The evolution of policy complexity in the European Union

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Motivation

"[T]he large number and complexity of these texts […] could lead to a lack of clarity which would impede their proper application"

— Council of the European Communities, 1975

"[W]e must be inventors of simplicity […], firstly within the Commission, for whom the pen must be lighter and the texts plainer […] the quest for compromise at Council level results in texts which are too complicated, even incomprehensible"

— Jacques Delors, 1992

"[E]very single measure in the EU's rulebook is fit for purpose – modern, effective, proportionate, operational and as simple as possible"

— Frans Timmermans, 2015

Research question

How does policy complexity in the EU vary over time, decision-making procedure and legal instrument?

Concept and operationalization

Structural complexity

- *Structural size*: sum of the number of recitals, paragraphs, subparagraphs, points and indents
- *Words per policy element*: word count divided by the sum of citations, recitals and articles

Linguistic complexity

- *Word entropy*: $-\sum_{w \in W} p_w \cdot log_2(p_w)$
- *Lix score*: $\frac{sentences}{words} + \frac{longwords \cdot 100}{sentences}$

Legal complexity

- *External references per article*
- *Internal references per article*

Hypotheses

H1 *The complexity of EU legislative proposals increases over time.*

H2 *Co-decision proposals are more complex than consultation proposals.*

H3a *Regulations are more complex than directives.*
H3b *Regulations and directives are more complex than decisions.*

Data and methods

Data basis

- All procedures recorded in EUR-Lex
- 38,853 procedures from March (1964 – May 2020)

Sample

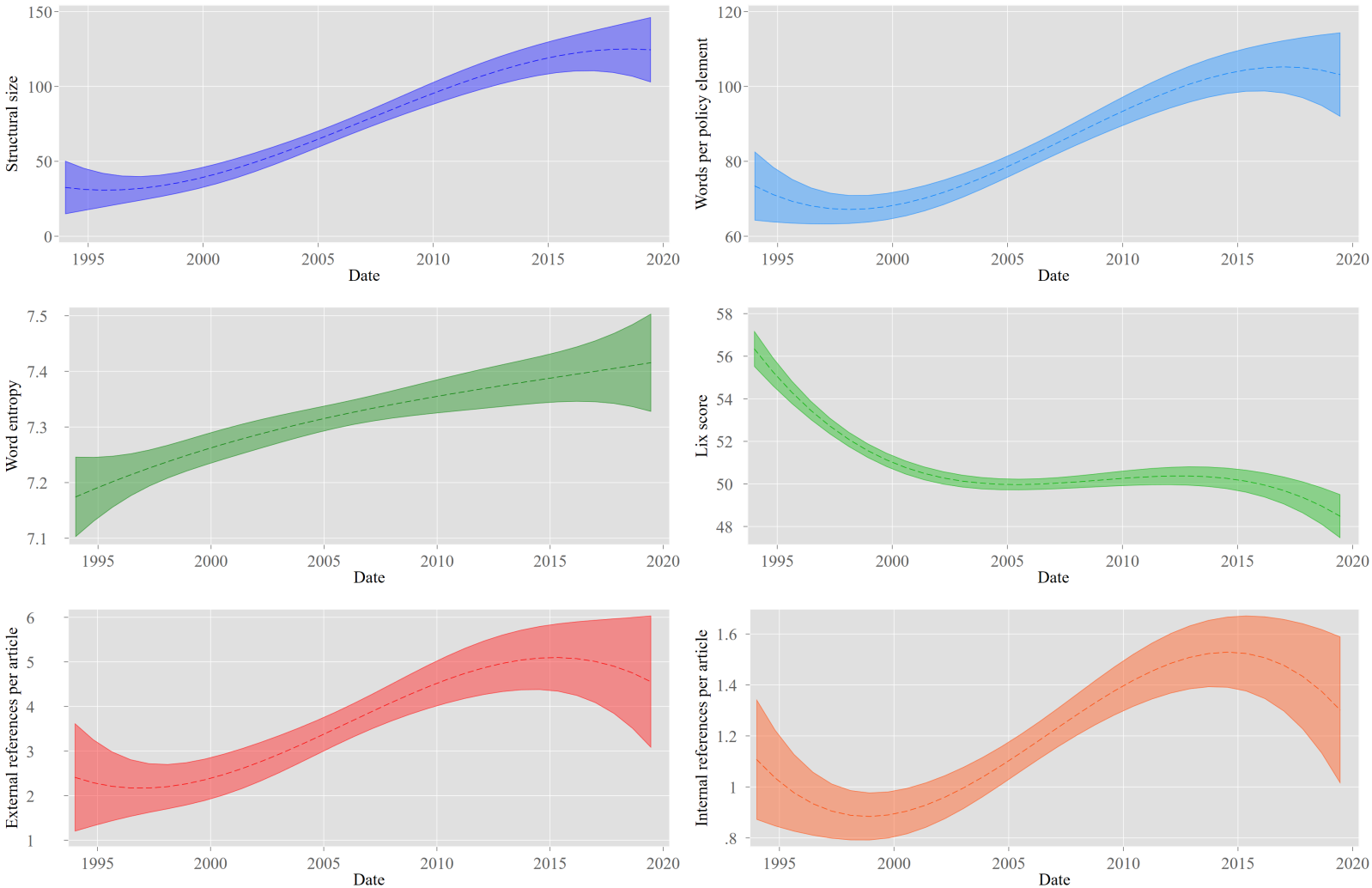
- Co-decision/consultation procedures
- Total: 4,040 procedures and their proposal texts (1994 – 2020)

