

The Substantive Focus of Parliamentary Questions in South Africa: The role of gender and intraparty competition

ONLINE APPENDIX

Technical Notes

Note 1: To operationalize the policy focus of each question in the dataset, we used OpenAI’s API and its offering of Large Language Models (LLM), specifically the updated GPT-3.5 Turbo model with the following prompt: *“You are a classifier of policy areas referenced in parliamentary questions in South Africa. You have to assign based on the following 21 major policy areas. You can assign more than one area per question. Delimit multiple policy areas with commas. Don't justify your decisions. Don't use terms not included in the list below. Policy Areas: {CapAreas_21}”*

Note 2: We examined the accuracy of the initial-stage classification into policy areas vis-a-vis manual classification, which yielded an overall 95% accuracy. 100 randomly selected questions from the dataset were classified into a single CAP policy area but also a multi-class classification where the coder could assign more than one policy area. The process yielded a 74% single-issue classification accuracy while the 95% reported above refers to the cases where both manual coders and the LLM classified at least one matching policy area.

Table A.1. CAP Policy to Domain Classification

CAP Policy Assigned	Policy Domain Classification
Macroeconomics	Hard
Social affairs	Soft
Urban planning	Neutral
Companies and domestic trade	Hard
Defense	Hard
Scientific research and technology	Hard
Civil rights and liberties	Neutral
Health	Soft
Agriculture	Hard
Foreign trade	Hard
Foreign affairs	Hard
Labour	Hard
Education	Soft
Environment	Neutral
Public administration	Neutral
Energy	Neutral
Immigration and integration	Hard
Spatial planning and public nature	Neutral
Transport	Hard
Arts, culture and entertainment	Soft

Source: De Vet and Devroe (2023a).

Table A.2. Randomly Selected Example Sentences per Policy Area and their Domain Classification

QUESTION	POLICY AREA	POLICY DOMAIN
Whether he is aware of the minimum wage for farmworkers; if so, what is the amount?	Agriculture	Hard
What is the progress with regard to the implementation of the registration of births within the 30-day period?	Civil rights and liberties	Neutral
What are the criteria for selecting intermediaries to disburse small enterprise finance agency (SEFA) funds?	Companies and domestic trade	Hard
What number of grant applications for military veterans is waiting to be processed?	Defence	Hard
What progress has his department made with the procurement of the promised laptops for the students in tertiary institutions?	Education	Soft
By what date does he envisage full private sector participation in the republic's national electricity generation?	Energy	Neutral
What are the relevant details of the shortage of water in Swartruggens?	Environment	Neutral
What progress has been made on the preparations for the next cycle of the African peer review mechanism?	Foreign affairs	Hard
What are the top five exports and imports in respect of each province?	Foreign trade	Hard
What is the percentage of surgically designated abortion facilities in south Africa?	Health	Soft
On what date will he submit the immigration bill to parliament for consideration?	Immigration and integration	Hard
Why has she waited so many years before taking drastic steps to address the failed compensation fund?	Labour	Hard
What progress has been made with the review of the parole system of his correctional services department?	Law and crime	Hard
What is the current value of the investment portfolio of the unemployment insurance fund?	Macroeconomics	Hard
Whether he will make use of spectrum auctions; if not, why not; if so, what are the relevant details?	Public administration	Neutral
What progress has been made in the construction of the (a) kat-7 precursor array and (b) meerkat array?	Scientific research and technology	Hard
How are child-headed households identified in respect of the mikondzo project?	Social affairs	Soft
By what date does her department envisage that the white paper on human settlements will be finalised?	Spatial planning and public nature	Neutral
When will the single transport economic regulator be (a) finalised and (b) tabled in parliament?	Transport	Hard
What steps does he intend to take to encourage the building of affordable housing?	Urban planning	Neutral

Table A.3. Descriptive Statistics of Variables

Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
Policy Domain	42995						
... Neutral	18501	43%					
... Soft	8697	20.2%					
... Hard	15797	36.7%					
Gender	42995	0.363	0.481	0	0	1	1
Vulnerability	42995	-0.164	0.19	-0.481	-0.323	-0.032	0.475
Election Proximity	42995	-0.016	1.003	-1.664	-0.952	0.815	1.847
Government	42995	0.043	0.202	0	0	0	1
Seniority	42995	0.026	1.017	-0.674	-0.674	0.45	4.946
Parl Party Group Leader	42995	0.022	0.147	0	0	0	1
Minister	42995	0.005	0.07	0	0	0	1
Mandate	42995	0.023	0.977	-5.291	0.074	0.555	22.48
Party Seat Share	42995	0.016	1.006	-1.601	-0.509	0.379	4.702
Female Parl Group Leader	42995	0.71	0.454	0	0	1	1
Gender equality	38956	0.022	0.998	-1.91	-0.424	0.219	4.238

