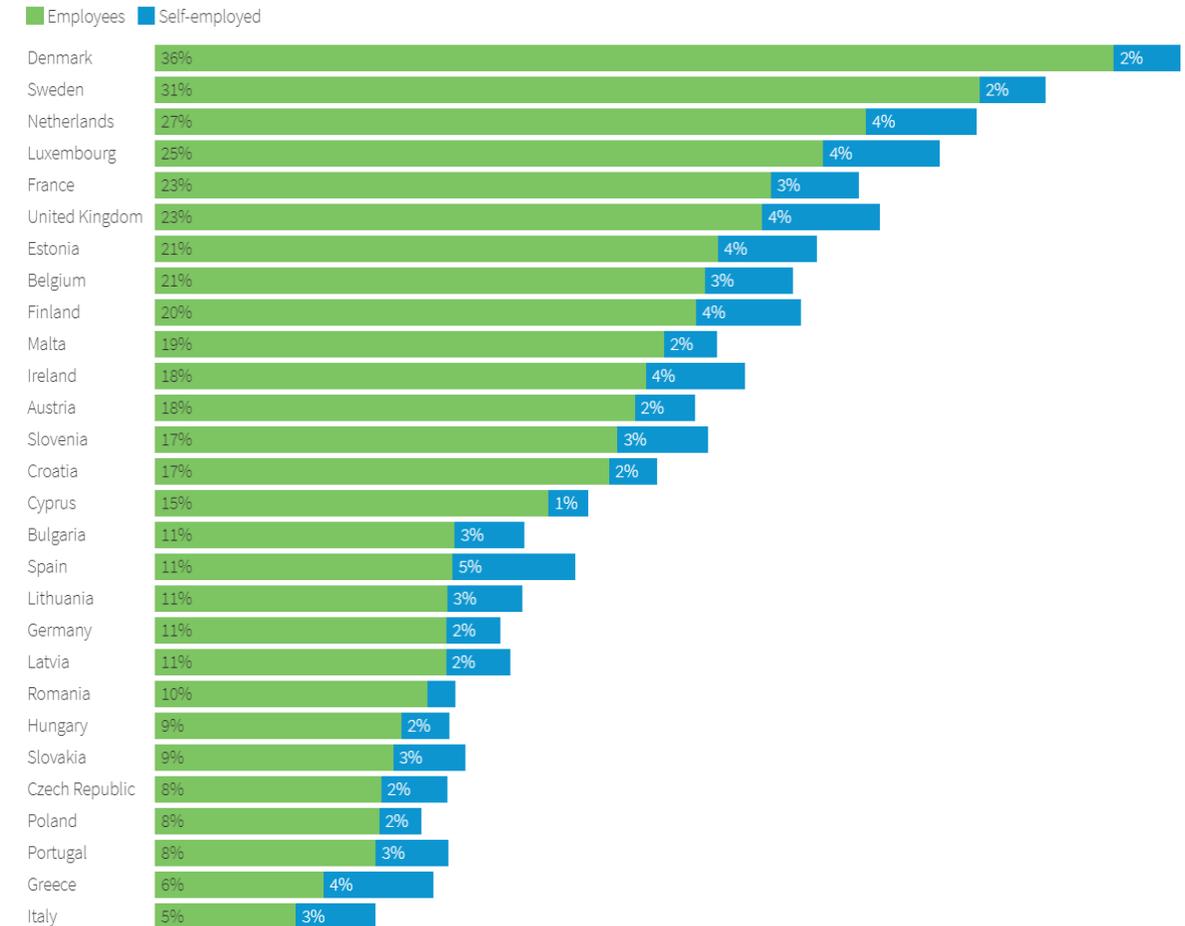
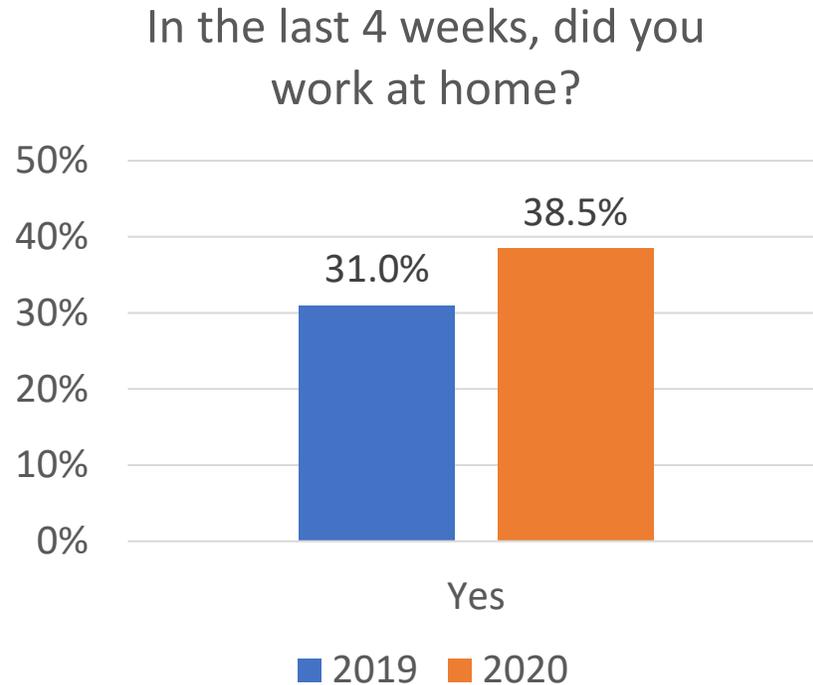