Method

- OLS Regression
- Independent variables: *date* (polynomial term), *procedure type* (binary), *legal instrument* (binary), *amending* (binary), *procedure subtype* (binary), *policy area* (binary fixed effects)

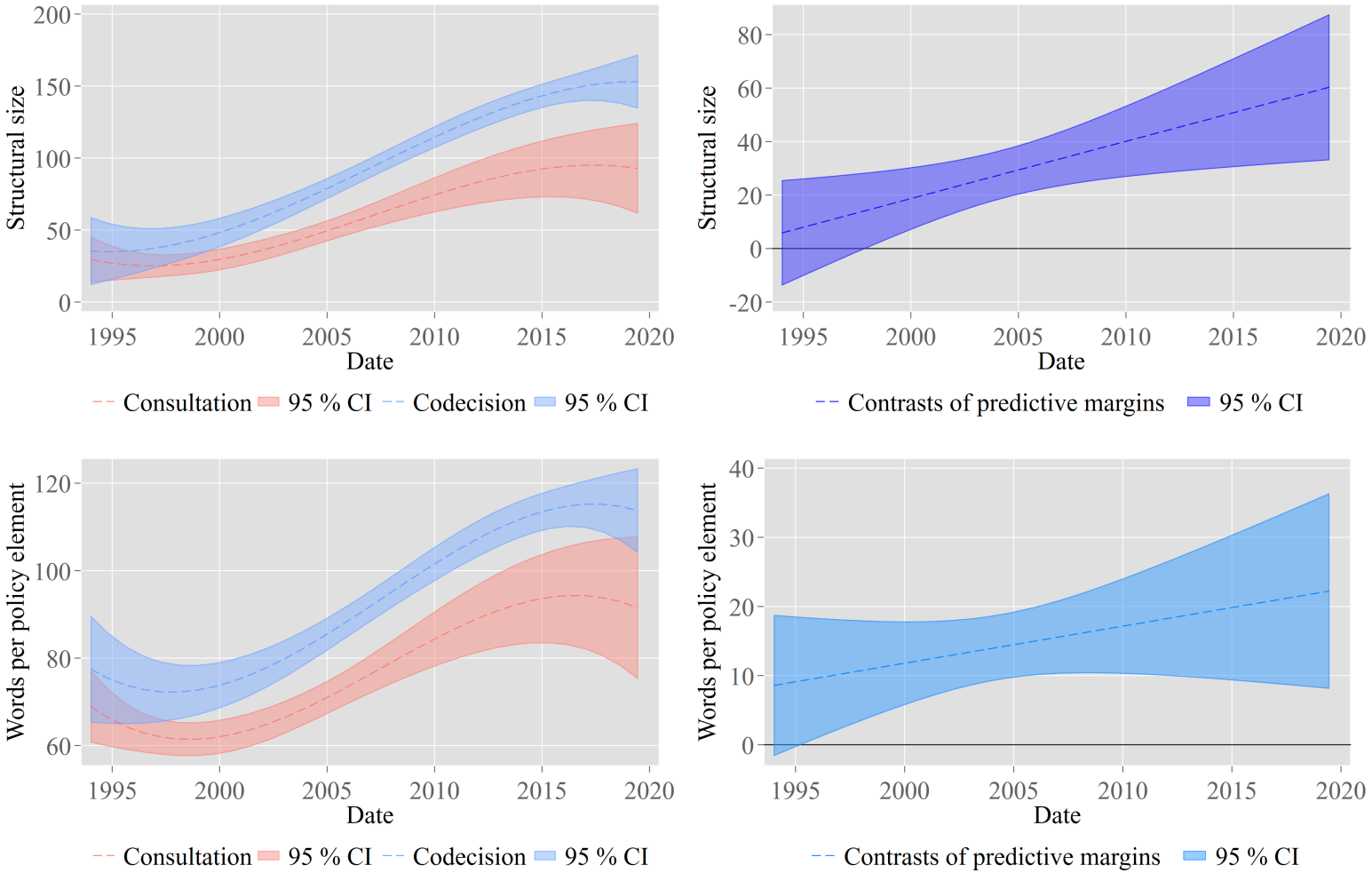
Results H1

Figure 1: Predicted complexity over time



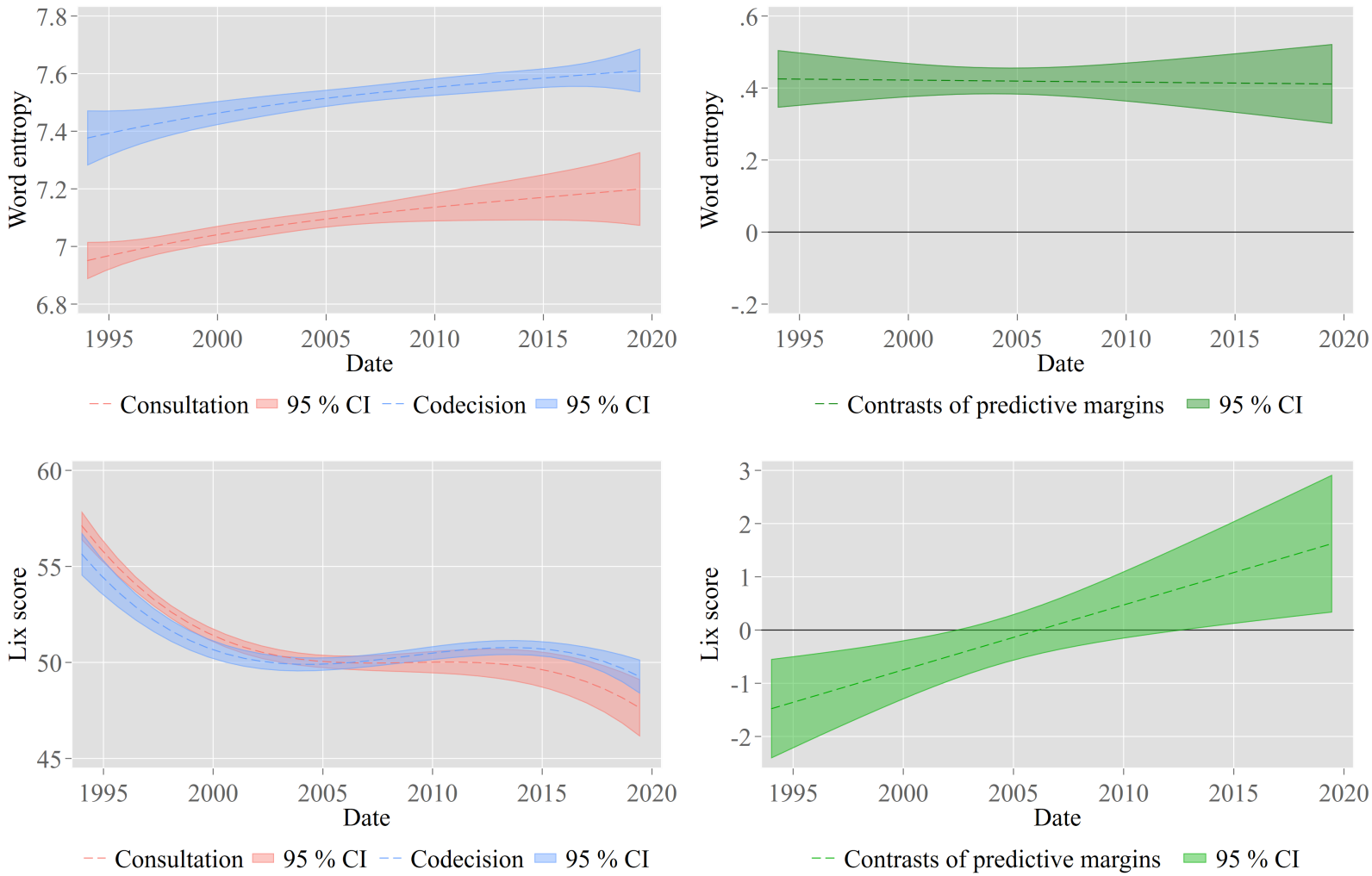
Results H2 i

