Appendix for "Bureaucratic Quality and the Gap between Implementation Burden and Administrative Capacities"

Supplemental Online material

Contents

A Coding manual (excerpt)

A.1 Basic Coding Procedure and Main Concepts

At the most basic level, the coders have to identify single events of policy change in the collected legal documents and, for each single event, assess the direction of change, i.e., whether the event of policy change represents the introduction or abolishment of a given target-instrument combination.

To be taken into consideration, a policy change must meet the following requirements in form and content: Formally, a relevant policy change is any measure or provision in the collected legislation (and where necessary respective administrative circulars specifying these rules) that 1) was published during the observation period, which starts on January 1, 1976, and ends on December 31, 2018, and 2) was adopted at the national level.

Contentwise, measures by sub-national jurisdictions such as regional or local bodies are excluded, even if the respective sub-national bodies are state-like entities with far-reaching competencies as in federal states.

A.2 Coding Categories

The method used to assess and code policy change is intended to be universally applicable, i.e., over a wide range of countries, irrespective of differing legal and administrative traditions. Thus, the coding rules comprise two invariant general categories. These are policy targets (*what is addressed?*) and policy instruments (*how is it addressed?*).

By means of these two categories, we seek to measure developments over time in a nuanced manner. To assess whether a change represents an introduction or abolishment of a policy measure, it is critical to evaluate the changes relative to the previous policy targets and instruments at the time. These relative changes need to be coded. Recalling the observation period (January 1, 1976, to December 31, 2018), this stated focus on change has one important implication: Although the relevant information for deciding whether a legal act falls into the observation period is the date of publication, it might be the case that coders need to consult legislation originating from some year before 1976 to reconstruct the occurrence and the direction of change. For instance, if a law adopted in 2008 changes a policy measure enacted by a law in 1973, this 1973 legislation must be considered in order to make a statement about the direction and nature of the policy change in 2008.

A.3 Coding Category 1: Policy Targets

The first and most general coding category is policy targets. For analytical reasons, we use a very narrow conception of policy targets. By policy targets, we mean a very specific activity within a subarea of a policy field guided by the question: who or what is addressed? More specifically, a policy target is subject to state activities in order to achieve a political objective within a specific area. The list below contains the policy targets considered. One single target is coded once per legislative act. Any instrument concerning this specific target will be attributed to the one single target. If a policy target from the list is introduced for the first time, i.e., subject to governmental action for the first time, this event must be coded as *policy introduction*. If, by contrast, a policy target from the list is abolished, i.e., is not anymore subject to governmental action, this event must be coded as policy termination. The termination of a target entails the termination of all attached instruments, which are coded separately. The same is true when a target is addressed for the first time.

Clean Air Policy
1. Air quality standards for nitrogen oxides (NOx)
2. Air quality standards for Sulphur dioxide (SO2)
3. Air quality standard for carbon monoxide (CO)
4. Air quality standard for particulate matter
5. Air quality standard for ozone (O3)
6. Air quality standard for lead
7. Nitrogen oxide (NOx) emissions from large combustion plants using coal
8. Nitrogen oxide (NOx) emissions from passenger vehicles using unleaded gasoline
9. Nitrogen oxide (NOx) emissions from heavy duty vehicles using diesel
10. Sulphur dioxide (SO2) emissions from large combustion plants using coal
11. Sulphur dioxide (SO2) emissions from passenger vehicles using unleaded gasoline
12. Sulphur dioxide (SO2) emissions from heavy duty vehicles using diesel
13. Carbon dioxide (CO2) emissions from large combustion plants using coal
14. Carbon dioxide (CO2) emissions from passenger vehicles using unleaded gasoline
15. Carbon monoxide (CO) emissions from large combustion using coal
16. Carbon monoxide (CO) emissions from passenger vehicles using unleaded gasoline
17. Particulate matter emissions from large combustion plants using coal
18. Arsenic emissions from stationary sources
19. Maximum permissible limit for the lead content of gasoline
20. Maximum permissible limit for the sulphur content of diesel
21. Carbon dioxide (CO2) emissions from aviation activities
22. Maximum permissible limit for the sulphur content of petrol (gasoline, benzine, fuel)

Nature Conservation Policy
1. Native forests
2. Nature protection areas and reserves
3. Import and export of endangered species
4. Import and export of endangered plants

Unemployment benefits
1. Basic unemployment benefits for singles
2. Basic unemployment benefit bonus for persons with spouse
3. Basic unemployment benefit bonus for persons with children
4. Special unemployment benefits: bad weather compensation; seasonal compensation
5. Special unemployment benefits: emergency aid
6. Special unemployment benefits: holiday payment
7. Special unemployment benefits: partial compensation, wage-complementing policy
8. Secondary unemployment benefits for singles (including tax-based benefits; only to be considered if the more special forms of special unemployment benefits do not apply; specification of the type of secondary unemployment benefit in the remarks column)
9. Secondary unemployment benefit bonus for persons with spouse
10. Secondary unemployment benefit bonus for persons with children
11. Monetary or non-monetary support for vocational education and training
12. Retention period (in case of quitting by the employee), i.e., a period of quarantine without benefits
13. Retention period (dismissal by the employer), i.e., a period of quarantine without benefits
14. Subsidized employment / employment subsidies (e.g., policies that introduce jobs which will to a large share be paid for by the unemployment benefits administration and are destined to serve the public good, such as additional jobs for relief agencies for elders, or jobs related to the maintenance of public parks)
15. Reimbursement of expenses related to active job search

Water Protection Policy
1. Lead in continental surfaces water (i.e., waters that flow or which are stored on the surface, and include natural water channels like rivers, surface runoff, streams, lakes and others)
2. Copper in continental surfaces water
3. Nitrate (NO3 –) in continental surfaces water
4. Phosphates in continental surfaces water
5. Zinc in continental surfaces water
6. Oils in continental surfaces water
7. Pesticides (fungicides, herbicides, insecticides, exempt DDT) in continental surfaces water
8. DDT (Dichloro-Diphenyl-Trichloroethane) in continental surfaces water
9. Phenols (as total C) in continental surfaces water
10. BOD (Biochemical Oxygen Demand) of continental surfaces water
11. Lead from industrial discharges into continental surfaces water
12. Copper from industrial discharges into continental surfaces water
13. Nitrate (NO3 –) from industrial discharges into continental surfaces water
14. Phosphates from industrial discharges into continental surfaces water
15. Chloride (Cl –) from industrial discharges into continental surfaces water
16. Sulphates from industrial discharges into continental surfaces water
17. Iron from industrial discharges into continental surfaces water
18. Zinc from industrial discharges into continental surfaces water
19. Oils and greases from industrial discharges into continental surfaces water
20. Pesticides and herbicides from industrial discharges into continental surfaces water
21. Phenols (as total C) from industrial discharges into continental surfaces water
22. Coliform bacteria from industrial discharges into continental surfaces water
23. BOD (Biochemical Oxygen Demand) from industrial discharges into continental surfaces water
24. COD (Chemical Oxygen Demand) from industrial discharges into continental surfaces water

Child benefits
1. Basic child benefits (children)
2. Special child benefits, e.g., special subsidy for juveniles having not reached majority (often 16-18 years) / youth benefit or indirect child benefits like means-tested family assistance (juveniles)
3. Payments for giving birth to children (birth)

Old-age Pensions
1. Basic People's Pension (standard-employee pension) for singles ("first layer pension" – basic minimum income for old-aged people, typically a pension of the same amount for all, regardless of contributions)
2. Basic People's Pension (standard-employee pension) for married couples
3. Basic People's Pension (standard-employee pension) for unmarried couples
4. Additional People's Pension for singles ("second layer pension" – pensions originating from another source than the basic people's pension, typically dependent on contributions/income)
5. Additional People's Pension for married couples
6. Additional People's Pension for unmarried couples
7. Special Pensions for singles (e.g., pensions paid to old-aged people who retire earlier than most of the working population)
8. Special Pensions for married couples
9. Special Pensions for unmarried couples

Table A1: Policy targets.

A.4 Coding Category 2: Policy instruments

We define a policy instrument as a tool or means adopted to achieve the underlying political objective of the selected environmental policy target. A policy instrument thus describes the type of governmental action adopted for a given policy target. A policy instrument is intended to have a regulating and/or guiding effect on people's actions. The tables below contain all potential policy instruments for environmental policy. For each policy targets, if addressed, there is at least one policy instrument defined as a tool to achieve the underlying political objective. Yet, any policy target may be addressed by means of various policy instruments. For each addressed policy target, the coders are asked to identify all instruments. Please note that a given policy instrument belongs to one type/group only.

Instrument	Description	Example
Obligatory standard	A legally enforceable numerical standard, typically involving a measurement unit, e.g. mg/l	Limit value for lead emissions in surface water, e.g. 50 mg/l
Prohibition / ban	Total or partial prohibition/ban on certain emissions, activities, products etc.	Ban on importation of products containing flurochlorocarbons; ban on exportation of endangered species
Technological prescription	A measure prescribing the use of a specific technique or technology	Best available technology or 'best practicable means'
Tax / levy	A tax or levy for a certain polluting product or activity	Levy on the emission of a certain pollutant into the surface waters, e.g., copper
Subsidy / tax reduction	A measure by which the state grants a financial advantage to a certain product or activity	The use of less air polluting cars
Liability scheme	A measure that allocates the costs of environmental damage to those who have caused the damage	"Polluter pays principle"
Planning instrument	A measure defining areas or times deserving protection	Zoning of activities around airports or sensitive ecosystems / Assignment of the status of a nature reserve to an area
Public investment	Specific public investment	Public investment for the research and development of new energy technologies; Investments in infrastructure
Data collection / monitoring programes	Specific programme for collecting data	Monitoring of urban air quality in the context of an early warning system for photochemical smog; monitoring of the population of certain endangered species
Information-based instrument	Voluntary agreements or commitments between the state and private actors or by private actors alone	Pollutant release and transfer register
Voluntary instrument	Voluntary agreements or commitments between the state and private actors or by private actors alone	Greenhouse reduction targets, e.g., a reduction of emissions by 10%
Permits	Permit to pollute the environment or the produce / import / export / sell environmentally harmful products	Mining companies to obtain according permits to mine in certain areas, e.g., native forests
Other	Any instrument that cannot be assigned to the given categories	(...)

Table A2: Environmental Policy. The table is exhaustive, containing the most common environmental policy instruments.

Instrument	Description	Example
Universal benefits / Allowance	A payment of a certain amount of money by the state, irrespective of means	Unemployment benefit, child benefit; orphan's benefit
Means-tested benefits	The entitlement to these benefits is usually not affected by whether a person has paid contributions or fees to an insurance scheme. Means-tested benefits are affected by the claimant's capital and income and involve a calculation (means-test). Based on that calculation it is determined whether a person is eligible for this benefit at all.	Income subsidy for persons with income that is insufficient for living above the poverty level
Contribution / fee	Payment made by citizens to a state agency to receive certain benefits	Fee for unemployment insurance
Tax exemption / subsidy	A reduction of tax payments to provide income tax savings	Child tax exemption
Bonus / grant	one-off grant / payment of money, irrespective of means	Bonus for giving birth to a child; reimbursement of expenses related to job search
Retention	Non-payment of a certain allowance	Retention period for unemployment benefit
Other	Any instrument that cannot be assigned to the given categories	(...)

Table A3: Social Policy. The table is exhaustive, containing the most common social policy instruments.
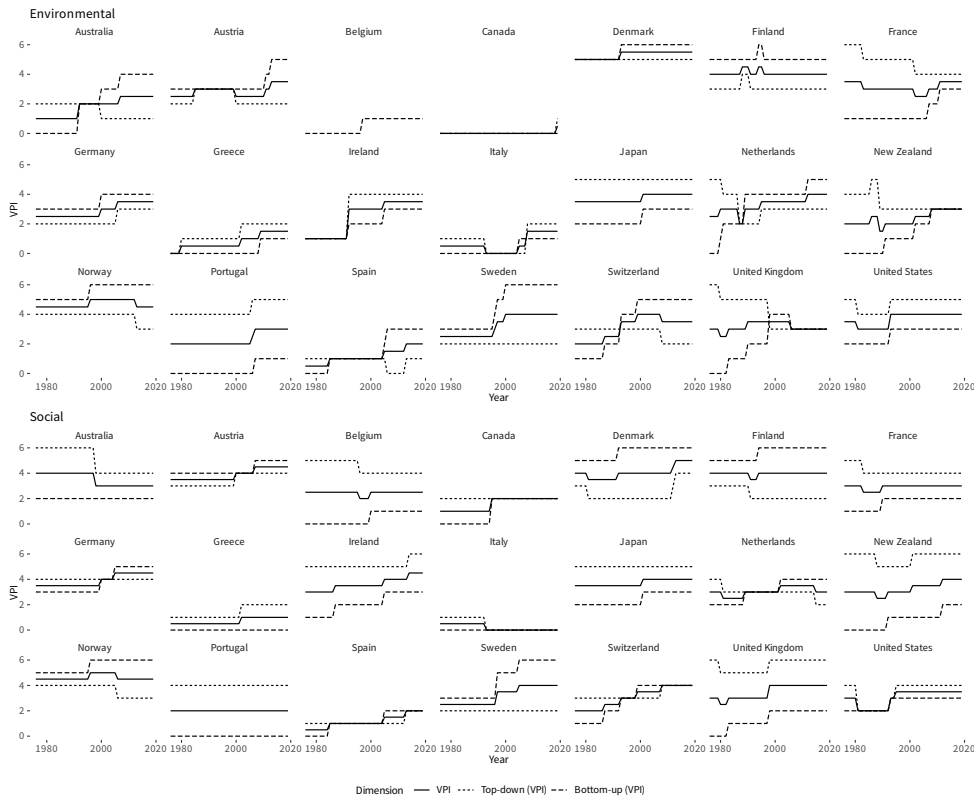
B Vertical Policy-Process Integration

Figure A1: Temporal evolution of vertical policy-process integration and its constitutive dimensions. Upper figure is environmental sector, and lower is social sector.