Chart: Eurofound • Source: European Working Conditions Survey 2015

Before Covid-19: Switzerland was in the upper part of the Eurofound Figure, with high % of remote workers (Denmark 38%, Sweden 33%, Netherlands 31%).

# Econometric analysis

## Dependent variable

In the last 4 weeks, did you work at home? Yes/No

## Explanatory variables

### Individual-specific characteristics

- Socio-demographic (gender, having a child, education)
- Occupation (ISCO classification by ILO)

### Firm-specific characteristics

- Sector (NACE rev.2 classification)

# PRELIMINARY RESULTS

VARIABLES	Probit	Probit	Probit
	(1)	(2)	(3)
Woman	<b>-0.091***</b>	<b>-0.192***</b>	<b>-0.066***</b>
Having a child	<b>0.163***</b>	<b>0.136***</b>	<b>0.163***</b>
Education_intermediate	<b>0.578***</b>	<b>0.586***</b>	<b>0.498***</b>
Education_high	<b>0.984***</b>	<b>0.996***</b>	<b>0.816***</b>
Agriculture, Forestry And Fishing			<b>0.344***</b>
Mining And Quarrying			-0.341
Electricity, Gas, Steam And Air Conditioning Supply			<b>0.317***</b>
Water Supply; Sewerage, Waste Management And Remediation Activities			<b>-0.239*</b>
Construction			<b>-0.276***</b>
Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles			-0.018
Transportation And Storage			0.055
Accommodation And Food Service Activities			<b>-0.453***</b>
Information And Communication			<b>1.047***</b>
Financial And Insurance Activities			<b>0.771***</b>
Real Estate Activities			<b>0.260***</b>
Professional, Scientific And Technical Activities			<b>0.379***</b>
Administrative And Support Service Activities			-0.014
Public Administration And Defence; Compulsory Social Security			<b>0.280***</b>
Education			<b>0.772***</b>
Human Health And Social Work Activities			<b>-0.292***</b>
Arts, Entertainment And Recreation			<b>0.253***</b>
Other Service Activities			<b>0.294***</b>
Activities Of Households As Employers; Undifferentiated Goods...			<b>-0.662***</b>
Activities Of Extraterritorial Organisations And Bodies			<b>0.711***</b>
Armed forces		<b>1.326***</b>	
Legislators, senior officials and managers		<b>1.766***</b>	
Professionals		<b>1.676***</b>	
Technicians and associate professionals		<b>1.273***</b>	
Clerks		<b>1.193***</b>	
Service workers and shop and market sales workers		<b>0.435***</b>	
Skilled agricultural and fishery workers		<b>1.397***</b>	
Craft and related trades workers		<b>0.391***</b>	
Plant and machine operators and assemblers		<b>0.130*</b>	
Constant	<b>-1.898***</b>	<b>-2.133***</b>	<b>-1.899***</b>
Observations	37,206	37,129	37,185
*** p<0.01, ** p<0.05, * p<0.1			

## PRELIMINARY RESULTS: Socio-demographic variables

VARIABLES	Probit	Probit	Probit
	(1)	(2)	(3)
Female	<b>-0.091***</b>	<b>-0.192***</b>	<b>-0.066***</b>
Having a child	<b>0.163***</b>	<b>0.136***</b>	<b>0.163***</b>
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Education_high	<b>0.984***</b>	<b>0.996***</b>	<b>0.816***</b>

Reference category: education\_low  
(compulsory education)