Figure 2: Predicted structural complexity by procedure type



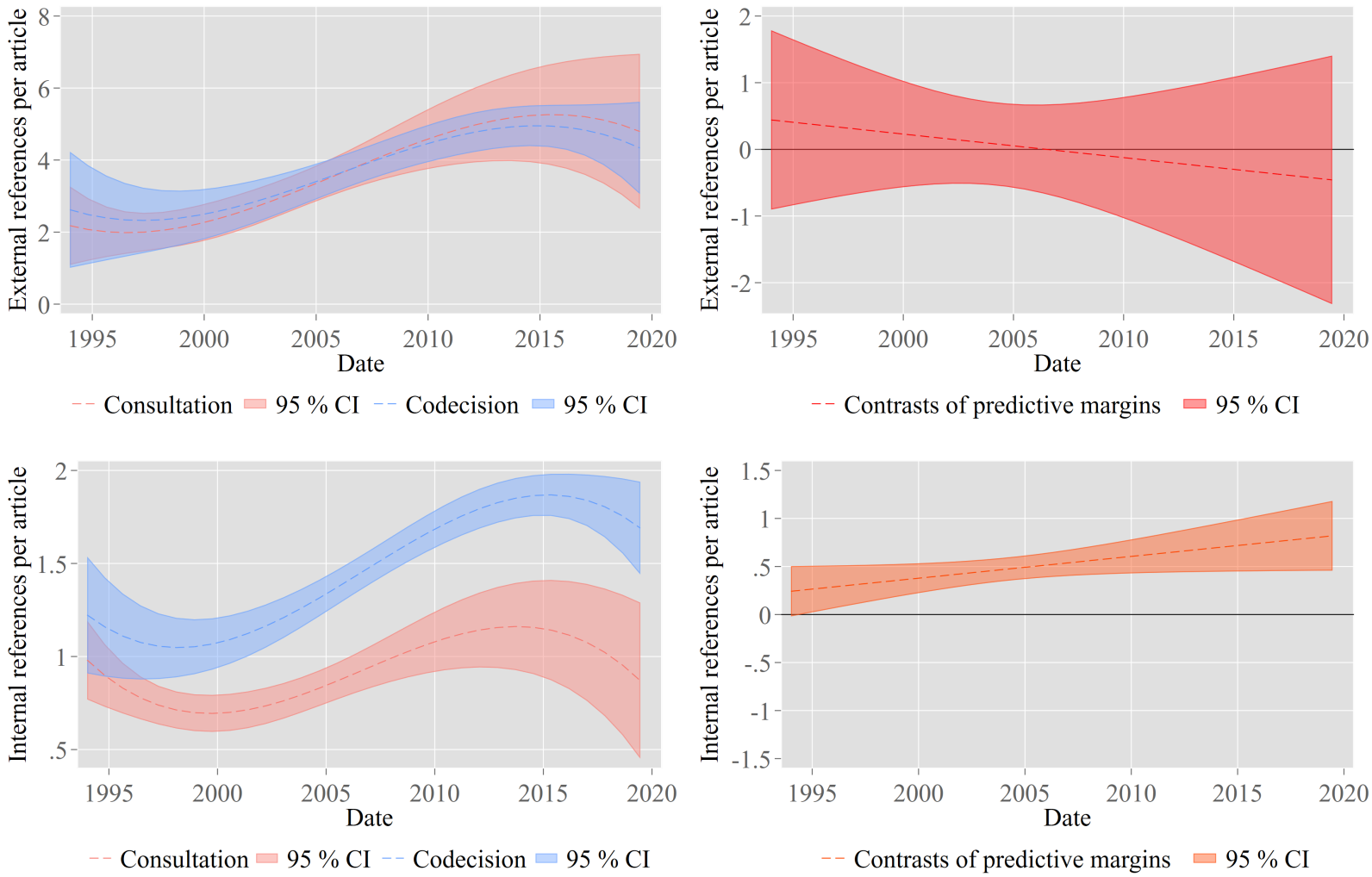
Results H2 ii

Figure 3: Predicted linguistic complexity by procedure type



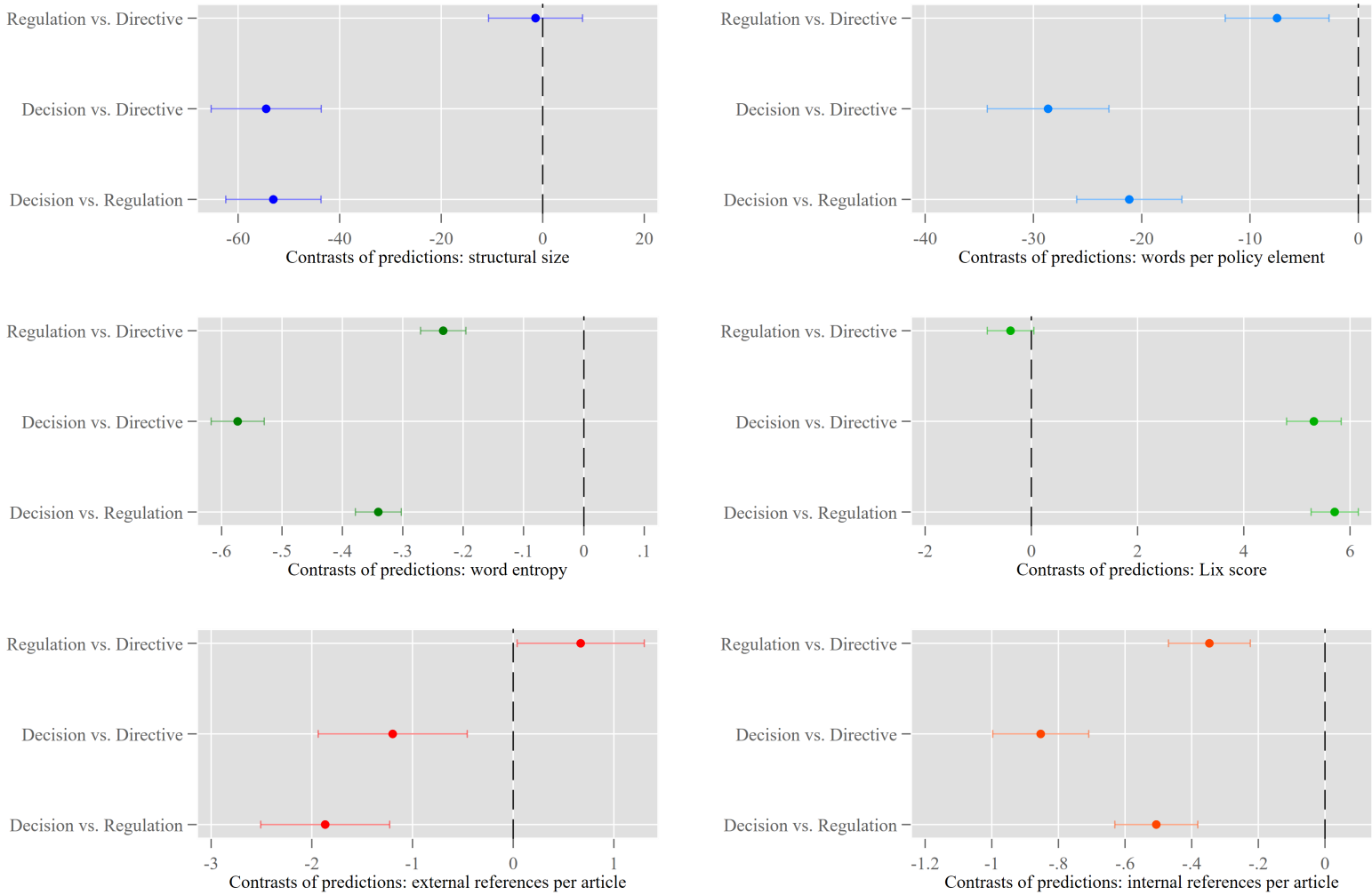
Results H2 iii

Figure 4: Predicted legal complexity by procedure type



Results H3

Figure 5: Contrasts of predicted complexity by legal instrument



Conclusion

- "*All that is needed for growth of complexity is a problem that requires it. Since problems continually arise, there is persistent pressure for complexity to increase*" (Tainter 2006: 93)
- Generally true, but:
  - Potentially some slowdown in the upward trend more recently
  - Complexity of policy proposals also related to inclusiveness of decision-making process
- Important: keep an eye on the cumulative costs of policy complexity

EUPLEX

"EUPLEX - Coping with Policy Complexity in the European Union" is a DFG-funded Emmy Noether Research Group led by Dr. Steffen Hurka at LMU Munich. The project is concerned with the measurement and study of the sources and effects of policy complexity in the European Union.