C Outcome variable: Gap (Implementation burden / Implementation capacity)

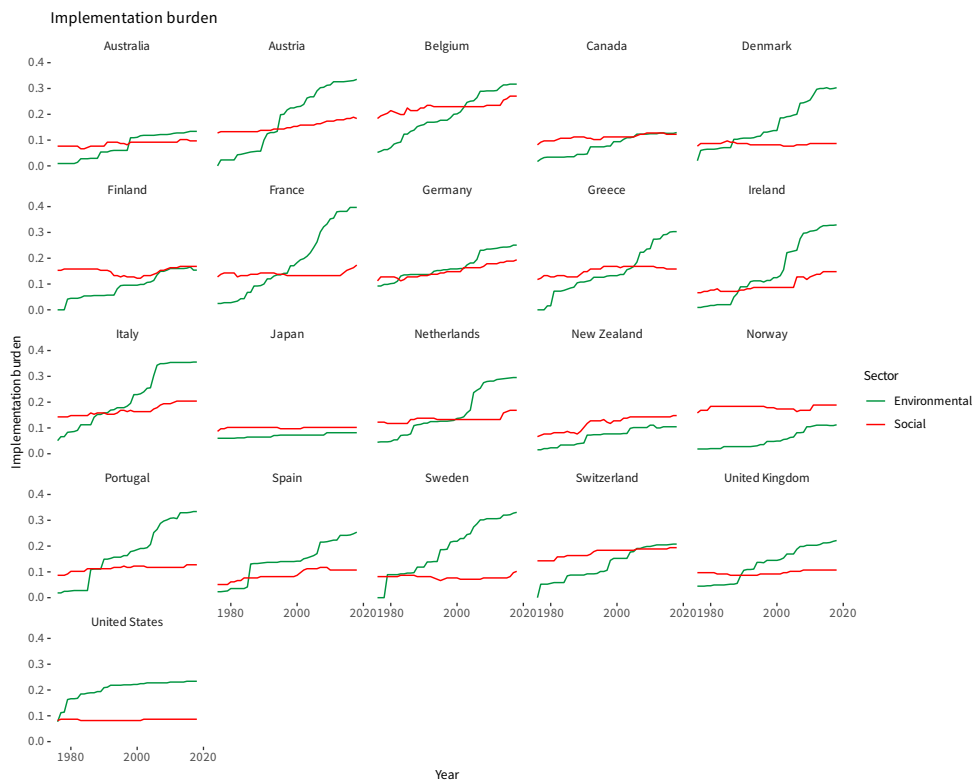## C.1 Implementation burden

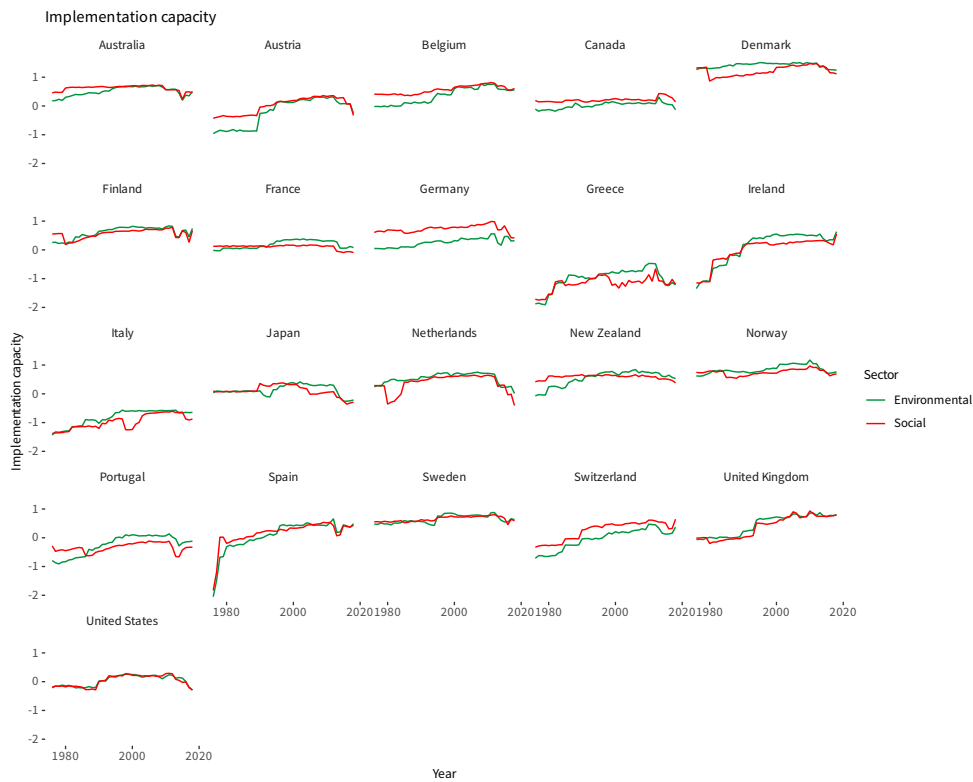Figure A2: Temporal evolution of implementation burden, by sector.

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Figure A3: Temporal evolution of implementation capacity, by sector. Implementation capacity is in its original scale, standardized at mean zero and standard deviation 1.

C.2 Implementation capacity

The scores of implementation capacity have been generated with a measurement model. The relative importances of each of the constitutive variables are shown in Table A4, along with the correlations between them and the generated scores.

Table A4: Discrimination parameters for a measurement model of implementation capacity, and the resulting correlations with the generated scores.

	Discrimination (point estimate)			
Component	Environmental	Social	cor(Env)	cor(Soc)
Administrative spending on active labour policy per population		0.0103		0.85
Environmental institutionalization	0.0132		0.573	
Information capacity	0.0711	0.0402	0.352	0.277
Professional bureaucratic remuneration	0.124	0.144	0.141	0.155
Professional criteria for appointment decisions in the state administration	0.717	0.685	0.801	0.731
Rigorous and impartial public administration	0.629	0.91	0.917	0.976
State authority over territory	0.317	0.262	0.435	0.424
Statistical Capacity score	0.43	0.336	-0.072	-0.0867
Tax revenue (% of GDP)	0.827	0.924	0.481	0.358
Taxes on income, profits and capital gains (% of revenue)	0.392	0.402	0.0808	0.0436
Taxes on international trade (% of revenue)	-0.0637	-0.068	-0.518	-0.433
Weberianess	-0.461	-0.406	0.0123	0.0124

High absolute values account for variables that contain a lot of information for the latent score on implementation capacity. Positive values account for variables that are oriented in the same direction as the latent score, where negative values imply that positive manifestations of the respective variable are aligned with negative values in the resulting latent score. Variables at zero provide no information.

The congeneric reliability (ρ_C, also known as ω reliability) is 0.78 for the environmental sector and 0.79 for the social sector.

C.3 Gap: Implementation burden / Implementation capacity

The burden capacity gap is obtained by the following procedure:

- Implementation burden: standardize and center at 10. Centering at 10 allows us to discard problems associated to signs between numerator and denominator, by having all in the positive range.
- Implementation capacity: standardize and center at 10.
- Divide the standardized and centered quantities (PS/IC).
- Subtract one, so that it is centered at zero, and the substantial interpretation of a zero is where the numerator and denominator are at their averages, or in equilibrium.
- Multiply by 10, so that the range resembles that of a standardized normal, with most of the cases between -2 and +2.

Figure A5 shows the correlation matrix between the main outcome variable (Burden capacity gap), its constitutive parts (Implementation burden and Implementation capacity) the main explanatory variable (Vertical Policy-Process Integration), as well as the control variables. Table A5 shows the descriptive statistics of the variables involved in the analysis, for the reference model.
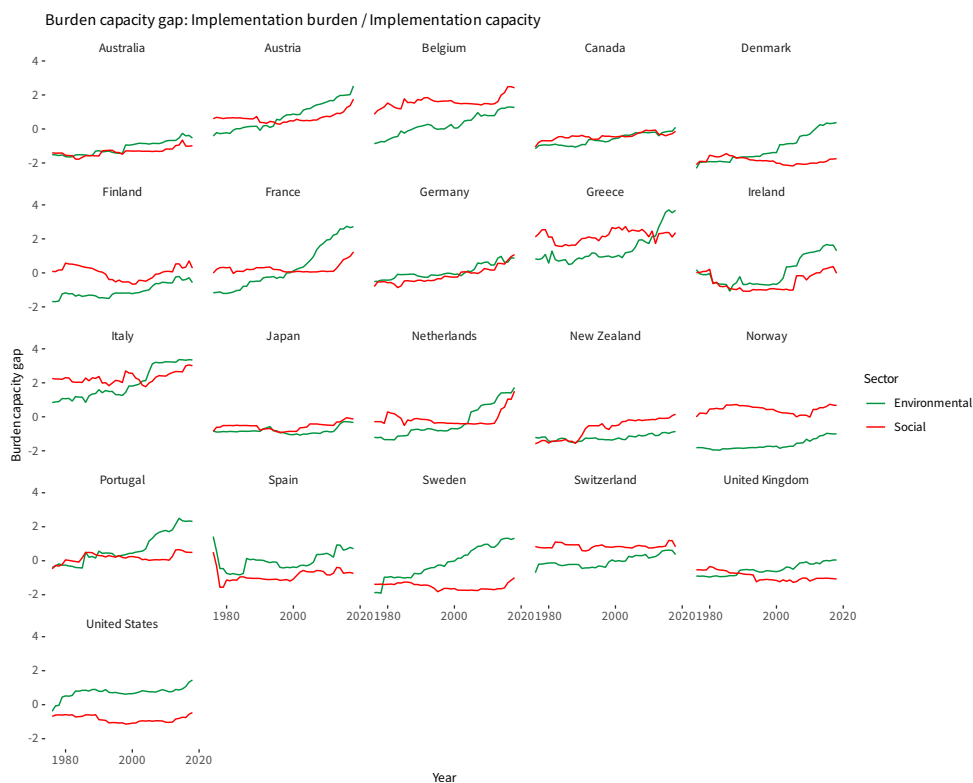
Figure A4: Temporal evolution of the burden capacity gap between implementation burden over implementation capacity, by sector. Implementation capacity has been centered from its original scale. Its minimum value is now one.

Figure A5: Correlation matrices for the relevant variables. By sector.

Table A5: Descriptive statistics.
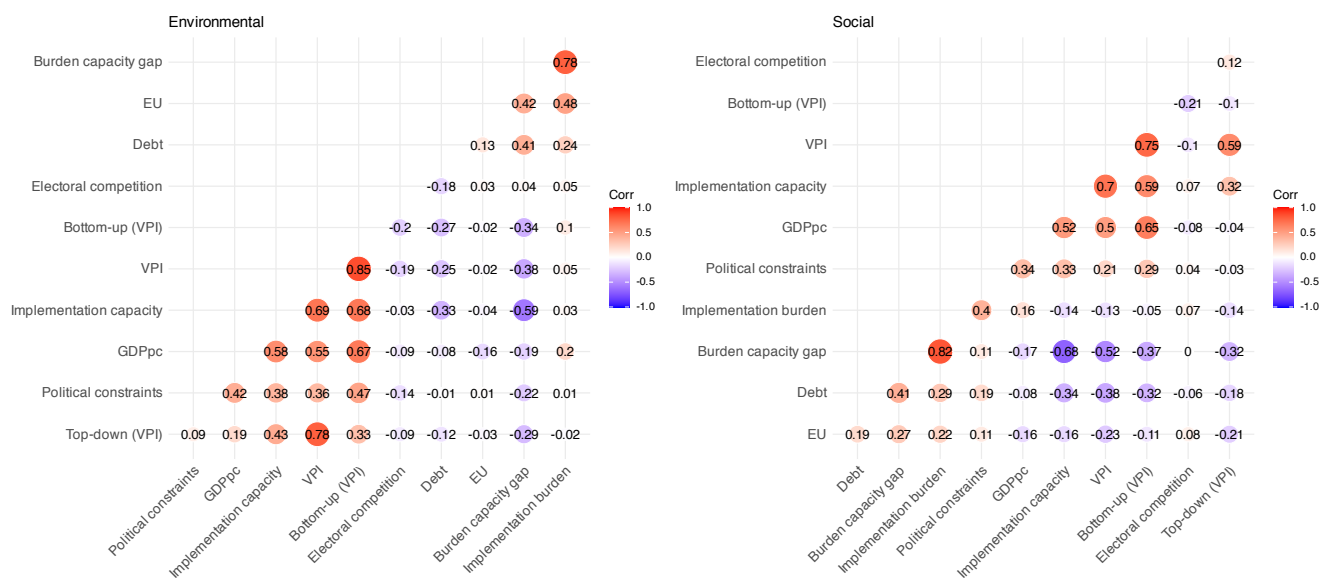
Variable	Min	Mean	Median	Max	SD
Debt	2.290	61.4502	55.2550	249.1100	34.7847
EU	0.000	0.5759	1.0000	1.0000	0.4943
Electoral competition	0.000	0.2393	0.1864	0.7538	0.2172
GDPpc (in 1,000s)	10.766	38.5091	36.2863	92.1195	14.9526
Political constraints	0.000	0.4730	0.4691	0.7181	0.0938
VPI	0.000	2.7975	3.0000	5.5000	1.3191
Environmental					
Bottom-up (VPI)	0.000	2.3787	2.0000	6.0000	1.9468
Burden capacity gap	-2.317	-0.1081	-0.2608	3.7072	1.1209
Implementation burden	0.000	0.1421	0.1246	0.3969	0.0930
Implementation capacity	-2.050	0.2083	0.2596	1.5095	0.5979
Top-down (VPI)	0.000	2.9174	3.0000	6.0000	1.5924
Social					
Bottom-up (VPI)	0.000	2.3787	2.0000	6.0000	1.9341
Burden capacity gap	-2.171	-0.0682	-0.2339	3.0530	1.1392
Implementation burden	0.051	0.1278	0.1276	0.2704	0.0417
Implementation capacity	-1.831	0.2284	0.3249	1.4766	0.5891
Top-down (VPI)	0.000	3.4109	4.0000	6.0000	1.5401

