

# Appendices

## Appendix 1. Data description

**Canada** (1990–2019). Data were generated by Statistics Canada. The data are population-level and include all sectors and industries and employees, working in establishments of at least two workers.

**Czechia** (2002–2016). Data were taken from the Average Earnings Information System (ISPV) survey conducted by the private agency TREXIMA. The data consist of the entire population of public sector workplaces, plus a sample of private sector workplaces. The private sector sample consists of workplaces with at least 10 employees. A stratified sampling of private sector workplaces with 10–250 employees was taken based on the size of the workplace. All private sector workplaces with over 250 employees are included in the data. The data also spans all industries and sectors. In the end, the dataset covers 80% of Czech workforce and 96% of the workforce in establishments with 10 and more employees. Estimates are weighted to correspond to the complete workforce in establishments with 10 and more employees.

**Denmark** (1994–2018). The data consist of population-level observations of both private and public sector workplaces extracted from the labor market statistic register (Den Registerbaserede Arbejdsmarkedsstatistik -RAS), and earnings from the job register IDAN. We selected workers working in establishments of at least two workers. Demographics such as age, gender, and nativity come from the population register (Befolkningsregistret). In order to drop marginal jobs, we exclude workers earning less than one third of OECD yearly wage.

**France** (1993–2019). Our analyses use data from the DADS social security register (*Déclaration annuelle de données sociales*). Access to the DADS data was obtained through the CASD (*Centre d'accès sécurisé aux données*) dedicated to researchers authorized by the French *Comité du secret statistique*. The data consist of population-level observations of private sector workers. State civil servants are missing before 2009 and excluded in the following years for consistency.

**Germany** (1990–2015). Data come from a customized sample for the project “Dynamics of Organizational Earnings Inequality: Investigation within the Comparative Organizational Inequality International Network (COIN)” of the Integrated Employment Biographies Sample (IEBS) of the Federal Employment Agency. It covers roughly 5% of the German working population and about 20,000 establishments, spanning the years 1999–2015. Estimates are weighted to correspond to the complete workforce.

Earnings not subject to social security because they are below the threshold for small-scale employment (e.g., newspaper delivery), which is currently 450 euros per month, are excluded from the sample. The earnings are also top coded at the social contribution limit, which differs by year and for East and West Germany. To impute the top-coded earnings, an imputation strategy based on the imputation from Card, Heining, and Kline (2013) was established, which accounts for individual and establishment wage prior to the censored period. However, rather than focusing on the mean individual and establishment wage prior to the censored observation as was done by Card, Heining, and Kline, we utilize information on lagged earnings. Given the limitation of our imputation, measures of exposure involving the top 1% should be therefore considered cautiously.

**Hungary** (2003–2017). Our analyses use Admin2 and Admin3 data processed by the Databank of the Centre for Economics and Regional Studies. These data are generated by linking data from five governmental institutions (the Pension Directorate, the Tax Office, the Health Insurance Fund, the Office of Education, and the Public Employment Service). Both Admin2 and Admin3 data are 50% random sample of the Hungarian population followed from 2003 to 2011 and 2003 to 2017 respectively. As wages are right-censored in Admin3 before 2013 and not in Admin2, we combine results from the two datasets. The earnings concept is monthly earnings from each person's primary job. Monthly data were aggregated to obtain yearly earnings. Low-wage workers, defined as workers earning less than half of the yearly minimum wage, are dropped from the sample. We selected workers working in establishments of at least two workers.

**Japan** (1989–2013). Data are from the Basic Survey on Wage Structure conducted by the Ministry of Health, Labor, and Welfare of Japan. The survey is a two-stage design in which a sample of private sector establishments with at least five employees are selected, and then a uniform random sampling of workers among these establishments is taken. Firms' executives are not included in the data. The sample covers 4% of the workforce working in establishment with more than five workers. Estimates are weighted to correspond to the complete workforce.

**Netherlands** (2006-2018). Yearly data on employee wages and companies' sector and industry are provided by the Statistics Netherlands (CBS) within the System of Social-Statistics Database (SSB). We linked data on employees and employing firms to construct a dataset with population-level coverage of wages

across all sectors and industries. The analyses include the highest-paying jobs of each employee in a given year and jobs with wages lower than age-specific minimal hourly wage are excluded.

**Norway** (1996–2018). Data were generated by Statistics Norway and are population-level, including all sectors and industries, although private sector identifiers are only available beginning in 1999. We selected workers working in establishments of at least two workers.