Further information and *these slides can be found on the project website* (www.euplex.org).

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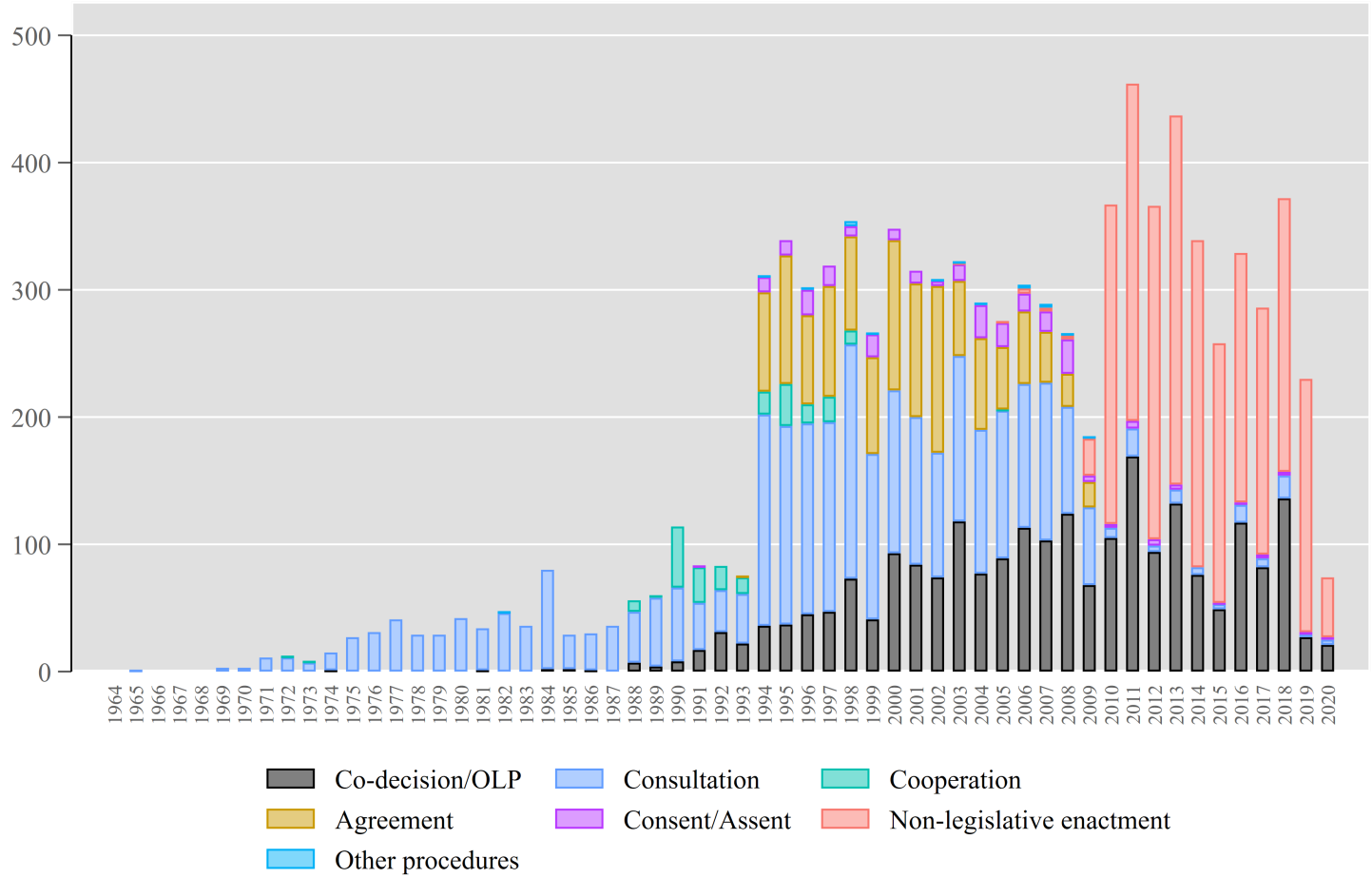
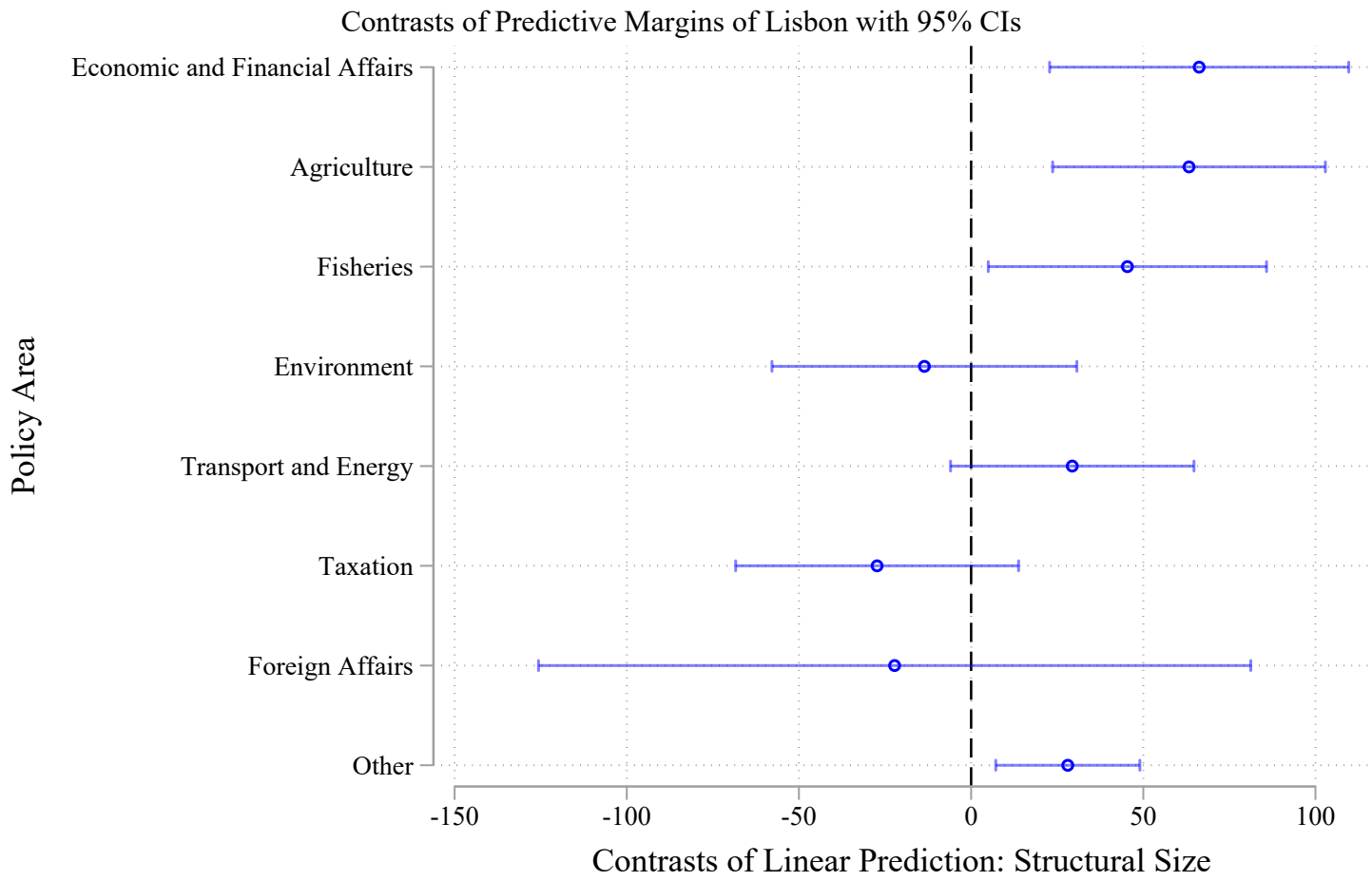
Appendix i