D Results

D.1 Main results in tabular form

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.56	(0.117)	[0.33 : 0.79]
Debt (log)	0.53	(0.062)	[0.42 : 0.66]
EU	0.47	(0.068)	[0.34 : 0.61]
VPI	-0.41	(0.065)	[-0.54 : -0.29]
Political constraints	-0.38	(0.083)	[-0.54 : -0.22]
GDPpc	-0.22	(0.08)	[-0.37 : -0.064]
Corporatism	0.07	(0.057)	[-0.037 : 0.18]
Electoral competition	-0.07	(0.054)	[-0.18 : 0.033]
Contiguity dependency (BCG)	0.01	(0.087)	[-0.15 : 0.19]
** Goodness of fit (R2)	0.59	(0.00146)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.21	(0.081)	[-1.4 : -1]
Trade dependency (BCG)	0.54	(0.093)	[0.36 : 0.72]
GDPpc	0.45	(0.09)	[0.28 : 0.63]
Corporatism	0.45	(0.064)	[0.32 : 0.57]
Debt (log)	0.38	(0.067)	[0.25 : 0.51]
Electoral competition	-0.24	(0.051)	[-0.34 : -0.14]
Political constraints	0.19	(0.087)	[0.024 : 0.36]
EU	-0.18	(0.082)	[-0.33 : -0.012]
Contiguity dependency (BCG)	-0.02	(0.083)	[-0.18 : 0.15]
** Goodness of fit (R2)	0.56	(0.00175)	[0.55 : 0.56]

Table A6: Model parameters. Reference model. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.58	(0.116)	[0.35 : 0.81]
Debt (log)	0.51	(0.063)	[0.39 : 0.64]
EU	0.47	(0.067)	[0.34 : 0.61]
Political constraints	-0.40	(0.085)	[-0.57 : -0.24]
Bottom-up (VPI)	-0.33	(0.095)	[-0.52 : -0.14]
Top-down (VPI)	-0.30	(0.078)	[-0.45 : -0.15]
GDPpc	-0.24	(0.084)	[-0.41 : -0.077]
Electoral competition	-0.11	(0.048)	[-0.2 : -0.012]
Corporatism	0.07	(0.062)	[-0.051 : 0.19]
Contiguity dependency (BCG)	0.01	(0.088)	[-0.15 : 0.19]
** Goodness of fit (R2)	0.59	(0.0016)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
Bottom-up (VPI)	-1.51	(0.091)	[-1.7 : -1.3]
GDPpc	0.74	(0.088)	[0.56 : 0.91]
Corporatism	0.70	(0.071)	[0.56 : 0.84]
Top-down (VPI)	-0.56	(0.086)	[-0.74 : -0.4]
Trade dependency (BCG)	0.47	(0.091)	[0.29 : 0.65]
Debt (log)	0.33	(0.065)	[0.21 : 0.46]
Electoral competition	-0.27	(0.049)	[-0.37 : -0.17]
Political constraints	0.17	(0.086)	[-4.4e-05 : 0.33]
EU	-0.16	(0.08)	[-0.31 : -2e-04]
Contiguity dependency (BCG)	-0.02	(0.078)	[-0.18 : 0.13]
** Goodness of fit (R2)	0.57	(0.00186)	[0.56 : 0.57]

Table A7: Model parameters. VPI in 2 dimensions. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Debt (log)	0.52	(0.06)	[0.39 : 0.63]
EU	0.46	(0.069)	[0.33 : 0.6]
Trade dependency (BCG)	0.45	(0.109)	[0.23 : 0.67]
Political constraints	-0.44	(0.079)	[-0.59 : -0.28]
VPI	-0.35	(0.059)	[-0.46 : -0.23]
GDPpc	-0.19	(0.075)	[-0.34 : -0.048]
Contiguity dependency (BCG)	0.13	(0.081)	[-0.028 : 0.28]
Corporatism	0.05	(0.056)	[-0.061 : 0.16]
Electoral competition	0.03	(0.049)	[-0.063 : 0.13]
** Goodness of fit (R2)	0.58	(0.00147)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.18	(0.079)	[-1.3 : -1]
Trade dependency (BCG)	0.60	(0.095)	[0.41 : 0.78]
GDPpc	0.46	(0.082)	[0.3 : 0.62]
Corporatism	0.45	(0.064)	[0.32 : 0.57]
Debt (log)	0.39	(0.067)	[0.26 : 0.52]
EU	-0.19	(0.082)	[-0.35 : -0.033]
Electoral competition	-0.19	(0.051)	[-0.29 : -0.095]
Political constraints	0.16	(0.088)	[-0.011 : 0.33]
Contiguity dependency (BCG)	-0.09	(0.084)	[-0.25 : 0.07]
** Goodness of fit (R2)	0.55	(0.0018)	[0.55 : 0.55]

Table A8: Model parameters. Continuous learning (instruments). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Debt (log)	0.50	(0.06)	[0.38 : 0.62]
EU	0.49	(0.069)	[0.35 : 0.63]
Political constraints	-0.43	(0.086)	[-0.6 : -0.27]
Contiguity dependency (BCG)	0.36	(0.077)	[0.21 : 0.51]
VPI	-0.34	(0.062)	[-0.46 : -0.21]
Trade dependency (BCG)	0.23	(0.106)	[0.021 : 0.44]
Electoral competition	0.14	(0.052)	[0.036 : 0.24]
GDPpc	-0.09	(0.073)	[-0.24 : 0.047]
Corporatism	0.04	(0.057)	[-0.077 : 0.15]
** Goodness of fit (R2)	0.57	(0.00183)	[0.56 : 0.57]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.09	(0.08)	[-1.2 : -0.93]
Trade dependency (BCG)	0.61	(0.09)	[0.44 : 0.79]
GDPpc	0.51	(0.075)	[0.36 : 0.66]
Debt (log)	0.37	(0.066)	[0.24 : 0.5]
Corporatism	0.29	(0.062)	[0.16 : 0.41]
Electoral competition	-0.12	(0.053)	[-0.23 : -0.015]
EU	-0.10	(0.08)	[-0.26 : 0.049]
Contiguity dependency (BCG)	-0.07	(0.077)	[-0.21 : 0.086]
Political constraints	0.01	(0.087)	[-0.16 : 0.18]
** Goodness of fit (R2)	0.53	(0.00215)	[0.53 : 0.54]

Table A9: Model parameters. Steep learning (instruments). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Debt (log)	0.55	(0.066)	[0.42 : 0.68]
Trade dependency (BCG)	0.53	(0.119)	[0.3 : 0.77]
EU	0.48	(0.069)	[0.34 : 0.61]
VPI	-0.40	(0.066)	[-0.53 : -0.27]
Political constraints	-0.37	(0.085)	[-0.53 : -0.2]
GDPpc	-0.20	(0.08)	[-0.36 : -0.042]
Corporatism	0.08	(0.058)	[-0.038 : 0.19]
Contiguity dependency (BCG)	0.04	(0.086)	[-0.13 : 0.21]
Electoral competition	-0.03	(0.083)	[-0.15 : 0.15]
** Goodness of fit (R2)	0.59	(0.0015)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.20	(0.08)	[-1.4 : -1]
Trade dependency (BCG)	0.59	(0.095)	[0.4 : 0.77]
GDPpc	0.53	(0.086)	[0.36 : 0.7]
Corporatism	0.41	(0.064)	[0.29 : 0.53]
Debt (log)	0.37	(0.066)	[0.24 : 0.5]
Electoral competition	-0.20	(0.064)	[-0.32 : -0.069]
EU	-0.18	(0.085)	[-0.35 : -0.02]
Political constraints	0.15	(0.088)	[-0.017 : 0.32]
Contiguity dependency (BCG)	-0.05	(0.084)	[-0.21 : 0.12]
** Goodness of fit (R2)	0.55	(0.00243)	[0.54 : 0.55]

Table A10: Model parameters. Capped learning (instruments). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

D.2 Variances
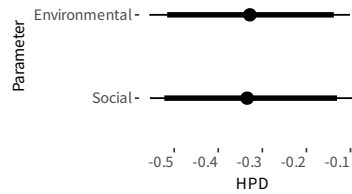
Figure A6: Parameters (λ) accounting for the effects of political constraints on the variance of the burden capacity gap (heteroskedasticity). Model parameters in Table A6.

D.3 Auto-regressive components
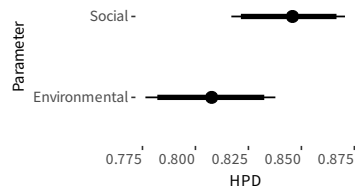
Figure A7: Auto-regressive (AR1) parameters (ρ_s). Model parameters in Table A6.

D.4 Time

Figure A8: Varying intercepts by decade (α_s). Model parameters in Table A6.

E Robustness and sensitivity

E.1 Different lag periods

Figure A9: Main effects comparing smoothed lags at 3 (reference model), 5 and 7 years (θ_s). Model parameters in Tables A6, A11 and A12.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.57	(0.122)	[0.33 : 0.8]
Debt (log)	0.53	(0.062)	[0.41 : 0.65]
EU	0.47	(0.07)	[0.33 : 0.6]
Political constraints	-0.40	(0.09)	[-0.58 : -0.23]
VPI	-0.39	(0.072)	[-0.53 : -0.26]
GDPpc	-0.21	(0.083)	[-0.37 : -0.05]
Corporatism	0.07	(0.058)	[-0.046 : 0.18]
Electoral competition	-0.05	(0.057)	[-0.16 : 0.063]
Contiguity dependency (BCG)	0.02	(0.085)	[-0.15 : 0.19]
** Goodness of fit (R2)	0.59	(0.00153)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.21	(0.079)	[-1.4 : -1]
Trade dependency (BCG)	0.55	(0.094)	[0.37 : 0.74]
GDPpc	0.47	(0.087)	[0.29 : 0.64]
Corporatism	0.44	(0.064)	[0.32 : 0.57]
Debt (log)	0.38	(0.067)	[0.25 : 0.51]
Electoral competition	-0.23	(0.053)	[-0.33 : -0.12]
EU	-0.19	(0.084)	[-0.36 : -0.025]
Political constraints	0.19	(0.086)	[0.023 : 0.36]
Contiguity dependency (BCG)	-0.02	(0.085)	[-0.18 : 0.14]
** Goodness of fit (R2)	0.55	(0.0018)	[0.55 : 0.56]

Table A11: Model parameters. Lag 5 years. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.
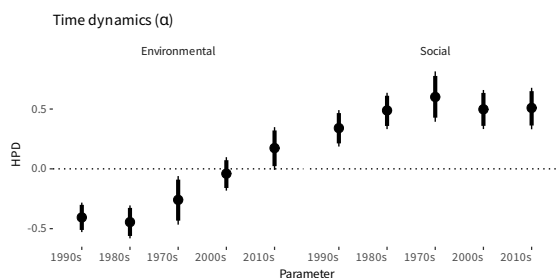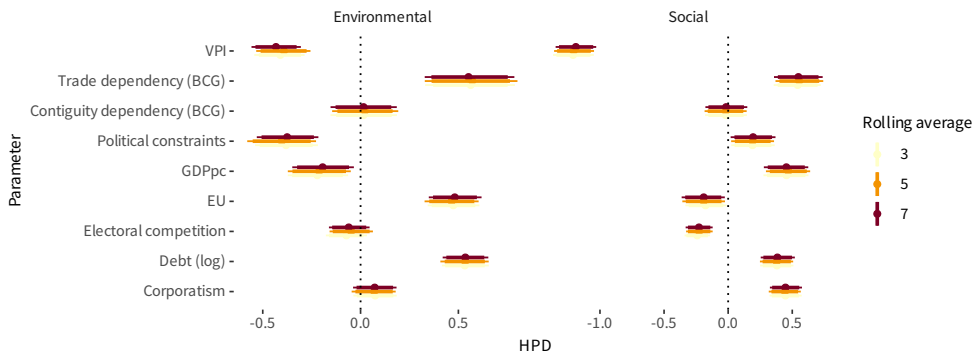
Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.55	(0.118)	[0.33 : 0.79]
Debt (log)	0.54	(0.059)	[0.42 : 0.65]
EU	0.48	(0.068)	[0.35 : 0.62]
VPI	-0.43	(0.064)	[-0.56 : -0.31]
Political constraints	-0.38	(0.08)	[-0.53 : -0.22]
GDPpc	-0.19	(0.08)	[-0.35 : -0.034]
Corporatism	0.07	(0.057)	[-0.038 : 0.18]
Electoral competition	-0.06	(0.053)	[-0.16 : 0.046]
Contiguity dependency (BCG)	0.02	(0.086)	[-0.15 : 0.19]
** Goodness of fit (R2)	0.59	(0.0014)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.19	(0.081)	[-1.3 : -1]
Trade dependency (BCG)	0.55	(0.096)	[0.36 : 0.74]
GDPpc	0.45	(0.089)	[0.28 : 0.62]
Corporatism	0.45	(0.065)	[0.33 : 0.58]
Debt (log)	0.38	(0.067)	[0.25 : 0.52]
Electoral competition	-0.23	(0.053)	[-0.33 : -0.12]
Political constraints	0.19	(0.089)	[0.019 : 0.37]
EU	-0.19	(0.085)	[-0.36 : -0.026]
Contiguity dependency (BCG)	-0.02	(0.084)	[-0.18 : 0.15]
** Goodness of fit (R2)	0.55	(0.00177)	[0.55 : 0.55]

Table A12: Model parameters. Lag 7 years. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.
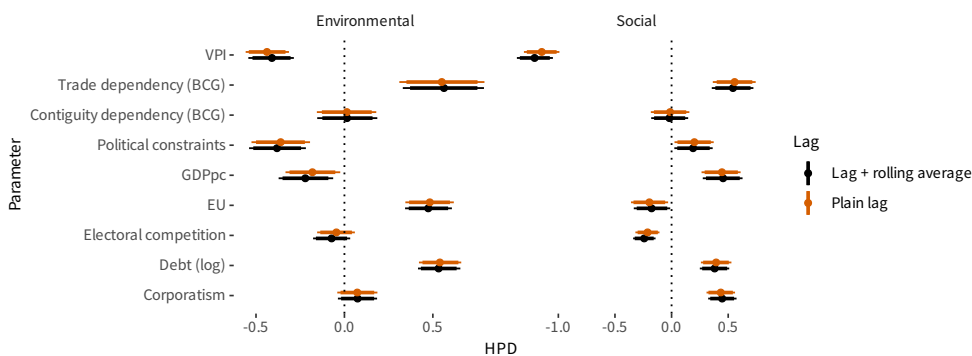
E.2 Lag, not smoothed

