Online-Appendix

„Government Interventions During the COVID-19 Pandemic, Culture, and Corporate Cost Behaviour“

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Appendix

Appendix 1: Sample distribution

Panel A: Annual distribution

Year	Number of observations	%
2017	2,031	13.14
2018	2,246	14.54
2019	2,509	16.24
2020	2,701	17.49
2021	2,918	18.89
2022	3,041	19.69
Total	15,446	100.00

Panel B: Country distribution

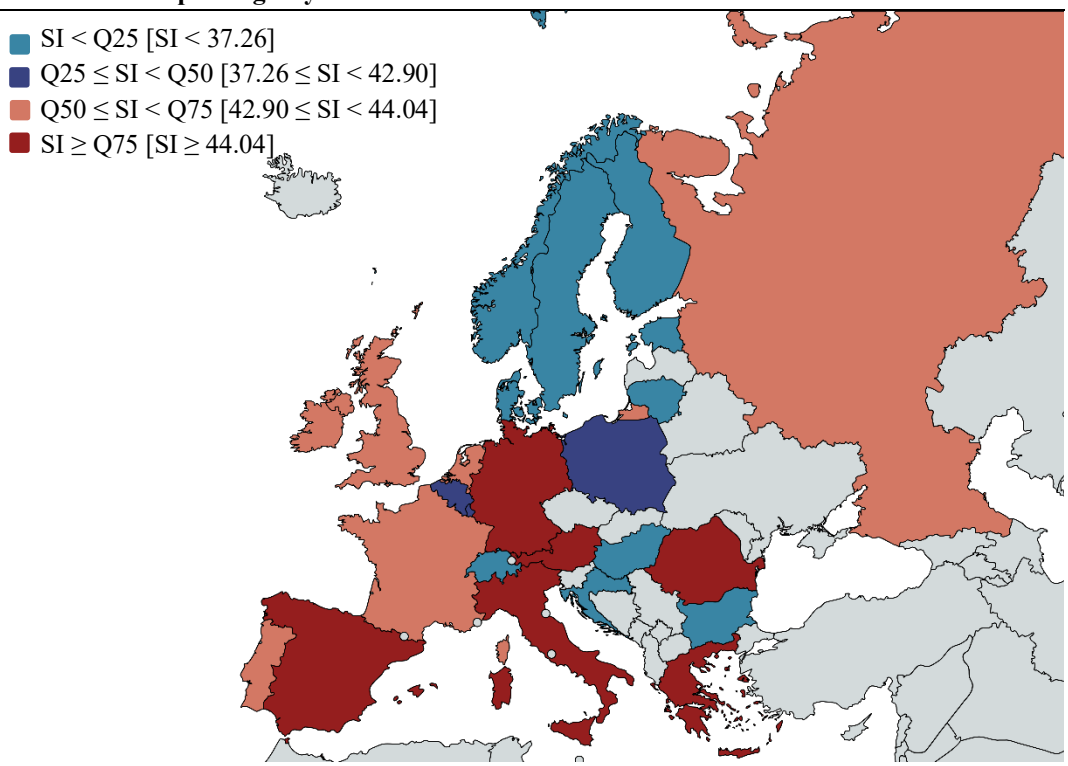
Country	Number of observations	%
Austria	203	1.31
Belgium	255	1.65
Bulgaria	54	0.35
Croatia	106	0.69
Denmark	313	2.03
Estonia	61	0.39
Finland	573	3.71
France	1,900	12.30
Germany	2,111	13.67
Greece	209	1.35
Hungary	54	0.35
Ireland	159	1.03
Italy	1,249	8.09
Lithuania	81	0.52
Luxembourg	158	1.02
Netherlands	318	2.06
Norway	542	3.51
Poland	1,065	6.89
Portugal	119	0.77
Romania	52	0.34
Russia	154	1.00
Spain	566	3.66
Sweden	1,334	8.64
Switzerland	715	4.63
United Kingdom	3,095	20.04
Total	15,446	100.00

Panel C: Industry distribution

Industry	Two-digit SIC code	Number of observations	%
Agriculture, Forestry, Fishing	01-09	172	1.11
Mining	10-14	587	3.80
Construction	15-17	910	5.89
Manufacturing	20-39	6,837	44.26
Transportation, Public Utilities	40-49	1,094	7.08
Wholesale Trade	50-51	536	3.47
Retail Trade	52-59	997	6.45
Finance, Insurance, Real Estate	60-67	*omitted*	0.00
Services	70-89	4,311	27.91
Public Administration	91-99	2	0.01
Total		15,446	100.00

Appendix 2: Distribution of governmental stringency during COVID-19 in Europe

Panel A: Heatmap stringency index



Panel B: Countries in treatment and control group

Country	$TREAT_n$	SI_n
Belgium	No	39.047
Bulgaria	No	36.168
Croatia	No	33.404
Denmark	No	35.377
Estonia	No	32.018
Finland	No	32.519
Hungary	No	36.543
Lithuania	No	36.019
Luxembourg	No	37.256
Norway	No	35.550
Poland	No	39.792
Sweden	No	36.689
Switzerland	No	36.358
Austria	Yes	49.143
France	Yes	42.273
Germany	Yes	44.042
Greece	Yes	52.545
Ireland	Yes	42.542
Italy	Yes	52.284
Netherlands	Yes	42.897
Portugal	Yes	43.700
Romania	Yes	44.323
Russia	Yes	41.217
Spain	Yes	44.959
United Kingdom	Yes	43.969