Figure 6: Procedures by initiation date and type



Appendix ii

Figure 7: Contrasts predicted complexity for Lisbon Treaty by policy area



Appendix iii

Table 1: Procedures by procedure type (data basis)

Procedure type	Frequency	Percent
Co-decision/OLP	2346	24.35
Consultation	3060	31.76
Cooperation	219	2.27
Agreement	1164	12.08
Consent/Assent	263	2.73
Non-legislative enactment	2547	26.43
Budget	14	0.15
Other	23	0.24

Appendix iv

Table 2: Procedures by legal instrument and procedure type (sample)

	Legislative Procedure		
Legal instrument	Consultation	Co-decision/OLP	**Total**
Directive	241	759	**1,000**
Regulation	964	1,094	**2,058**
Decision	704	257	**961**
Total	**1,909**	**2,110**	**4,019**

Appendix v

Table 3: Descriptive statistics: dependent variables

Variable	Observations	Mean	Std.Dev.	Min	Max
Structural policy complexity					
Structural size	4019	73.748	137.233	1	2545
Words per policy element	4019	83.144	68.082	17.08	1217.86
Linguistic policy complexity					
Word entropy	4019	7.307	.613	4.37	9.04
Lix score	4019	51.126	6.984	23.42	106.11
Legal policy complexity					
External references per article	4019	3.422	8.87	0	139.2
Internal references per article	4019	1.202	1.711	0	24

Appendix vi

Table 4: OLS Regressions

Variables	Structural size	Words per policy element	Word entropy	Lix score	External references per article	Internal references per article
Date	-0.28**	-0.20***	0.00	-0.04***	-0.02**	-0.01***
	(0.12)	(0.06)	(0.00)	(0.01)	(0.01)	(0.00)
Date	0.00**	0.00***	-0.00	0.00***	0.00**	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Date	-0.00**	-0.00***	0.00	-0.00***	-0.00**	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Co-decision/OLP (ref. Consultation)	-30.23	2.47	0.41**	-1.32	3.26	-0.53
	(39.54)	(20.47)	(0.16)	(1.87)	(2.70)	(0.52)
Co-decision/OLP X Date	0.00	0.00	-0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Regulation (ref. Directive)	-37.69	3.99	-0.02	0.11	2.44	-0.68
	(35.34)	(18.30)	(0.14)	(1.67)	(2.41)	(0.47)
Decision (ref. Directive)	139.33***	74.41***	0.11	19.24***	8.09***	0.76
	(44.06)	(22.81)	(0.18)	(2.09)	(3.01)	(0.58)
Regulation X Date	0.00	-0.00	-0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Decision X Date	-0.01***	-0.01***	-0.00***	-0.00***	-0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Amending proposal (ref. Basic proposal)	-71.56***	-0.53	-0.34***	-2.41***	5.70***	0.24***
	(4.51)	(2.33)	(0.02)	(0.21)	(0.31)	(0.06)
Codification (ref. Legislation)	2.38	3.68	-0.04	-1.43*	0.20	-0.19
	(17.03)	(8.82)	(0.07)	(0.81)	(1.16)	(0.23)
Recast (ref. Legislation)	26.07***	18.67***	0.12***	-1.12***	0.66	0.47***
	(7.88)	(4.08)	(0.03)	(0.37)	(0.54)	(0.10)
Policy Area Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.21	0.14	0.35	0.32	0.12	0.11
N	4,019	4,019	4,019	4,019	4,019	4,019

Note: *p<0.1; ** p<0.05; *** p<0.01; Ordinary Least Squares Regression; standard errors in parentheses.

Appendix vii

Table 5: Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Structural size	1.000					
(2) Words per policy element	0.542	1.000				
(3) Word entropy	0.527	0.565	1.000			
(4) Lix Score	-0.003	0.025	-0.000	1.000		
(5) External references per article	0.164	0.645	0.137	-0.026	1.000	
(6) Internal references per article	0.388	0.618	0.421	-0.053	0.462	1.000

Appendix viii

Table 6: Policy area assignment by DG

Policy area	DG/Service
Administration	HR
Agriculture	AGRI
Budget	BUDG, DG18
Competition	COMP, ECA, DG15
Development	DEVCO, DEV, AIDCO, ECHO
Economic and Financial Affairs	ECFIN, FISMA, DG02
Enlargement/Neighborhood	ELARG, NEAR
Environment	ENV, CLIMA
Fisheries	MARE
Foreign Affairs	EEAS, FPI, RELEX, SCR, DG01, DG01A, DG01B
General Affairs	SG
Health, Food Safety, Consumers	SANCO, SANTE
Information	CNECT, DIGIT, INFSO, DG10, COMMU
Internal Market	GROW, MARKT, ENTR, DG03, DG23
Justice and Home Affairs	JUSTI, HOME, JLS
Legal Service	SJ
Regional Policy	REGIO
Research and Innovation	RTD, JRC
Social Affairs	EAC, EMPL
Statistics	STAT_COMMUN, ESTAT
Taxation	TAXUD
Trade	TRADE
Transport and Energy	MOVE, ENER, TREN, DG07, DG17, EURATOM
Other	BEPA, DGT, AUDIT, IAS, IGS, OP_DATPRO, TASKF_A50_UK, TASKF, SCIC, OLAF, FSU

References

Tainter, J. 2006. “Social complexity and sustainability.” *Ecological Complexity* 3 (2): 91–103.