Figure A10: Main effects comparing smoothed lags at 3 (reference model) with plain lag at 3 years (θ_s). Model parameters in Tables A6 and A13.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.55	(0.123)	[0.31 : 0.79]
Debt (log)	0.54	(0.061)	[0.42 : 0.66]
EU	0.48	(0.07)	[0.34 : 0.62]
VPI	-0.44	(0.063)	[-0.56 : -0.31]
Political constraints	-0.36	(0.084)	[-0.53 : -0.19]
GDPpc	-0.18	(0.079)	[-0.33 : -0.024]
Corporatism	0.07	(0.057)	[-0.04 : 0.19]
Electoral competition	-0.05	(0.054)	[-0.15 : 0.059]
Contiguity dependency (BCG)	0.01	(0.086)	[-0.16 : 0.18]
** Goodness of fit (R2)	0.59	(0.00145)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.15	(0.08)	[-1.3 : -0.99]
Trade dependency (BCG)	0.56	(0.096)	[0.36 : 0.74]
GDPpc	0.44	(0.089)	[0.26 : 0.61]
Corporatism	0.43	(0.065)	[0.31 : 0.56]
Debt (log)	0.39	(0.068)	[0.26 : 0.53]
Electoral competition	-0.21	(0.054)	[-0.32 : -0.11]
Political constraints	0.20	(0.088)	[0.026 : 0.37]
EU	-0.20	(0.084)	[-0.36 : -0.031]
Contiguity dependency (BCG)	-0.01	(0.086)	[-0.18 : 0.16]
** Goodness of fit (R2)	0.55	(0.00179)	[0.55 : 0.55]

Table A13: Model parameters. No smoothed lag, but plain lag. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.3 Subtraction vs. Ratio

Figure A11: Main effects comparing the reference model against one where the gap is a subtraction (PS-IC) (θ_s). Model parameters in Tables A6 and A14.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	1.29	(0.076)	[1.1 : 1.4]
Contiguity dependency (BCG)	-0.72	(0.057)	[-0.83 : -0.61]
VPI	-0.59	(0.048)	[-0.69 : -0.5]
EU	0.53	(0.058)	[0.41 : 0.64]
Debt (log)	0.42	(0.051)	[0.32 : 0.52]
Political constraints	-0.25	(0.071)	[-0.39 : -0.12]
Electoral competition	-0.14	(0.042)	[-0.22 : -0.054]
GDPpc	0.02	(0.061)	[-0.1 : 0.14]
Corporatism	0.00	(0.047)	[-0.092 : 0.091]
** Goodness of fit (R2)	0.63	(0.00197)	[0.63 : 0.64]
y = Burden-Capacity gap (Social, N=903)			
VPI	-0.86	(0.047)	[-0.96 : -0.77]
Trade dependency (BCG)	0.38	(0.049)	[0.29 : 0.48]
Debt (log)	0.24	(0.041)	[0.16 : 0.32]
Corporatism	0.24	(0.038)	[0.16 : 0.31]
Electoral competition	-0.19	(0.031)	[-0.25 : -0.13]
GDPpc	0.16	(0.06)	[0.04 : 0.27]
Political constraints	-0.04	(0.053)	[-0.14 : 0.068]
Contiguity dependency (BCG)	-0.03	(0.05)	[-0.13 : 0.067]
EU	0.02	(0.05)	[-0.075 : 0.12]
** Goodness of fit (R2)	0.58	(0.00185)	[0.58 : 0.58]

Table A14: Model parameters. Burden as subtraction. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.4 Generosity vs. Administrative spending

Figure A12: Main effects comparing the reference model against one where implementation capacity replaces administrative spending with generosity (θ_s). Only social sector. Model parameters in Tables A6 and A15.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.03	(0.075)	[-1.2 : -0.88]
Trade dependency (BCG)	0.46	(0.092)	[0.27 : 0.64]
GDPpc	0.45	(0.085)	[0.27 : 0.61]
Corporatism	0.39	(0.06)	[0.27 : 0.51]
Debt (log)	0.38	(0.065)	[0.25 : 0.51]
EU	-0.17	(0.078)	[-0.32 : -0.016]
Electoral competition	-0.16	(0.059)	[-0.27 : -0.042]
Political constraints	0.11	(0.084)	[-0.055 : 0.28]
Contiguity dependency (BCG)	0.02	(0.081)	[-0.14 : 0.18]
** Goodness of fit (R2)	0.54	(0.00202)	[0.53 : 0.54]

Table A15: Model parameters. Model with generosity instead of administrative spending. Only social sector. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.5 Simplified VPI
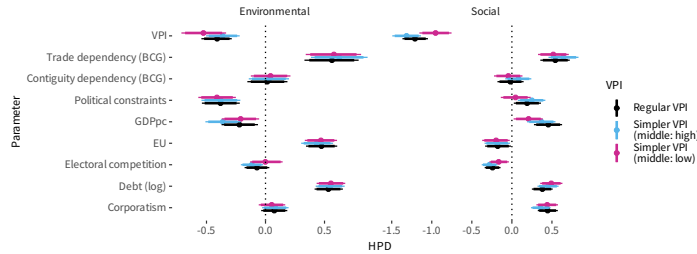
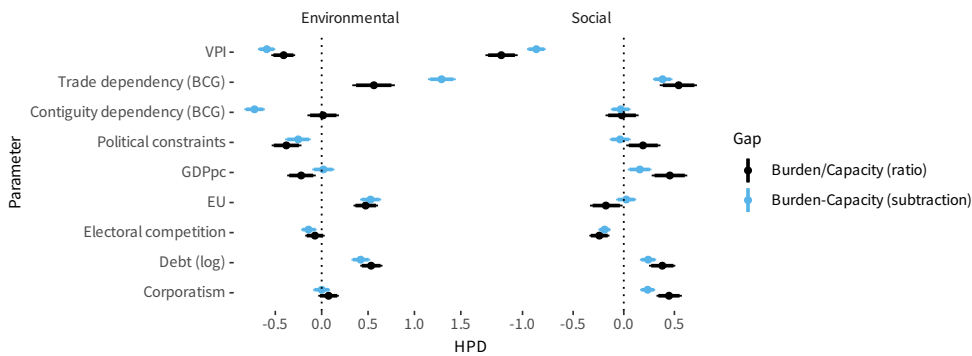Figure A13: Main effects comparing the reference model against one where VPI is simplified into two categories (θ_s). Model parameters in Tables A6, A16 and A17.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.63	(0.124)	[0.39 : 0.86]
Debt (log)	0.55	(0.062)	[0.43 : 0.67]
EU	0.43	(0.068)	[0.3 : 0.57]
Political constraints	-0.38	(0.084)	[-0.54 : -0.21]
VPI	-0.36	(0.073)	[-0.5 : -0.22]
GDPpc	-0.36	(0.075)	[-0.51 : -0.21]
Electoral competition	-0.12	(0.048)	[-0.21 : -0.019]
Corporatism	0.08	(0.057)	[-0.029 : 0.2]
Contiguity dependency (BCG)	0.03	(0.086)	[-0.14 : 0.2]
** Goodness of fit (R2)	0.58	(0.00139)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.32	(0.091)	[-1.5 : -1.1]
Trade dependency (BCG)	0.64	(0.096)	[0.46 : 0.83]
Debt (log)	0.45	(0.067)	[0.32 : 0.58]
GDPpc	0.37	(0.091)	[0.19 : 0.54]
Corporatism	0.36	(0.062)	[0.24 : 0.48]
Electoral competition	-0.28	(0.05)	[-0.38 : -0.18]
Political constraints	0.25	(0.088)	[0.074 : 0.42]
EU	-0.18	(0.081)	[-0.34 : -0.025]
Contiguity dependency (BCG)	0.08	(0.083)	[-0.083 : 0.24]
** Goodness of fit (R2)	0.55	(0.00163)	[0.55 : 0.55]

Table A16: Model parameters. VPI with 2 values (low/high, and middle category as high). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.
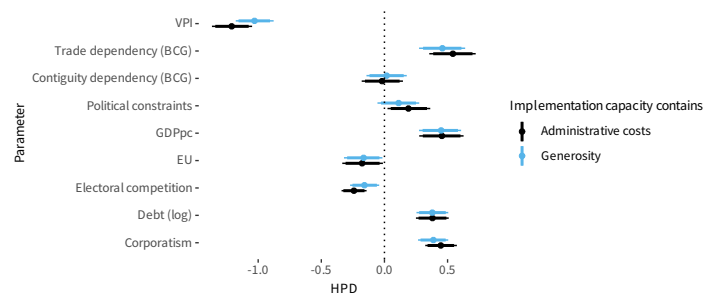
Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.58	(0.12)	[0.34 : 0.81]
Debt (log)	0.55	(0.062)	[0.43 : 0.68]
VPI	-0.53	(0.095)	[-0.71 : -0.33]
EU	0.47	(0.069)	[0.33 : 0.61]
Political constraints	-0.41	(0.081)	[-0.57 : -0.25]
GDPpc	-0.21	(0.081)	[-0.37 : -0.054]
Corporatism	0.05	(0.057)	[-0.057 : 0.17]
Contiguity dependency (BCG)	0.04	(0.085)	[-0.12 : 0.21]
Electoral competition	0.00	(0.074)	[-0.13 : 0.15]
** Goodness of fit (R2)	0.58	(0.00143)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-0.95	(0.103)	[-1.2 : -0.75]
Trade dependency (BCG)	0.52	(0.098)	[0.33 : 0.71]
Debt (log)	0.49	(0.07)	[0.35 : 0.63]
Corporatism	0.44	(0.068)	[0.31 : 0.58]
GDPpc	0.21	(0.094)	[0.022 : 0.39]
EU	-0.20	(0.089)	[-0.37 : -0.027]
Electoral competition	-0.16	(0.061)	[-0.28 : -0.038]
Political constraints	0.05	(0.094)	[-0.14 : 0.23]
Contiguity dependency (BCG)	-0.04	(0.09)	[-0.22 : 0.13]
** Goodness of fit (R2)	0.52	(0.00272)	[0.51 : 0.52]

Table A17: Model parameters. VPI with 2 values (low/high, and middle category as low). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.6 Learning via Targets

Figure A14 compares the posterior distributions of the parameters of interest (θ_s) between the reference model and three specifications where learning occurs through the same mechanisms explained in the main text, but the weights are by targets, not by instrument.

In the main text, we assume that the administration primarily learns via the instrument dimension. Following this logic, we expect that administrators will find it easier to implement policies that use the same instrument type. However, one might argue that learning with respect to policy targets is also relevant. In other words, it can be the case that once the administration managed to deliver services to one category of people, another policy affecting the same target group will be easier to implement than the previous one. To take account of such learning effects, we discount instruments that are adopted in the context of the same policy target. Here, we apply the weighting schemes as described in the main text (no learning; capped learning; continuous learning; steep learning).
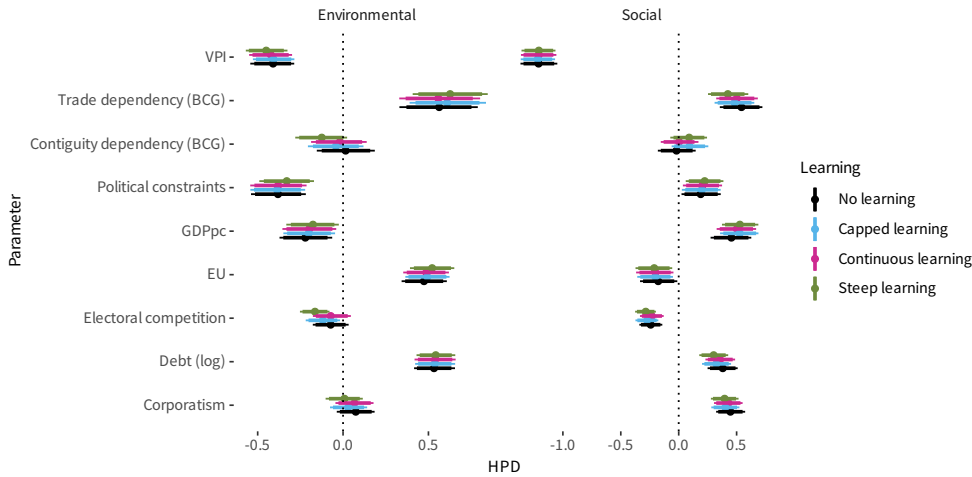
Figure A14: Main effects comparing the reference model against different models specifying learning using weights by targets (θ_s). Model parameters in Tables A6 and A18 to A20.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.56	(0.119)	[0.33 : 0.8]
Debt (log)	0.54	(0.061)	[0.42 : 0.66]
EU	0.49	(0.069)	[0.35 : 0.62]
VPI	-0.42	(0.065)	[-0.55 : -0.3]
Political constraints	-0.38	(0.085)	[-0.54 : -0.21]
GDPpc	-0.20	(0.081)	[-0.36 : -0.04]
Electoral competition	-0.07	(0.057)	[-0.18 : 0.046]
Corporatism	0.07	(0.057)	[-0.044 : 0.18]
Contiguity dependency (BCG)	-0.02	(0.082)	[-0.19 : 0.14]
** Goodness of fit (R2)	0.59	(0.00148)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.21	(0.079)	[-1.4 : -1.1]
GDPpc	0.50	(0.087)	[0.33 : 0.67]
Trade dependency (BCG)	0.50	(0.091)	[0.32 : 0.68]
Corporatism	0.43	(0.063)	[0.31 : 0.55]
Debt (log)	0.36	(0.065)	[0.23 : 0.49]
Electoral competition	-0.23	(0.052)	[-0.33 : -0.13]
Political constraints	0.21	(0.086)	[0.036 : 0.37]
EU	-0.20	(0.082)	[-0.37 : -0.045]
Contiguity dependency (BCG)	0.00	(0.082)	[-0.15 : 0.17]
** Goodness of fit (R2)	0.55	(0.00188)	[0.55 : 0.56]