**Spain** (2006–2018). Our analyses use data from the Continuous Sample of Working Histories (CSWH) (*Muestra Continua de Vidas Laborales con datos fiscales*) from Spain's Social Security Office. The CSWH contains matched anonymized social security, income tax and census records for a 4% non-stratified random sample of the population who in one specific year had any connection with Spain's social security system (whether via employment, self-employment, unemployment, or retirement). The CSWH provides information on individuals' complete labor market histories from 1980 (or the year the individual registers with Social Security) to the year of data collection.

Because earnings from the social security records are top and bottom capped, we use earnings from tax records containing uncensored gross labor earnings for each job (tax records are available from 2006 onwards).

**South Korea** (1990–2012). Data are from a survey conducted by the Korean Ministry of Labor. The data consists of a sample of private sector establishments, first stratified by size and then by region and industry. An establishment must have had a minimum of five employees to be included in the sample before 1999, and ten employees beginning in 1999. All industries except Agriculture are

included. The dataset contains only full-time jobs. Estimates are weighted to produce national estimates.

**Sweden** (1990–2018). The data used are from population-wide administrative registers from Statistics Sweden (the LISA database) and cover all sectors and industries.

**Table A1. Presentation of linked-employer administrative data**

Country	Start	End	Field	Definition of threshold	Threshold wage (end year)	Number workers (end year)	Source
Canada	1990	2018	Exhaustive	1/2 full time full year minimum wage	8921 Can \$	15,571,107	Statistics Canada
Denmark	1994	2018	Exhaustive	1/4 OECD yearly wage	109,412 Da. Kr	2,039,139	RAS, IDAN and BES
Norway	1995	2018	Exhaustive	1/4 OECD yearly wage	139,875 No. Kr	1,410,206	Statistics Norway
Sweden	1990	2018	Exhaustive	1/3 prime age P50	100,660 Sw. Kr	4,519,342	Statistics Sweden
France	1993	2019	Exhaustive private sector	1/2 full time full year minimum wage	8,024 €	20,671,976	DADS
Germany	1990	2015	Sample of workers (6%) in 20,000 establishments	1/2 full time P10	12,871 €	1,120,354	IEBS
Netherlands	2006	2018	Exhaustive	Age-specific minimum hourly wage	4 € per hour	8,867,793	CBS
Spain	2006	2018	Random sample of workers born since 1962 (4%)	1/2 full time full year minimum wage	5,837 €	247,004	Continuous Sample of Working Histories (CSWH) and tax records
Czechia	2002	2016	Sample of workers (80%)	1/2 full time full year minimum wage	52,830 Cz. Kr	1,917,812	Average Earnings Information System (ISPV) survey
Hungary	2003	2017	Sample of workers (50%)	1/2 full time yearly minimum wage	765,000 HUF	1,147,366	Admin2 and Admin3
South Korea	1990	2012	Sample of workers (8%) out of a sample of private sector establishments size>5	1/2 full time full year minimum wage	4,763,200 KRW	613,369	Korean Ministry of Labor
Japan	1990	2013	Sample of workers (4%) out of a sample of private sector est. of size >5	1/2 full time P10	1,056,700 Yen	1,089,517	Basic Survey of Wage
USA	1990	2016	Exhaustive	No threshold	0 \$	148,658,000	SSA in Piketty Saez (2003) updated (2020)

**Table A2. Banks in sample**

Bank	Country	Start year	End Year
ABN AMRO group	Netherlands	2011	2017
AIB group PLC	Ireland	2011	2017
Banco santander SA	Spain	2011	2017
Bank of ireland group PLC	Ireland	2010	2017
Bankia SA	Spain	2012	2017
Barclays PLC	United-Kingdom	2013	2017
BBVA	Spain	2011	2017
BNP Paribas	France	2009	2017
Commerzbank	Germany	2010	2017
Danske bank AS	Denmark	2011	2017
Deutsche bank AG	Germany	2010	2017
Erste group bank AG	Austria	2012	2017
HSBC HLDGS PLC	United-Kingdom	2013	2017
ING groep NV	Netherlands	2012	2017
Intesa sanpaolo SPA	Italy	2011	2017
Jyske bank	Denmark	2011	2017
National bank of greece	Greece	2013	2017
NATIXIS	France	2010	2017
Permanent TSB group HLDGS	Ireland	2014	2017
Skandinaviska enskilda bank	Sweden	2010	2017
Société générale group	France	2010	2017
Svenska handelsbanken	Sweden	2010	2017
Swedbank AB	Sweden	2009	2017
Sydbank AS	Denmark	2011	2017
Unicredit SPA	Italy	2009	2017