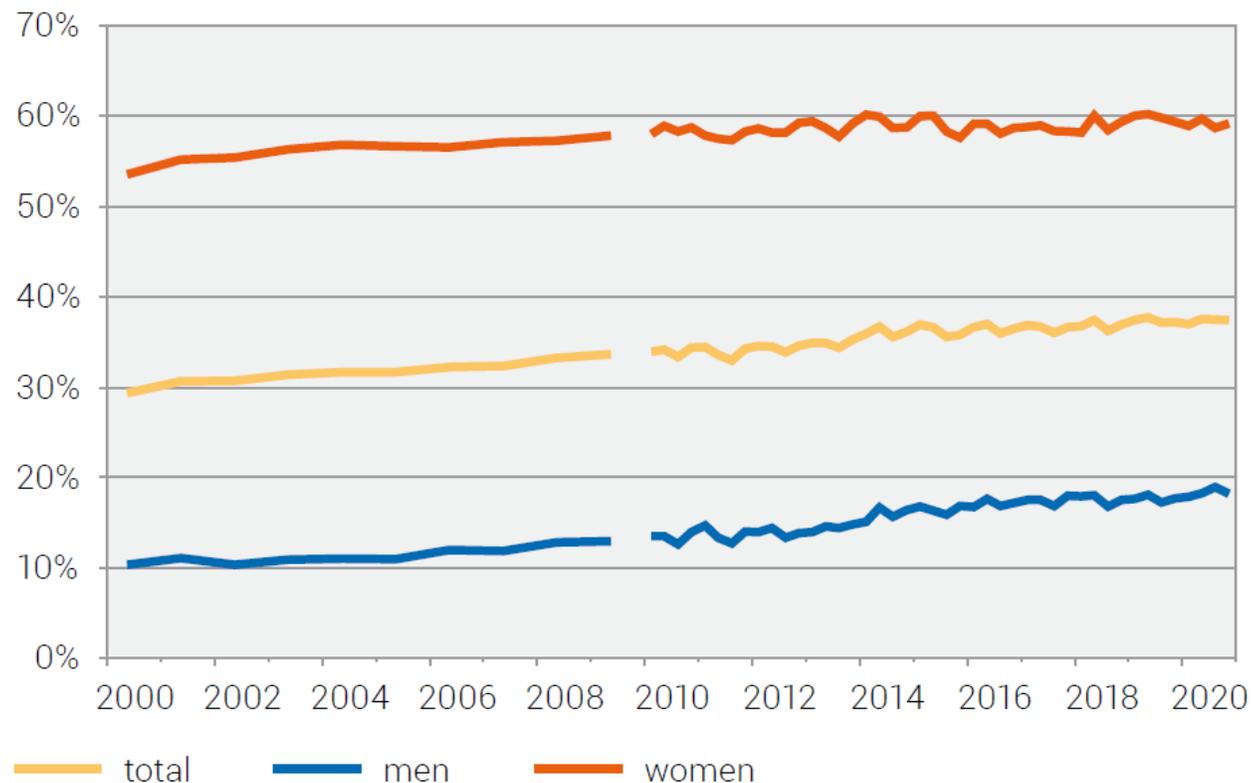
Female coefficient: negative and strongly significant  
→ Women are less likely to work from home than men  
(ceteris paribus)



Possible explanation: the diffusion of part-time

## PRELIMINARY RESULTS: Socio-demographic variables

### Persons employed part-time according to gender



Source: FSO – Swiss Labour Force Survey (SLFS)

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- Part-time work has risen sharply in Switzerland over the past 20 years and now **accounts for more than a third of employed persons**.
- It mainly concerns **women**, who in 2020 accounted for **74% of part-time employed persons** (1,3 million compared with 459'000 men). Childcare and other family responsibilities are the main reasons cited for part-time employment.

## PRELIMINARY RESULTS: Occupation (ISCO classif.)

VARIABLES	Probit	Probit	Probit
	(1)	(2)	(3)
Armed forces		<b>1.326***</b>	
Legislators, senior officials and managers		<b>1.766***</b>	
Professionals		<b>1.676***</b>	
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Plant and machine operators and assemblers		<b>0.130*</b>	

Reference category: elementary occupations

All occupations, if compared to elementary occupations

(Street vendors, shoe cleaning and other street services elementary occupations, domestic helpers and cleaners, deliverers, garbage collectors, farm-hands and labourers, mining and quarrying labourers, ...),

are more likely to work from home

# PRELIMINARY RESULTS: Sectors

VARIABLES	Probit (1)	Probit (2)	Probit (3)
Agriculture, Forestry And Fishing			<b>0.344***</b>
Mining And Quarrying			-0.341
Electricity, Gas, Steam And Air Conditioning Supply			<b>0.317***</b>
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Reference category: manufacturing

People working in  
Construction  
Accommodation and food  
service activities  
Health services  
are **less likely** to work from  
home than those in  
manufacturing

People working in  
ICT, Finance, Insurance,  
Real estate, Public  
administration, Education  
are **more likely** to work from  
home than those in  
manufacturing

## Next steps

- Investigating the influence of employment contract characteristics on the probability of observing home-working: full-time vs part-time, and the gender issues.
- Add other individual-specific characteristics (age, children age,...)
- Investigating the heterogeneity among regions (NUTS-2 level): Eastern Switzerland, Zürich, Central Switzerland, North-western Switzerland, Espace Mittelland, Région Lémanique, and Ticino.
- Calculating the marginal effects.

# Thanks for Your Attention!



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