Table A18: Model parameters. Continuous learning (targets). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.63	(0.113)	[0.41 : 0.85]
Debt (log)	0.54	(0.058)	[0.43 : 0.66]
EU	0.52	(0.066)	[0.39 : 0.65]
VPI	-0.45	(0.062)	[-0.57 : -0.33]
Political constraints	-0.33	(0.081)	[-0.49 : -0.17]
GDPpc	-0.18	(0.077)	[-0.33 : -0.025]
Electoral competition	-0.16	(0.044)	[-0.25 : -0.079]
Contiguity dependency (BCG)	-0.12	(0.078)	[-0.28 : 0.024]
Corporatism	0.01	(0.055)	[-0.1 : 0.12]
** Goodness of fit (R2)	0.59	(0.00158)	[0.59 : 0.6]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.21	(0.075)	[-1.4 : -1.1]
GDPpc	0.53	(0.08)	[0.37 : 0.69]
Trade dependency (BCG)	0.42	(0.088)	[0.25 : 0.6]
Corporatism	0.40	(0.06)	[0.28 : 0.52]
Debt (log)	0.30	(0.064)	[0.18 : 0.43]
Electoral competition	-0.28	(0.046)	[-0.38 : -0.2]
Political constraints	0.22	(0.083)	[0.061 : 0.39]
EU	-0.21	(0.082)	[-0.37 : -0.056]
Contiguity dependency (BCG)	0.09	(0.081)	[-0.072 : 0.24]
** Goodness of fit (R2)	0.55	(0.00188)	[0.55 : 0.56]

Table A19: Model parameters. Steep learning (targets). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.61	(0.115)	[0.39 : 0.84]
Debt (log)	0.54	(0.059)	[0.42 : 0.66]
EU	0.49	(0.068)	[0.36 : 0.62]
VPI	-0.41	(0.062)	[-0.53 : -0.29]
Political constraints	-0.39	(0.083)	[-0.54 : -0.22]
GDPpc	-0.20	(0.077)	[-0.35 : -0.047]
Electoral competition	-0.12	(0.051)	[-0.22 : -0.018]
Contiguity dependency (BCG)	-0.04	(0.082)	[-0.21 : 0.12]
Corporatism	0.03	(0.056)	[-0.076 : 0.14]
** Goodness of fit (R2)	0.59	(0.00151)	[0.59 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.22	(0.076)	[-1.4 : -1.1]
GDPpc	0.53	(0.085)	[0.36 : 0.69]
Trade dependency (BCG)	0.48	(0.089)	[0.31 : 0.65]
Corporatism	0.40	(0.061)	[0.28 : 0.52]
Debt (log)	0.32	(0.064)	[0.2 : 0.45]
Electoral competition	-0.27	(0.05)	[-0.37 : -0.18]
EU	-0.20	(0.079)	[-0.36 : -0.049]
Political constraints	0.20	(0.085)	[0.027 : 0.36]
Contiguity dependency (BCG)	0.09	(0.08)	[-0.061 : 0.26]
** Goodness of fit (R2)	0.56	(0.00204)	[0.55 : 0.56]

Table A20: Model parameters. Capped learning (targets). Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.
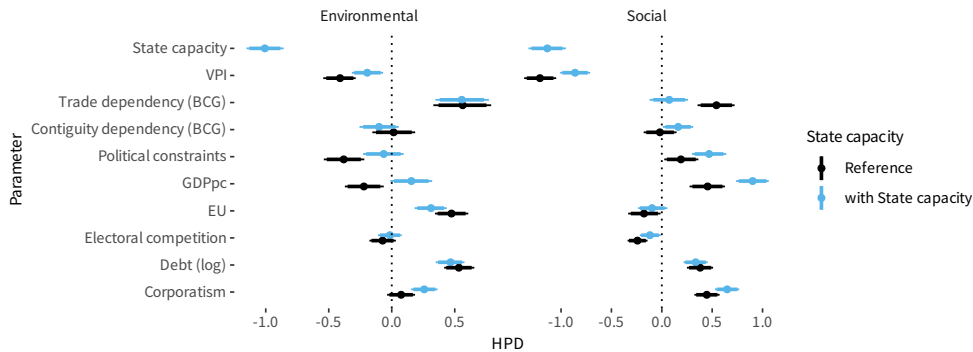
E.7   Control by State capacity

Figure A15: Main effects comparing the reference model against one with a control for State capacity (θ_s) using Hanson & Sigman (2020). Model parameters in Tables A6 and A21.

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Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
State capacity	-1.01	(0.075)	[-1.2 : -0.86]
Trade dependency (BCG)	0.56	(0.108)	[0.35 : 0.77]
Debt (log)	0.47	(0.058)	[0.35 : 0.58]
EU	0.31	(0.065)	[0.18 : 0.44]
Corporatism	0.26	(0.053)	[0.15 : 0.36]
VPI	-0.19	(0.063)	[-0.32 : -0.068]
GDPpc	0.16	(0.084)	[-0.011 : 0.32]
Contiguity dependency (BCG)	-0.10	(0.078)	[-0.26 : 0.055]
Political constraints	-0.06	(0.082)	[-0.23 : 0.095]
Electoral competition	-0.01	(0.048)	[-0.11 : 0.079]
** Goodness of fit (R2)	0.62	(0.00161)	[0.62 : 0.62]
y = Burden-Capacity gap (Social, N=903)			
State capacity	-1.14	(0.094)	[-1.3 : -0.95]
GDPpc	0.90	(0.083)	[0.74 : 1.1]
VPI	-0.86	(0.076)	[-1 : -0.71]
Corporatism	0.65	(0.062)	[0.53 : 0.77]
Political constraints	0.47	(0.088)	[0.3 : 0.64]
Debt (log)	0.34	(0.061)	[0.22 : 0.46]
Contiguity dependency (BCG)	0.16	(0.076)	[0.011 : 0.31]
Electoral competition	-0.12	(0.053)	[-0.22 : -0.011]
EU	-0.10	(0.075)	[-0.24 : 0.056]
Trade dependency (BCG)	0.07	(0.097)	[-0.12 : 0.26]
** Goodness of fit (R2)	0.59	(0.00168)	[0.58 : 0.59]

Table A21: Model parameters. With state capacity. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.8 Control by Regional authority index

Figure A16: Main effects comparing the reference model against one with a control for Regional authority (average of self-rule and shared rule) (θ_s) using Hooghe & Marks (2016). Model parameters in Tables A6 and A22.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.60	(0.119)	[0.37 : 0.84]
EU	0.53	(0.072)	[0.4 : 0.68]
Debt (log)	0.49	(0.062)	[0.37 : 0.61]
Political constraints	-0.42	(0.083)	[-0.58 : -0.26]
VPI	-0.34	(0.066)	[-0.47 : -0.21]
Regional authority	0.32	(0.067)	[0.19 : 0.46]
GDPpc	-0.29	(0.078)	[-0.44 : -0.14]
Electoral competition	-0.13	(0.047)	[-0.23 : -0.044]
Contiguity dependency (BCG)	-0.07	(0.086)	[-0.24 : 0.1]
Corporatism	0.06	(0.057)	[-0.055 : 0.17]
** Goodness of fit (R2)	0.59	(0.00156)	[0.59 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.22	(0.079)	[-1.4 : -1.1]
Trade dependency (BCG)	0.53	(0.095)	[0.34 : 0.71]
GDPpc	0.44	(0.088)	[0.26 : 0.61]
Corporatism	0.43	(0.064)	[0.31 : 0.56]
Debt (log)	0.39	(0.066)	[0.26 : 0.52]
Electoral competition	-0.23	(0.051)	[-0.33 : -0.13]
Political constraints	0.22	(0.087)	[0.051 : 0.39]
EU	-0.17	(0.084)	[-0.33 : -0.0019]
Regional authority	-0.14	(0.074)	[-0.29 : 0.0053]
Contiguity dependency (BCG)	0.03	(0.089)	[-0.14 : 0.21]
** Goodness of fit (R2)	0.56	(0.00163)	[0.55 : 0.56]

Table A22: Model parameters. With regional authority. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

E.9 Comparison between the Gap and its constitutive parts

Figure A17: Comparison of the VPI effect in a model with a standardized gap against the VPI of the standardized constitutive parts (Portfolio size and Implementation capacity, respectively) (θ_s). Model parameters in Tables A23 to A25.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.50	(0.109)	[0.28 : 0.71]
Debt (log)	0.47	(0.054)	[0.36 : 0.57]
EU	0.42	(0.06)	[0.3 : 0.54]
VPI	-0.36	(0.058)	[-0.48 : -0.25]
Political constraints	-0.34	(0.074)	[-0.49 : -0.19]
GDPpc	-0.20	(0.07)	[-0.33 : -0.055]
Electoral competition	-0.07	(0.043)	[-0.15 : 0.01]
Corporatism	0.06	(0.051)	[-0.034 : 0.17]
Contiguity dependency (BCG)	0.01	(0.075)	[-0.13 : 0.16]
** Goodness of fit (R2)	0.59	(0.00144)	[0.58 : 0.59]
y = Burden-Capacity gap (Social, N=903)			
VPI	-1.07	(0.068)	[-1.2 : -0.94]
Trade dependency (BCG)	0.48	(0.085)	[0.32 : 0.65]
Corporatism	0.40	(0.056)	[0.28 : 0.5]
GDPpc	0.40	(0.077)	[0.24 : 0.55]
Debt (log)	0.34	(0.059)	[0.22 : 0.45]
Electoral competition	-0.22	(0.045)	[-0.31 : -0.13]
Political constraints	0.17	(0.076)	[0.022 : 0.32]
EU	-0.16	(0.074)	[-0.31 : -0.013]
Contiguity dependency (BCG)	-0.02	(0.074)	[-0.17 : 0.12]
** Goodness of fit (R2)	0.56	(0.00171)	[0.55 : 0.56]

Table A23: Model parameters. Gap standardized. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.
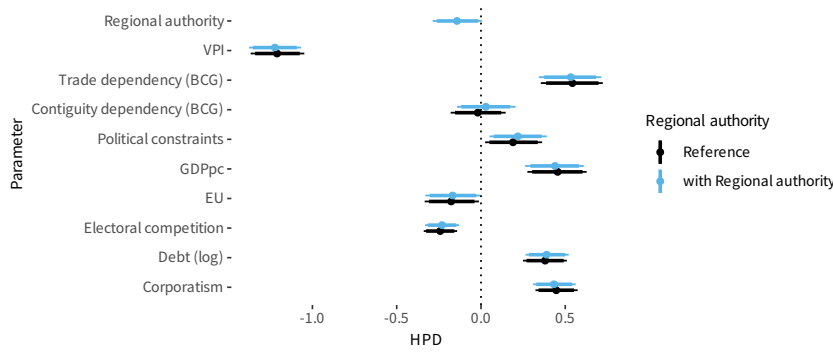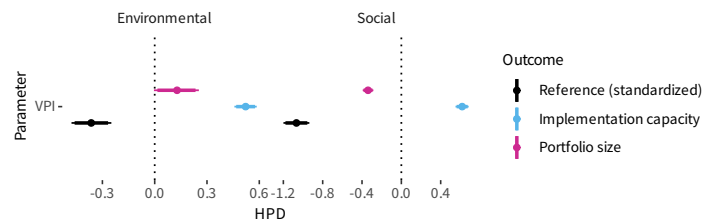
Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
Trade dependency (BCG)	0.68	(0.123)	[0.44 : 0.92]
EU	0.67	(0.065)	[0.54 : 0.8]
Debt (log)	0.36	(0.052)	[0.26 : 0.47]
VPI	0.13	(0.066)	[-0.0044 : 0.25]
Corporatism	0.12	(0.054)	[0.017 : 0.23]
Contiguity dependency (BCG)	-0.12	(0.08)	[-0.28 : 0.042]
Electoral competition	-0.06	(0.043)	[-0.15 : 0.022]
Political constraints	-0.01	(0.075)	[-0.15 : 0.14]
GDPpc	0.00	(0.08)	[-0.16 : 0.15]
** Goodness of fit (R2)	0.64	(0.00191)	[0.64 : 0.64]
y = Burden-Capacity gap (Social, N=903)			
GDPpc	0.40	(0.039)	[0.33 : 0.48]
VPI	-0.34	(0.028)	[-0.39 : -0.28]
Contiguity dependency (BCG)	0.25	(0.032)	[0.19 : 0.32]
Corporatism	0.24	(0.03)	[0.19 : 0.3]
EU	0.23	(0.036)	[0.15 : 0.29]
Electoral competition	-0.19	(0.02)	[-0.23 : -0.15]
Trade dependency (BCG)	-0.11	(0.038)	[-0.18 : -0.028]
Debt (log)	-0.03	(0.029)	[-0.084 : 0.03]
Political constraints	0.02	(0.04)	[-0.058 : 0.099]
** Goodness of fit (R2)	0.51	(0.00501)	[0.5 : 0.52]

Table A24: Model parameters. Outcome is standardized implementation burden. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