**Table A3. The asymmetric effect of capitalization on inequality and finance's contribution to inequality**

	Top 1% share			Finance earnings' over-representation in top 1%		
	(1)	(2)	(3)	(4)	(5)	(6)
GDP per capita	-0.02 (0.05)	0.01 (0.04)	0.09** (0.04)	0.27* (0.14)	0.28** (0.13)	0.29** (0.14)
Union rate	0.25*** (0.05)	0.23*** (0.05)	0.30*** (0.05)	0.05 (0.06)	0.02 (0.06)	0.06 (0.06)
Importation rate	-0.10 (0.07)	-0.06 (0.07)	0.10* (0.06)	-0.21* (0.10)	-0.19* (0.11)	-0.17 (0.11)
Capitalization /GDP	0.35*** (0.07)	0.47*** (0.06)	0.54*** (0.08)	0.60*** (0.14)	0.73*** (0.19)	0.63*** (0.15)
Capitalization /GDP × Years in (2001-2003, 2008-2013)		-0.43*** (0.13)			-0.44** (0.21)	
Cumulative sum of drops in capitalization /GDP			-0.45*** (0.09)			-0.09 (0.09)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Num. Obs.	270	270	270	243	243	243
R <sup>2</sup>	0.61	0.63	0.67	0.51	0.53	0.51
Num. groups: country	13	13	13	12	12	12

Note: OLS models with country and year fixed effects and panel corrected standard errors in parenthesis. Dependent and independent variables are country demeaned standardized. All independent variables are one-year lagged. \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1



**Table A4. Job and bank fixed effects for logged number of material risk takers**

	Log of the Number of material risk takers declared	
	Job FE	Bank FE
2009	-0.32 (0.42)	-0.08 (0.50)
2010	0.11 (0.22)	0.21 (0.39)
2011	0.23 (0.14)	0.14 (0.23)
2012	0.08 (0.09)	0.10 (0.16)
2014	0.64*** (0.10)	0.62*** (0.13)
2015	0.62*** (0.12)	0.77*** (0.13)
2016	0.59*** (0.13)	0.72*** (0.17)
2017	0.55*** (0.15)	0.56*** (0.19)
Total assets (log)	-0.83** (0.39)	0.31 (0.52)
Earnings before interest and taxes (asinh)	-0.02*** (0.01)	-0.01 (0.02)
Number of employees in the Bank (log)	-0.06*** (0.02)	-0.02 (0.03)
Position fixed effects	Yes	No
Bank fixed effects	No	Yes
R <sup>2</sup> (full model)	0.92	0.81
R <sup>2</sup> (proj model)	0.32	0.18
Num. obs.	428	171
Num. groups: Jobs	72	
Num. groups: Banks		25

Note: OLS models with job or bank fixed effects and cluster robust standard errors in parenthesis \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1

**Table A5. Robustness checks. Impact of regulation on pay according to various specifications**

Specif.	Control variables	Fixed	Variable	Total
<u>A. Regulated period parameter</u>				
0	None	0.30*** (0.08)	-0.57* (0.31)	0.14 (0.11)
1	Total assets, Earnings, size of the banks	0.29*** (0.10)	-0.43 (0.48)	0.17 (0.11)
2	Idem + Nb risk takers	0.28*** (0.06)	-0.43 (0.46)	0.16** (0.07)
3	Idem + (Nb risk takers) <sup>2</sup>	0.18** (0.08)	-0.85 (0.53)	-0.02 (0.04)
4	Idem + (Nb risk takers) <sup>3</sup>	0.21** (0.09)	-0.52 (0.47)	0.01 (0.05)
5	Idem + (Nb risk takers) <sup>4</sup>	0.20** (0.09)	-0.69 (0.51)	0.02 (0.05)
<u>B. 2014 dummy variable parameter</u>				
0	None	0.13** (0.06)	-1.27*** (0.35)	-0.08 (0.08)
1	Total assets, Earnings, size of the banks	0.14** (0.06)	-1.27*** (0.32)	-0.05 (0.09)
2	Idem + Nb risk takers	0.15** (0.06)	-1.27*** (0.32)	-0.05 (0.08)
3	Idem + (Nb risk takers) <sup>2</sup>	0.14* (0.07)	-1.30*** (0.39)	-0.06 (0.04)
4	Idem + (Nb risk takers) <sup>3</sup>	0.17** (0.08)	-1.06*** (0.37)	-0.05 (0.04)
5	Idem + (Nb risk takers) <sup>4</sup>	0.17** (0.08)	-1.06*** (0.37)	-0.05 (0.03)

Note: OLS models with job effects and cluster robust standard errors in parenthesis.