Appendix 3: Variable definitions

Variable	Definition
Firm-level variables	
$LABOUR_{i,t}$	Total salaries and benefits expenses of firm i in year t in million euros.
$\Delta lnLABOUR_{i,t}$	The change in the natural logarithm of labour costs of firm i in year t relative to year t-1.
$SALES_{i,t}$	Total net sales revenue of firm i in year t in million euros.
$\Delta lnSALES_{i,t}$	The change in the natural logarithm of sales revenue of firm i in year t relative to year t-1.
$DEC_{i,t}$	An indicator variable equalling one if sales revenue of firm i in year t is less than that in year t-1, and zero otherwise.
$SUC\_DEC_{i,t}$	An indicator variable equalling one if sales revenue of firm i in year t is less than that in year t-1 and sales revenue in year t-1 is less than in year t-2, and zero otherwise.
$ASSETS_{i,t}$	Total assets of firm i in year t in million euros.
$AINT_{i,t}$	The natural logarithm of total assets of firm i divided by sales revenue of firm i in year t.
$EMPLOYEES_{i,t}$	Total number of employees of firm i in year t.
$EINT_{i,t}$	The natural logarithm of the number of employees of firm i divided by sales revenue of firm i in year t.
Country-level variables	
$GDP_{n,t}$	Annual percentage growth rate of GDP of country n in year t.
SI_n	A measure representing country n's stringency of government policy responses implemented to control the spread of COVID-19, averaged for the period from 2020 to 2022.
$POST_t$	An indicator variable equalling one for the years t after the COVID-19 outbreak, i.e. 2020, 2021 and 2022, and zero otherwise.
$TREAT_n$	An indicator variable equalling one if the mean stringency index score of country n from 2020 to 2022 is above the median stringency index score of all countries' means from 2020 to 2022 in the sample.
PDI_n	Hofstede's country-level power distance score.
IDV_n	Hofstede's country-level individualism score.
MAS_n	Hofstede's country-level masculinity score.

UAI_n	Hofstede's country-level uncertainty avoidance score.
LTO_n	Hofstede's country-level long-term orientation score.
IVR_n	Hofstede's country-level indulgence score.
$PDI\_high(low)_n$	An indicator variable equalling one if the power distance score of country n is above (below) the median power distance score in the sample, and zero otherwise.
$IDV\_high(low)_n$	An indicator variable equalling one if the individualism score of country n is above (below) the median individualism score in the sample, and zero otherwise.
$MAS\_high(low)_n$	An indicator variable equalling one if the masculinity score of country n is above (below) the median masculinity score in the sample, and zero otherwise.
$UAI\_high(low)_n$	An indicator variable equalling one if the uncertainty avoidance score of country n is above (below) the median uncertainty avoidance score in the sample, and zero otherwise.
$LTO\_high(low)_n$	An indicator variable equalling one if the long-term orientation score of country n is above (below) the median long-term orientation score in the sample, and zero otherwise.
$IVR\_high(low)_n$	An indicator variable equalling one if the indulgence score of country n is above (below) the median indulgence score in the sample, and zero otherwise.
$CASES_n$	The cumulative number of cases attributed to COVID-19 in country n from 2020 to 2022 per 10,000 population.
$lnCASES_n$	The natural logarithm of the cumulative number of cases attributed to COVID-19 in country n from 2020 to 2022 per 10,000 population.
$DEATHS_n$	The cumulative number of deaths attributed to COVID-19 in country n from 2020 to 2022 per 10,000 population.
$lnDEATHS_n$	The natural logarithm of the cumulative number of deaths attributed to COVID-19 in country n from 2020 to 2022 per 10,000 population.
ES_n	A measure representing country n's level of economic support implemented in response to COVID-19, averaged for the period from 2020 to 2022.
$lnES_n$	The natural logarithm of a measure representing country n's level of economic support implemented in response to COVID-19, averaged for the period from 2020 to 2022.

Appendix 4: Testing pre-treatment covariate balance

Variable	Mean treatment	Mean control	p-value t-test for difference in means	p-value Kolmogorov–Smirnov test for difference in distributions
$\Delta lnLABOUR_{i,t}$	0.058	0.084	0.000	0.000
$\Delta lnSALES_{i,t}$	0.057	0.075	0.005	0.000
$DEC_{i,t}$	0.321	0.285	0.002	0.038
$SUC\_DEC_{i,t}$	0.134	0.100	0.000	0.051
$GDP_{n,t}$	1.899	2.674	0.000	0.000
$AINT_{i,t}$	0.271	0.169	0.000	0.000
$EINT_{i,t}$	-5.411	-5.401	0.643	0.034