Covariate	Coefficient	SD	95% CI
y = Burden-Capacity gap (Environmental, N=903)			
VPI	0.52	(0.033)	[0.46 : 0.59]
Debt (log)	-0.26	(0.038)	[-0.33 : -0.18]
Political constraints	0.21	(0.046)	[0.12 : 0.3]
EU	0.16	(0.035)	[0.091 : 0.23]
GDPpc	0.11	(0.038)	[0.034 : 0.18]
Trade dependency (BCG)	-0.08	(0.057)	[-0.19 : 0.029]
Electoral competition	-0.05	(0.071)	[-0.12 : 0.1]
Corporatism	-0.05	(0.031)	[-0.11 : 0.0082]
Contiguity dependency (BCG)	-0.03	(0.042)	[-0.11 : 0.053]
** Goodness of fit (R2)	0.61	(0.00274)	[0.61 : 0.62]
y = Burden-Capacity gap (Social, N=903)			
VPI	0.62	(0.034)	[0.55 : 0.68]
Trade dependency (BCG)	-0.39	(0.038)	[-0.46 : -0.32]
EU	0.27	(0.034)	[0.21 : 0.34]
Debt (log)	-0.19	(0.027)	[-0.25 : -0.14]
Political constraints	0.17	(0.04)	[0.088 : 0.25]
Contiguity dependency (BCG)	0.13	(0.037)	[0.062 : 0.21]
Electoral competition	0.13	(0.024)	[0.081 : 0.17]
GDPpc	0.12	(0.037)	[0.057 : 0.2]
Corporatism	0.00	(0.029)	[-0.052 : 0.061]
** Goodness of fit (R2)	0.63	(0.00224)	[0.62 : 0.63]

Table A25: Model parameters. Outcome is standardized implementation capacity. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

F On performance

Figure A18 shows the average marginal effects of new environmental policies on the environmental performance of a country for different sizes of the burden-capacity-gap. For this analysis, two broad indicators are combined. The first indicator captures the general environmental performance with respect to key environmental pollutants such as SOx, NOx, CO, waste, etc. The second indicator refers to each site's country specific environmental performance (CSEP) (Jahn, 2016). The indicators are rescaled so that a higher value implies greater environmental quality. The analysis control for a range of other influences such as the absolute levels of economic development, EU membership, and the structure of national economy (urbanization and industrialization). Moreover, it contains a lagged dependent variable.
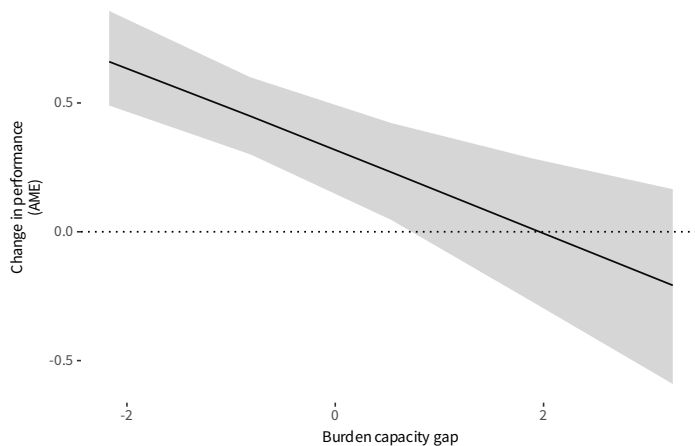
Figure A18: Effects of burden capacity gap on environmental performance (average marginal effects). Model parameters in Table A26

Covariate	Coefficient	SD	95% CI
y = Environmental performance (N=693)			
Portfolio size	0.37	(0.072)	[0.23 : 0.51]
Industry	0.21	(0.015)	[0.18 : 0.23]
Portfolio size * Gap	-0.10	(0.037)	[-0.17 : -0.02]
EU	0.08	(0.026)	[0.028 : 0.13]
GDP growth	-0.05	(0.017)	[-0.083 : -0.017]
Trade	-0.03	(0.021)	[-0.075 : 0.0063]
Urban	0.03	(0.023)	[-0.012 : 0.074]
Gap	0.01	(0.018)	[-0.02 : 0.05]
GDP pc	-0.01	(0.025)	[-0.059 : 0.041]
** Goodness of fit (R2)	0.83	(0.0106)	[0.81 : 0.84]

Table A26: Model parameters. Outcome is environmental performance. Coefficient point estimates (median of the posterior distribution), SD refers to the standard deviation (uncertainty), and CI to the 95 percent credible interval.

G   Interview Methods

We conducted 36 anonymous, semi-structured interviews with members of the social and environmental public administration in Denmark and Italy. This part of the Appendix provides additional information on the interviews. We follow the recommendations of Bleich and Pekkanen (2013) on how to assemble a state-of-the-art "Interview Methods Appendix." We describe the sampling process, the interview strategy, and report the detailed results of the coding procedure. We sought informed and voluntary consent from interviewees and their statements have been fully anonymized (see detailed descriptions below). The present study was reviewed and approved by a relevant ethical board.

I. Sampling Process

We employed a purposive sampling strategy based on theoretical considerations. For each country, the sample frame contains all members of environmental and social public bodies that decide on policy implementation in their respective fields. We interviewed implementers working in different types of environmental and social authorities in their countries such as central agencies, state-level agencies or local authorities. We contacted potential interviewees by email (their contact details are available online). If we did not receive an answer, we sent a friendly reminder two weeks after the first email or tried to reach them by phone. We conducted the interviews by phone or by online conferencing applications such as Zoom or Skype between 21.04.2021 and 03.05.2022 and each one lasted 18-126 minutes. The interviewees from the two countries were responsible for a large variety of implementation-related activities, ranging from the supervision of subordinate entities to the granting of permits and the monitoring and inspections of industrial plants or water basins in the field of environmental policy implementation, and to accounting activities or benefit and service provision in the realm of social policy.

We conducted anonymous interviews for research and ethical reasons. First, how implementers perceive and deal with (high) implementation burdens are very delicate or even awkward topic as these practices might go against their professional ethos, and they often imply that, to some degree, the implementers "failed" to effectively implement a policy. Anonymity also increases the probability that they would be more open about speaking about very difficult decision situations. Second, we expected that political principals could use interview results to target and blame specific interviewees who admitted that they cannot do their job as stipulated in their contracts. This expectation was confirmed by several interviewees who wanted additional reassurance from us at the beginning of their interview that their statements would by anonymous. We thus opted against providing full transcripts of the interviews as these would make it easy to identify interviewees. Instead, we provide redacted statements from each interview in Coding Table A27 below.

We approached potential interviewees via email by asking them whether they would be willing to take part in a study about "Policy Implementation in the European Union". By framing the topic of our study in a broad and rather indeterminate way, we intended to avoid self-selection on the part of respondents. Contacting potential respondents more directly with our aim to investigate the influence of increased workloads on effective policy implementation would have increased the probability that mainly frontline workers who are strongly affected by this situation would have answered our request. We simultaneously complied with research ethics (Martin 2013) since our request was not deliberately misleading: the relationship between workload and implementation can clearly be an aspect of "Policy Implementation in the European Union" as perceived by frontline workers.

2. Interview Strategy

We conducted the interviews by telephone/Zoom (or other web-based conferencing applications) and recorded them. The records are stored on a protected university server. Prior to the interview, we assured the interviewees of their anonymity to allow them to feel more relaxed and to increase the probability that they disclose sensitive information (Novick 2008). We first introduced the respondents to the topic of our study in very broad terms so as not to prime or push them in a certain direction. The initial questions were deliberately kept broad so that interviewees could tell us about their working situation from their perspective. We asked the most sensitive question – whether interviewees engage in various coping practices to cope with higher workloads – rather late in the interview so that interviewees had time to feel comfortable.

The open-ended questions we asked included:
- What are your specific responsibilities within the organization?
- What is your professional background? Is that a common background for your organization?
- How long have you been working in the organization?
- When did you face the steepest increases of workload?
- Can you give concrete examples of such increases?

3. Coding Procedure and Coding Results

Three researchers coded the interviews. If there were notable differences in the coding results, the researchers listened to the relevant interview parts again to see whether they had to correct their assessments. If disagreements persisted, the researchers discussed their assessments to reach an agreement on adequate coding. We coded the interviews for the following pieces of information:

- Whether interviewees experience a high workload (yes/no)
- Whether workload has been increasing over time (yes/no)
- Whether they can identify periods during which the workload increased considerably (open)
- Why they think workload has increased (open)
- How they try to cope with the increased workload (open)
- Whether they prioritize tasks (yes/no; open)
- Whether increased workload affects policy implementation and, by extension, goal attainment (yes/no; open)
- Which factors helped them to effectively implement a policy (open)
- Additional comments that illuminate the research situation

Table A27 indicates the detailed coding results for our main research foci: implementation burden, implementation capacities, as well as the reported consequences of their inter-relationship, the burden-capacity gap.

Table A27: Coding Table

ID	Implementation Burden	Implementation Capacities	Burden-Capacity Gap / Performance
		DENMARK – Social Policy	
DK soc_1	„The regulation keeps getting more and more complex" "Growing workload is a natural result of growing complexity in the benefit system. In an administrative unit as ours, you have to cope with all the changes, all the diversity that you see coming in the administration."	"We are always communicating to the lawmakers, the price of the changes in the lawmaking process, and with that information they can then balance the price of changing our IT systems with the political purpose." "With the implementation of new IT systems, we can see that we are more efficient now than we have ever been. So, we have managed to get a very high degree of efficiency, and that's again due to automatization and digitalization. Again, a very specific Danish experience." "We are advising them [the policy makers] and they are in most cases following our advice [on resources]." "I would say we are all the time in this dialogue [with the state and the municipalities]. We are agreeing whether or not it is possible to hold the deadlines. Normally, if it's law, […] we have to reorganize, of course, to put in more capacity into the projects, if we can see that we are not keeping deadlines. […] We are looking at the resources, filling in new resources or maybe also asking people to do overtime, if it's needed and if they are agreeing to it."	"So, we're trying to equalize the two different patterns [growing workload vs. limited resources] by using digital tools to minimize the problem in the complexity of laws, regulations." "We don't see a lot of performance difficulties." "So, if we need more resources, then we have to negotiate with superior authorities. […] If the superior bodies are asking us to help with new tasks, when we are dealing with them, we are negotiating with them on the price. In Denmark it is written in the law, what the administrative costs is for implementing new regulation." "I mean, in general, I see us being able to handle the complexity. It's not easy, but we are highly specialized in dealing with complexity, that's our license to operate."
DK soc_2	"In the pension area, we receive between 3 to 5 new legislations or legislative changes every year. So, our systems need constant changing. And it's always big changes and always complex changes. It's very seldom that it is a simplification, or a small change." "We also work with law simplifications. And we try to help them [the policy makers] see some of the simplifications. So, we have a catalogue of simplifications we have given to the lawmakers."	"I think some of the reasons why this works, is because we discuss the future laws a lot with the lawmakers. […] So, we say to them: 'if you change this, it's a big and a very costly change. But if you do that, we can do it cheaper and faster'." "They don't come to us to implement new laws which we would not be able to implement." "If we have said, 'that's a problem, we don't have enough time', then we often experience that they [the policy makers] listen to us."	"I would say that the complexity is stable roaring. But in your case, I don't think we have less or stagnating resources, because we get our costs covered. So, if we have legislation and laws that need a system change, we are able to hire the people we need. So, we have our costs covered." "We just do what the law mandates us […] and we normally achieve those goals." "We have a big roadmap, a big workload... we have changes for about 60,000 development hours in our IT supply system. And we are starting to get at the maximum of our capacity. […] I also think it's possible to keep up with that, because we have a good dialogue with them [the policy makers]."
DK soc_3	"You could say it's varying at times, but still, on the general level, it's continuously rising in the last years. […] It is fluctuating but on a steady level. Because we can get a lot of work with some parts of the policies, but then there are policies we have less work with. So, it's variated per se. But if you ask the municipalities, they may feel that the workload is increasing."	"We try to make the supervision of the job centers and the employment service simpler. So that they only have few goals, the necessary goal management skills, and not a lot of measures." "They [staff and office] tell the politicians that we also need to make a plan for the implementation, and we need to get enough resources to do the implementation. And I think they are quite good to explain this. So that's very lucky."	"We can manage it. We are used to do this. And we'll do it also in the future."
DK soc_4	"On a scale from one to five, it is a five [laughs]. If I look across to other areas, handled by municipalities in Denmark, this is definitely the most complex area in terms of legislation."	"I think, we are quite well equipped with capacities. Certainly, we are very busy in the Job Center, but I think we have sufficient resources."	"I think we have some scope for still pursuing our tasks. Yeah, certainly."
DK soc_5	"We have, in our agency, a lot of reform and ongoing work with new political agreements and agreements with the social partners. […] Over the years, it [the workload] has been growing and growing."	"It costs money, and it costs time and resources to implement it, and therefore we have to have an overhead. So, for a lot of our reforms, there is an overhead for manpower in the agency, explicit to do this reform." "I think that, for the moment, we have the resources needed."	"And we also have economic incentives for the municipality. If the municipality is not doing a good job and meet [the targets] that they are expected, then they get less reimbursement from the state. And we also have an IT-Tool at national level that all municipality have to use. And then we are doing a very tough benchmarking with the municipalities, so that the municipalities can learn from each other."
DK	"It increases... well, it's not exponentially growing, but it's steadily growing. And	"First, what happens in my unit, is that a taskforce from the State Department, the state employment	"Our effectiveness is on limit. It's not possible to squeeze any more out of the organization. If we need to do more,