\*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1

**Figure A1. Evolution of top earnings shares of financiers and non-financiers in the national top 1%**

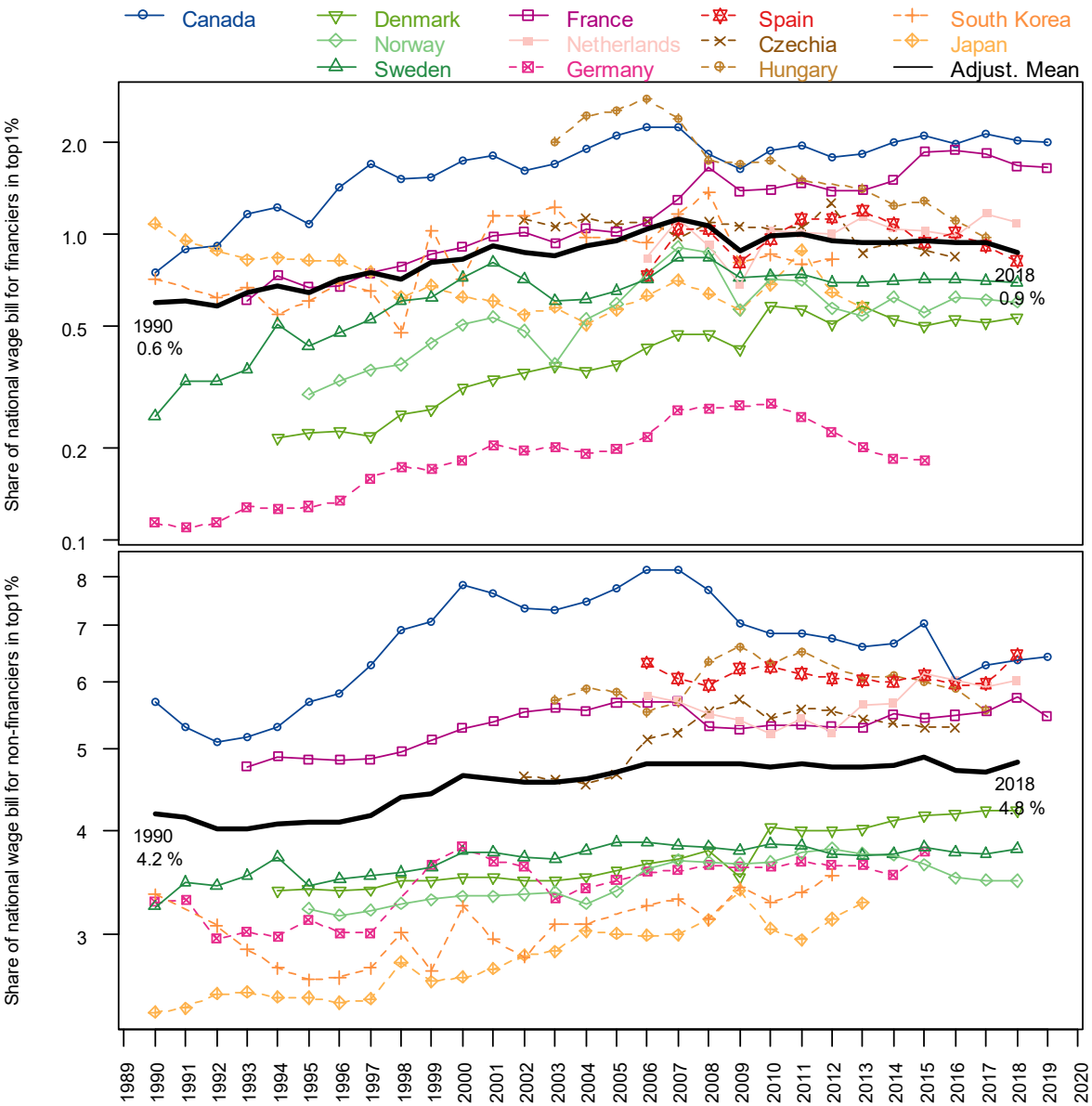




Figure A3. Capitalization to GDP