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ID	Implementation Burden	Implementation Capacities	Burden-Capacity Gap / Performance
soc_6	it's been so since 2007, especially since the job centers were invented in their current form. And legislation, rules, and regulations, within this area have been growing ever since."	agency [STAR], is sent into the job center saying: 'You are not effective, what is going on? What is wrong? You need to be more effective, or else the mayor of the municipality has to go and visit the Minister of Employment'. And then he would be sent back to the municipality, with a lift of finger which says 'you need to improve'. So, pressure from the political level, both state and municipal, will land on us to be more effective. And if we do not manage to lift our effectiveness, then a task force will be sent to take over." "From the Ministry of Employment in Denmark, there are often funds we can seek in projects. A targeted project for certain groups within our unit's responsibilities. And we can try and get funds from them, send an application, get a project, and additional funding for the project period. That's one way we can try and get more funds externally."	we need to get more. We have made the most effective guidelines and schedules and so forth."
DK soc_7	"Roughly between 2010 to 2015, there were so many reforms on the labor market area. So, basically, we could not... we had to implement new reforms all the time. And those were big reforms. […] Now, things are quieter in the labor market, in terms of regulation, in terms of things coming from the national level. […] It gives us the possibility to actually work with our core workload. That was not the case between 2010 and 2015." "And in 2019 they skipped quite a few of those rules setting the municipalities free. Not to that extent, but to some extent. So, I would say, since 2019, […] we have had less regulation."	"They [STAR, regional offices] engage very much in dialogue and try to bridge the conversation between us [the local level] and the national level. And they're doing a great job in terms of that." "I put the numbers forward [in resource negotiations with municipalities]. I have looked into my Excel sheets and I'm promoting a business case. I'm saying, I've calculated this. And I succeeded doing that in other municipalities by letting the politicians have the understanding that if you invest in this area, you will get more welfare in the future."	"If you [municipalities] cannot perform, we [national level] can step in and ask you to perform, and we can actually put you under administration." "We get 80% of our expenses [for the unemployed] funded by the state for the first four weeks, then it drops to 40%. After a year, we only get 20% of the expenses funded by the state. 80% of the funds, we need to find them locally. So, the incentives are there to do a good job at the local level"
DK soc_8	"I think the last 10 to 15 years it has been this way and despite of promises from the central organizations on slowing down, they frequently make changes."	"Our local politicians, they recognize that it's hard sometimes and they cut us some slack." "Again, we try to be ahead. When we make a plan for the implementation, we make forecasts. And if we fail in getting ahead, we respond quickly. We recruit, make new privatizations so that we can move resources from one place in the organization to another. Sometimes we involve our politicians, if we don't think there's enough money, but the other tasks are what we do first. We also try to learn from other municipalities, and adapt our processes inside the organization"	"We are not there yet [that the 'overload' leads to implementation deficits]. But it might get difficult for us to find additional employees. If it's not a fun place to work, people can find other places... It can become a problem in the future, if it keeps increasing this way. But right now, no we are not there yet."
DK soc_9	"I think the biggest problem is all the registrations that my employees have to do every day. […] This is getting increasingly complex due to the legislation […] I would say that it's getting worse and more every year, and also more complicated. "	"We're trying to talk about where the problems are, and what we can do about it. Do we have to recruit more employees? We do not have many private companies that we work with. We do it ourselves. But we are also adjusting our processes. There is a lot of administrative reform going on in Denmark in general."	"I believe that we can handle it, but we have to talk to our employees and adjust processes often asking ourselves all the time: how can we handle this?" "I believe that we can still manage, but we have to talk about it and prioritize in the organization."
DK soc_10	"Labor market legislation in Denmark amounts to more than 30,000 pages. It's a ridiculous amount of legislation that we have in this field. And we have divided the unemployed citizens into multiple subsections. They all have their own registration process, […] which is in a way very, very efficient, but also amounts to enormous numbers of rules and procedures that we need to meet for each of them."	"What we, of course, do is to try to reorganize our resources. We look through our procedures of work and see whether we can make them more efficient. And we try to monitor, whether we should move employees from this section to another section. Of course, we are trying to apply all the usual managerial tools that you can apply in a situation like that. But basically, if we're behind, we're behind. […] And we will get some bad mark from our accountant when they come to visit. But then I would say, 'yes, sad, but I addressed the resources to a more important task'." "There is a huge incentive for business cases. But there is very little knowledge of what would be a good business case. But the combination of economic incentives, prescription on procedures in the law, and the decentralization of operations	"I've heard a lot of people saying that we can sort of decrease the number of goals within the labor market. And that is true. But I don't think that we have reached a level where there is inefficiency as such, there is, of course, always a certain amount of inefficiency, especially if somebody from outside looks over our shoulders. But it's not crippling."

ID	Implementation Burden	Implementation Capacities	Burden-Capacity Gap / Performance
		works quite well, because it provides a baseline which is important to have."	

<div align="center">

DENMARK – Environmental Policy

</div>

ID	Implementation Burden	Implementation Capacities	Burden-Capacity Gap / Performance
DK env_1	"Yeah, yeah, we are overloaded, of course, a little bit because we have a lot of things we want to do." "I think that we mostly think it's our own responsibility, our own fault when the workload is bigger." "Sometimes, they say: 'Well, you are doing so well, and you have this money for so many years - is it really necessary?' And what they don't understand is, that there's an enormous amount of workload expanding. Those higher up in the system, they don't understand that. But actually those, we have contact with, they understand it."	"I don't think, I could say, or that we could say that we increase capacities, because we have the money, and we can use our manpower." "But I think we have a pretty good capacity to absorb and adjust"	"But we, yeah, we think we're doing pretty good in coping with it. But we tend to be a little bit too ambitious, because we... so that people have too many tasks, because we want to improve in a lot of areas." "We have a lot of projects going on and we have to prioritize between one and the other. But we regularly have meetings between the nearest boss and individual staff member to try to balance that tie. So, it shouldn't be the problem of the individual colleague, but a common problem asking: what is most important now?" "I don't think we had a situation where we say it's totally impossible to handle all our tasks."
DK env_2	"The complexity has just gone through the roof, basically. And well, what's supposed to be for instance […] a minor renewal procedure every five to 10 years, all of a sudden renewal is just as big or bigger than the original evaluation."	"So, and there in Denmark, we do have the opportunity to, we actually get the fees that we connect directly to the agency, which you don't do in lots of the other countries, which means that we have some possibilities of adapting our resources to an increased workload" "So, I would say, on a smaller level, we used to be able to have more possibilities for getting additional resources, also, because of our organizational change, there was a lot more money in the organization for that, but that is tightening up. So, at the moment, the financial future is looking a bit tense." "I mean, they're obviously, we're obviously, we're not being asked: 'do you have the capacity to do this?' If it's a policy goal for a minister from the department, they just got to push it through. I mean, it's going to happen."	"And when it comes to policy attainment, obviously, that means that a lot of products out there that get to stay on the market unregulated in many cases, because we're not finishing up, because we somehow have this goal of, you know, making the evaluation so perfect in every way. We're actually leaving potentially dangerous or harmful products on the market for a longer time instead of just finishing it up and you know, starting to regulate this. So yes, it's definitely the complexity prolonging the process all the time." I mean, there can definitely be delays. I mean, that some applicants will have to wait longer, because we can't do it all. But that's definitely an issue." "I do think we can cope. I think we're under a lot of pressure now. That's also because […] the national resource situation, I think, is looking a bit bleak."
DK env_3	"So, this resource task [thing], yes, it's always a problem. It's always an issue. But right here, because we had new money coming, it was possible to make a new team, a full new team situated at the headquarter"	"It's like when you clean your house, you can always do better, you can always be cleaner. It's easy. You can put as many resources, manpower in it as you want. And you can, you can get good results, and you can get better results. And our task is to see what is necessary."	
DK env_4	"I think we pursue our goals just the right way we should. If you ask the people who go out every day and do the samples, they also say they are busy, but I think it's how it's already been. Which employee would say they weren't busy? I don't think we're overloaded."	"So, if we had a new task, we would ask for extra money. But normally when we get a new task, some money would fall."	
DK env_5	"And in all the years I've been working in the municipality […], we have a slow decrease in numbers of employees. So, more and more tasks and fewer persons." "I think it's very difficult to... to, to see. And I think it's being less and less effective because of the overload. And I can't imagine the same steepness in more work in the next 10 years. I think there must... something new must happen."	"We just hired a private consulting firm for extra help with our tasks a week ago. So, to some extent, we do that." "And we have been allowed to get two more persons in the team. Because of that… It helps a little bit, but not enough. […] So, there's some understanding for our situation."	"And also, we, all the time, you know, postpone that, the deadlines. So, we contact the state and they allow us to postpone. So, we push the projects in front of us, you know, an ever-growing pile of projects" "We have some types of deadlines. We always have to ask for more time, and they, the state, have a deadline regarding the EU. So, now we are facing the limit for postponing. And because of that we have some very big projects right now at the same time that we have to implement."
DK env_6	"And it seems workload is just increasing and increasing. I can't say that there's been a specific moment that really exploded. It's not... No, I don't feel that it's just been more and more." "Politicians and top-level administration are aware of why environmental legislation is made, but when it comes to the enforcement of the laws, they become disinterested [allocating nothing to it] and are often irritated and will not listen that it's those same laws that make their	"Our leaders and our politicians, and also in the administration above us, they're not interested. We're just always the ones that come whining and don't want progress. And yeah, we're always the stick in the wheel for the bike and it falls apart." "No mobilization, no more resources are coming. That's the administrative mantra: 'we have to do things smarter, we have to digitalize'." "If the municipality was only here to guard environment, that would be one thing, but the municipalities are sort of a… We see to public	"We prioritize big time. We're saying that the companies or industries that are in this level of small… We don't even look at their wastewater, we just... - but they're also just carried to our central wastewater treatment plants. So, it's not that big an environmental [issue, with small business sewage], so we keep finding places where we don't have to look at." "If we have to take a case, that is really a burden, and it takes a lot of resources out of probably three [employees] and me and two other colleagues have to really dig deep into this case, then there's just more cases

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	projects more expensive or impossible. There is a gap between saying and doing."	health, to day care, to... It's sort of a balancing of resources. And I think many people would think: 'wouldn't it be better if those 16 people that looked at the environment just quit, and then we could have 16 more public health ones, or something else, culture, or just mending the roads?'"	that are not being solved."
DK env_7		"Because when the government is coming with the project, yes, normally, the money is also there to do this project. But when the money… We receive the money here, and in the house the money disappears. And we only get a little bit of that money to do this job. And the rest of the money is going to all the places in your commune. That's really not… Then we have to do more jobs and are not paid for it."	
DK env_8	"Yeah, all the way from myself to the team to the next level, we have to prioritize. Every day you have to, yes." "To make more with less? Yes, we are trying to all the time."		"… a lot with the water plans, because there is a lot of money in these plans. And then it's... you're trying to navigate: 'If you don't do this, how much trouble do you get? Okay, this meant lot of trouble, then you will do it again, trying to find something else not to do. Okay, there's no problem, then we'll do that instead.' So, it's navigating, you know?"
DK env_9	"We are very much working with a lot of things that sort of address different goals at the same time." "But for now, it's quite okay. They wanted it to have a very high priority concerning biodiversity and concerning use of the areas. But they also give you the financial possibilities to do it."	"The politicians, the government, the parliament have been quite aware that new policies have a cost. And they have been very aware in a good manner to sort of make the financials, the financial possibilities so we have a possibility, a good possibility to achieve the goals that they have put on the organization." "I think we were financially backed up. It's okay."	"We are not asked anything that is impossible for us to deliver. Because we have the resources. We are coping a little with the timespan. Politicians, they want their decisions to be handled in a very short time […] They seem to be okay with what we're doing, with our performance." "I'm not feeling organizational overload with tasks. Yeah, we, we can do it better. And we are working on it. But it's not, it's not a major problem for now."
	ITALY – Social Policy		
IT soc_1	"Until a few years ago, ten years ago, we had time to read the messages, etc. But now, it's so hectic that I either take my work home or I have to read them only a little trying to gather as much information as quick as possible to be updated on my work." "The legislator, even when making laws in good faith to meet the users, makes laws a bit cumbersome. So, when it comes to putting them into practice in the concrete case, it becomes very complicated for us." "For us today, the legislation that was initially fairly simple and straightforward has become very tangled."	"The shortage of staff is felt a lot at our headquarters." „Our headquarters are in a dramatic situation. Having 40 percent of people over 60 is very serious because a lot of people are going to leave, and we don't expect to get new entries in the next one or two years." "We are all used to using the computer for INPS programs. […] There is a bit of a generational gap of course, given that most people are 50 years and older. It's not that easy for everyone to be more or less tech-savvy." "A good deal of the computer procedures has been outsourced, somewhat controlled by the INPS but not completely. There are big problems with theory and knowledge of laws because they are computer scientists, not public administrators. […] Sometimes they don't understand us because they are computer scientists."	"We are not so influential. We try to adapt to the choices of organizing work that rains down on us from above." "There are sometimes problems in our workflow because sometimes the funding taps are shut down. They open and close the funds, reset them, reopen them. […] There are sometimes services we do try to process because we know if we don't work it now, we run out of money." "There is work and we distribute the work among the heads we have left, or we decide to give it out to other locations. But many other locations are in the same situation like us." "There are no choices. We don't have tools and we can't hire ourselves." Referring to an aging public administration where skills are not passed on: "Unfortunately, it has often happened that professionalism has been lost."
IT soc_2	With respect to whether there is workload increase: "Absolutely yes. Definitely in recent years and that will be the case. This is the prospect, let's say in which we will move, also following the implementation of the PNR plan [Programma Nazionale di Riforma] and all the approved measures financed from the European level to cope with the emergency health care and the consequences of this emergency. But in any case, even in recent years, the prospect has been precisely this." "This reform took place in 2017. So, let's say that in 2018, 2019 and so far, we have certainly recorded a very, very significant workload increase." "During the period of the pandemic […],	"Some things you can do, some feedback and some positive elements sometimes occur. If not, you do, how you can." "At my level as a manager, I have no excuse, no alibi to justify myself when I can't find the time to deal with things. I find the time. In the evenings, on Saturdays and Sundays and holidays… I know that this area must be handled very carefully because employees must be protected, and they cannot pay the expenses of organizational problems." "For some years, there have been no more recruitments of large numbers of new people who naturally need more investment in the beginning in training activities. There are even less resources." "Having had to identify a series of alternative	"Of course, there is concern [with respect to policy effectiveness and policy goal attainment], we cannot deny it." "I have always represented these difficulties adequately. So, I know that those at the highest level are very aware of this. And he is also very aware that he must represent sharing this difficulty to see if it can be remedied. But how far and until we can handle the impact of further stresses, I do not know." „In addition, it [workload] was added with almost exactly the same staff that was there before." "Certainly, the impact has been there […] We have to do all this work. We do it. We struggle, but we do it." "It was an area above all from the financing of the projects of the associations that we, unfortunately, first did not have resources available at the regional level. Without investing in this area, we couldn't implement

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	we had to manage a series of activities of connecting information and implementation in comparisons of local services that also entailed a considerable additional workload."	modes, it turned out that in the equipment offices we are quite outdated." "For a long time, we haven't had openings for new staff. […] for many, many years there haven't been any bigger calls for tender." "More than reorganizing tasks, unfortunately, we end up assigning more tasks to the people."	anything like this."
IT soc_3	„There is a need for greater integration of policies with each other and for greater speed […] In every assignment I had, there were different degrees of acceleration." "Of course, the concern of politics is always achieving new goals. So, the stimulus of policy for change is very strong and it's clear that at the technical level, we must seek solutions to respond appropriately to the new needs."	"Despite what is being done, even with much effort, we have not yet started […] the inclusion of young people into the organization. This will be one of the fundamental elements to be able to improve the functioning of the structure and above all in the provision of services." "Time as a scarce resource can only force the leaders and managers of the organization to achieve the goals within the dates and the deadlines set by going well beyond their working hours […] There is work to do on Saturday and Sunday. This is an element that applies to managers and executives." "So, we're trying to work with this focus on making interventions more flexible to simplify policy management and try to make them more effective. […] This is the attempt that we are working on with the few tools we have." "Of course, through participation in national and Community projects, we can make specific interventions, but it is not so much a demand for resources but rather identify a policy of interventions and seek resources from other Community and national projects in collaboration with banking foundations that are a subject that in Italy provides public funding for social policy interventions."	"We do all the activities; however, it is very clear to us that some could be done better, and we can't do it." „Because if you do so many useless checks for charity, you work hard, but the result is not so effective." „Since you cannot do everything, we have to continually see what the most important thing at that time is. So, we work on the basis of urgencies." "In the end, there is a search for mediation, aiming at the objectives that emerge to put in place policies that respond to those targets and those needs with the resources we have. So, it is clear, that the constraints affect […] the impact of policies and […] the achievement of the objectives."
IT soc_4	"With the decrease in staff and the ever-increasing new services, that the public administration must guarantee in order to cope with new social problems, we found ourselves in a situation where this workload could no longer be handled." "The officials had to get used to making not one product [i.e., service] or two, but to make ten. […] As it once was, that everyone had one service to do, that does no longer exist." "We were not ready to manage this level of computerization in a few days." "We are personally in a situation that is quite critical. I have already seen other places where new hires have been made, and they are able to carry out tasks more calmly."	"In the meantime, we do not have new hires. The last competition [large call for tender] was very important. It was done two years ago, but no one has come to our unit, they went to other locations." "The public administration must understand that a competition cannot be held on a national basis. […] They [new employees] must be trained. But training means focusing on a person for at least two years. It is a commitment. So, we didn't have any new entries." "We had an increase in productivity last year because […] with smart working there is an increase in productivity […] From now on, there will be an increase in attendance instead, with the same number of colleagues. But in addition, we have to manage the users who come physically and if you're in the office, they'll come to you. If you are home, they don't bother you. There is a whole amount of time lost compared to a "smart job" …" "Outsourcing is not used" "3,000 people are missing." "We really need young people and young officials. And this is crucial […] I find myself with a person who has already worked 30 years who can't make a jump to manage complex [and digitalized] practices…"	"Like in a private company, we point out to the directors, to do these practices. We need either staff or subsidiarity. The problem that we have with time is the limit. We are at the limit now." „We had the new products [services] with COVID, but we didn't get any new resources. The level of stress begins to become a big problem. […] In this situation, we need to work on more funds, at the level of occupation, on new personnel." "So many things are done. Politics makes the law. When a new pension reform comes, we are in the eye of the storm. But with a real revolution, like the Brunetta reform, it cannot be attributed to the institution […], but we keep the law given to us." "The concern [about problems of overload undermining effectiveness and policy goal attainment] is very strong, if no change happens. […] Now, that so many colleagues left, concern is there…" "We don't have any other way. Of course, if we cannot reach the deadlines, we have to ask for help. We are at a level very close to the maximum."
IT soc_5	"I would say that in the last five years, there was a large shift of policies from the State to the Regions. And with it came an exponential growth in demands and requirements from the State to the Regions."	"In our agency, we are missing a bit - but not only we, it is a bit of a common problem - a replacement of staff, in the sense that many people are retiring and are not being replaced. So, it is clear that workloads are getting heavier, and people are facing more issues and workloads, so	"Outside [of the administration], these difficulties are not apparent. Because anyway we, on the inside, always try to respond to any request and realize and conclude the proceedings in the appointed time." "Keep in mind that regarding the requests, we would have 30 days to answer, [but] on average we answer in

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	"The burden and therefore the trouble is also due to the fact that, at the central level, the demands are more pressing and more complex. I imagine that this is also due to the fact that a lot of funds come from European funds […], so Europe is asking things that we, as Italy, are not and were not sufficiently prepared to receive." "Over the last few years, instead of simplifying, we have increased the complexity, so it is increasingly tiring."	indeed, this problem exists, and we feel it." "And when we really don't make it, for example, in the case of launches of calls with numerous projects, we ask the other sectors of our directorate whether they are available to help us. This is the only way" "We have some agencies where we can transfer sections of work directly, which, however, are sections that can only be transferred to in a costly way, that is, only by allocating funding for the realization of that action."	five." "We have not yet touched the point of no return. Because […] we are still alive and we are still in a position to be able to devote ourselves to it, with a dose of effort that – I will repeat – is not visible from the outside" "We still manage to handle everything."
IT soc_6	"About five years ago, my responsibilities practically doubled. But with an allocation of resources not proportional to the increase in responsibilities."	"Outsourcing is a very important experience throughout the Italian public administration, and in my sector, it is extremely important. […] We are not able to guarantee, at least to date, internal technical assistance. And this is a choice that was made by the legislator in the distant 1990, and subsequently in 1998/1999, with the policies of service externalisation, which is a policy that in some ways worsened the quality of the Italian public administration because it brought a lot of knowledge and many skills outside the perimeter of the public administration, binding it elsewhere and making public administration quite vulnerable to blackmail from the institutions that offer outsourced services."	"I hope that people will come to me, because if the new tasks that we are waiting for, arrive without new staff, there will be a mutiny here." "An increase in responsibilities without an increase in the staff at our disposal would put us in serious difficulties." [Interviewer: "And has this happened already?"] "So far not." Because the resources were [already] very substantial, we were able to cope with the new tasks."
IT soc_7	"Our ministry has never been involved in the management of the European Social Fund in the social area. There was another part of the ministry that was working on the numbers side of the ESF, but in the area of poverty and social inclusion we had never been working with this European fund. So, no one had the skills to work in this field. And this happened because in the new cycle of programming 2014-2020, there was this new objective concerning social inclusion and poverty in the European Social Fund. […] And we couldn't have, in the short period, a technical assistance, because in order to have this assistance, we needed to wait for a European call. So, we […] had a huge amount of work for a couple of years." "We work much more than the usual […] time of the other workers."	"Especially for the Reddito di Cittadinanza (RDC), we decided to use some part of the European Social Fund […] We were too few. There are three people working on the measure in my office, and I mean, it's totally inadequate. We have to provide indications, clarifications and whatever to 8.000 municipalities, to 20 regions, and many workers who work on the measure. But we added this partnership [with the ESF] to manage the relationship with the municipalities and the region, to also […] save our reputation, and to not leave alone the territories in the implementation of the measure."	"It's a problem that does not only concern our organisation, but also the other administrations that are linked to us for the management of the minimum income measure, in particular INPS [Istituto Nazionale della Previdenza Sociale]. Especially in this pandemic period, we have had so many new instruments to support the income of the population, that INPS had problems to fully manage the implementation of the RDC, the minimum income measure. So, some parts of the measure are still not fully implemented." "We are continuously introducing change in our sector, in the law, without leaving enough time for the implementation. The political level prefers to introduce something new instead of letting work what is already there." "No, no, no, no, we cannot [effectively cope with more increases in workload]. Especially now, we just approved a new poverty plan and a new social policy plan, and they are ambitious. […] But we were too few before [in terms of staff], and now that we start to implement all the things that we put into the two plans, the poverty plan - it's a three-years-plan - and the social policy plan, we won't be enough again. So, I hope that we receive new resources, because we are otherwise not able to fulfil the objectives."
IT soc_8	"The social issues are more or less always the same, […] the situation of emergency, of crisis is constant." "The workload is indeed always increasing."	Concerning reporting obligations in the context of EU funds, but also national and regional financing: "It started with Excel files. Now, we have gradually arrived at IT platforms on which to upload the data, but it takes qualified staff, and we are absolutely lagging behind in this regard." "Unfortunately, it is not possible to hire because there are budgetary constraints and therefore, we cannot… It is a fairly aged public administration […] Although many people retire, they are not replaced. There is no job shadowing, so there isn't any possibility to make an adequate transfer of skills…" "We are unfortunately all quite stretched as staff. We are quite down to the bone as human resources. So, it becomes a bit difficult."	"Fortunately, as I said before, the colleagues, who are ready to make overtime, pull up their sleeves, and so… In any case, we try to reach the objective." "Fewer staff resources, obviously, lead to the problems I'm telling you about." "Perhaps everything is done a little less thoroughly. […] Certainly, we could do better without a doubt." "I have no more space, i.e., we are reaching saturation."
		ITALY – Environmental Policy	
IT env_1	"[Adapting to new problem and policy constellations] suffers from the work	"We are very few compared to […] a few years ago."	"The shortage of time necessarily leads to simplifying procedures as much as possible."

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	overload."	"There has been a reduction in personnel. Obviously, it is an increase in the workload of those who stayed." "The idea is to be able to recreate an adequate staff to cope with this situation."	"[What suffers] is perhaps the quality of the in-depth study that is buried in that specific investigation." "I would say all offices often need to resort to extra work." "We have to cope with limited resources, limited to a set of tasks. We go to concentrate on some situations that are considered more problematic, neglecting a little other tasks. It is obvious that here lies the risk of neglecting situations that then become problems."
IT env_2	"We have many directives from above, so it is increasingly difficult to be efficient in performing many different types of work"	"The lack of staff, lack of resources and also a certain lack of organization. We have many directives from above, so it is increasingly difficult to be efficient in performing many different types of work."	Their work focus is on "any daily problem and then there is little focus on environmental policies." "When these requests for doing things that do not compete with our normal activities, other activities remain suspended." "We say that the method of our unit is to prioritize" "Not being able to ensure that in 30 days a [environmental impact assessment] process is [completed, is] a heavy burden for our kind of activity."
IT env_3	"There is a progressive increase [in directives to implement] … Over the last 10 years, and in particular, in the last five, it has become more and more… And at the same time the EU has become more demanding."		"Some time we are not able to do all the things we have scheduled." "We avoid planning something that is not possible to complete [within a certain time limit]."
IT env_4	"Not only tasks are always growing, there are increasing challenges: money that is less, and less funding…" "I notice a big disconnect between the political side and the technical side that is growing more and more over the years, unfortunately… Especially when the Water Framework Directive entered into force."	"I think we're a little on the edge, a bit at the limit in the sense that I do not know how it can continue to grow the load… Sooner or later we should have new people." "Unfortunately, politicians go their own way. Then they take decisions, make them, and carry out its policy without using the technical unit…"	"We are still quite able to handle the workload over time, because we're pretty good at getting by. Then one thing is to try to work harder…" "The priorities are given by emergencies. After it is handled, the rest comes."
IT env_5	"The regulation, the directives, are really hard to implement for us. This moment, we are in the fourth phase of the transboundary pollutant protocol… We have to manage a lot of documentation."	"I don't speak for myself, but all my colleagues have a remarkable sense of responsibility despite the type of contract they have. We hope to be able to hire."	"Tendentially, all activities were done, but in absurd conditions, in really harsh conditions and with personal sacrifices." "It is very rare that in one in a thousand cases it can happen that we miss something." "In order to allow users to fulfill their legal obligations […], we have neglected and are neglecting international relations."
IT env_6	"We have a lot of administrative burden for things that 20 years ago, we were able to do with a simple letter." "We don't have the capacity to focus on specific environmental aspects because they are very, very detailed, complicated to manage."	"For 20 years now, we don't substitute any retirement." "I work during the night I work during the weekend, without problem, even if in Italy, the salary for service is not so high."	"[There are situations where] you have done the work, but nothing is produced. And this happens many times frequently… This is normally due to the… Yes, in some cases, we don't have human resources."
IT env_7	"The increasing of the laws and the many, many things to do and the less persons who work in the public administration…" "At the beginning, our public administration role was only about managing regional protected areas. With Natura2000, the work became more, and more difficult"	"We have no personal resources, human resources and no economic resources to face off this problem [of higher workload]" "In many occasions we ask for another person and other professional resources but in vain"	"We have a delay in all the things, we have to respond to." "Even this [prioritizing] is quite impossible because we have no facultative activities, but we have to focus on the most important activities."
IT env_8	"What we see is that a lot of other units of my Institute are starting to rely on us for analyzing their data. Our workload is increasing because of this. It's not because of direct workload, but because of workload caused by other units" "The Maritime Special Planning Directive was a big increase in the workload."	"We have to work more. So in the evening, on holidays, and so on… If we have a deadline, we have to respect it."	"Actually, the increasing of workload left us less space for research. So well, before, we had more time to carry out research activities in order to improve our capabilities"
IT env_9	"Every year some new tasks arrive when they assign goals, every year they add	"The problem of [environmental agency] is that after these large hires in the 2000s, […] it [the	"[There is no] space for zero research. Absolute zero. There are no more projects, nothing, just this very heavy

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	because this is missing, that is missing, the other is missing…"	agency] no longer hired anyone… the number of people has decreased dramatically… On the few remaining the workload has multiplied. But a lot, a lot…"	chore" "… we can only carry out the routine." "Specific investigations, we don't do it anymore. We limit ourselves to comparisons with the legal limits on the limits set, parameters set. Full stop. Nothing else is done. And this is not nice. It is not nice because investigations and screening should also be carried out on these new emerging pollutants…" "Unlike before we had a broader vision, a little more knowledge of the territory, too. Now, we are very, very specialized and we do our little piece and then we pass the ball on to the others."

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