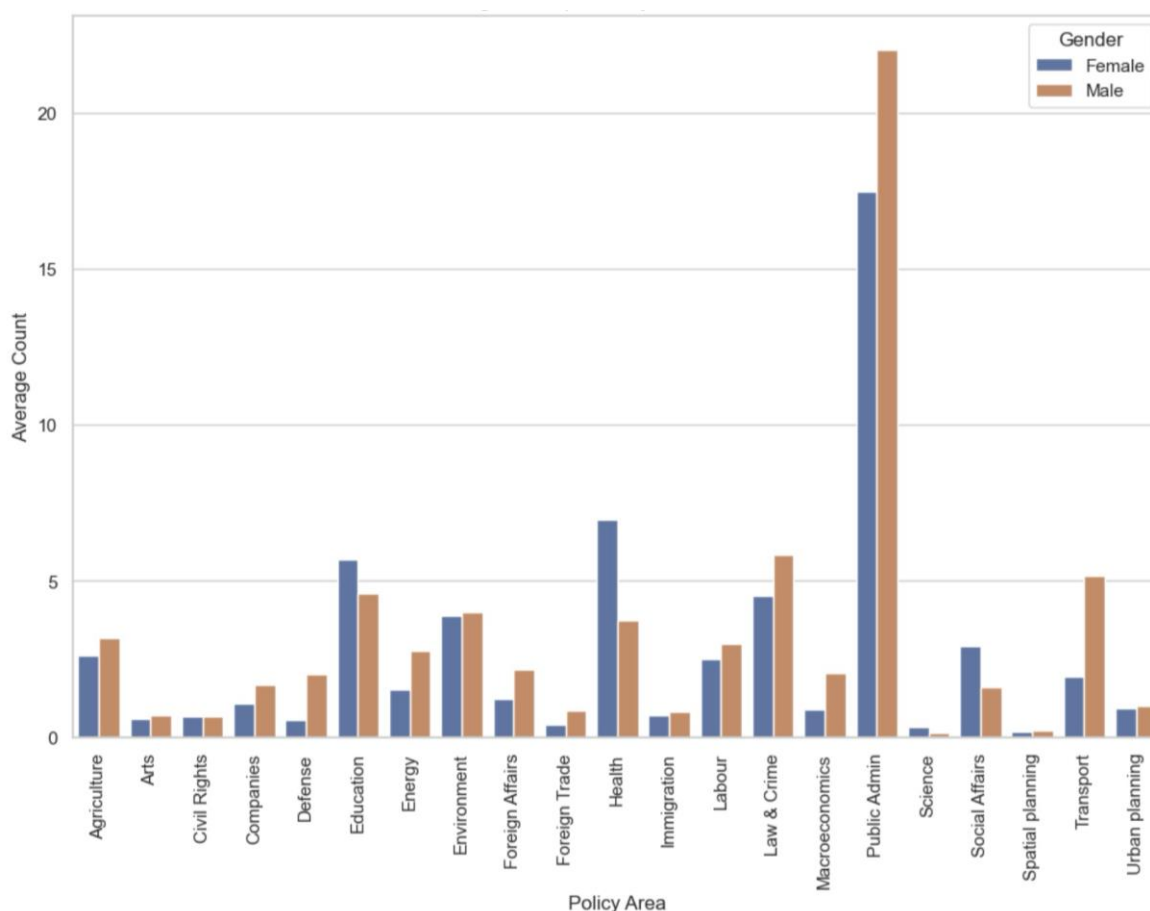


Figure A.1 - Average count of PQ per specific policy domain for female and male MPs

Table A.4. Multinomial logit regression for the baseline, vulnerability and election proximity hypotheses (without controls)

Results - No Controls						
<i>Dependent variable:</i>						
	(1) Baseline Model		(2) Vulnerability Model		(3) Election Proximity Model	
	Soft	Hard	Soft	Hard	Soft	Hard
Gender: 1=Female	0.724*** (0.029)	-0.288*** (0.025)	0.659*** (0.036)	-0.217*** (0.032)	0.723*** (0.027)	-0.265*** (0.024)
Vulnerability	-0.359*** (0.078)	-0.059 (0.063)	-0.268*** (0.071)	-0.199** (0.064)		
Female Parl Group Leader	-0.280* (0.116)	-0.229* (0.102)				
Election Proximity	-0.010 (0.015)	0.044*** (0.012)			0.009 (0.014)	0.047*** (0.012)
Government	0.400 (0.508)	-0.321 (0.450)				
Seniority	0.025 (0.017)	0.110*** (0.013)				
Parl Party Group Leader	-0.431*** (0.105)	-0.173* (0.078)				
Minister	-0.158 (0.212)	-0.231 (0.154)				
MP Mandate	0.030* (0.015)	0.125*** (0.012)				
Party Seat Share	-0.725*** (0.120)	0.216* (0.096)				
Gender equality	0.654*** (0.084)	-0.097 (0.072)				
Gender*Vulnerability			-0.380** (0.143)	0.280* (0.128)		
Gender*Election Proximity					-0.044 (0.027)	-0.086*** (0.024)
Constant	-0.945*** (0.208)	-0.864*** (0.171)	-0.936*** (0.066)	-0.558*** (0.055)	-0.920*** (0.068)	-0.639*** (0.056)
N	42995		42995		42995	
Akaike Inf. Crit.	79,837.770		88,956.750		88,956.460	

Note:

+p<0.1; *p<0.05; **p<0.01; ***p<0.001

Coefficients estimated with multinomial logit regression.

A control variable for legislature fixed effects is included in the models but not displayed.

Table A.5. Multinomial logit regression with three-way interaction between gender, vulnerability and election proximity.

	Results	
	<i>Dependent variable:</i>	
	Soft (1)	Hard (2)
Gender	0.631*** (0.038)	-0.209*** (0.033)
Vulnerability	-0.369*** (0.079)	0.051 (0.069)
Female Parl Group Leader	-0.312** (0.117)	-0.221* (0.103)
Election Proximity	-0.008 (0.019)	0.008 (0.017)
Government	0.285 (0.510)	-0.300 (0.451)
Seniority	0.029+ (0.017)	0.109*** (0.013)
Parl Party Group Leader	-0.419*** (0.106)	-0.192* (0.078)
Minister	-0.176 (0.213)	-0.214 (0.154)
MP Mandate	0.026+ (0.015)	0.121*** (0.012)
Party Seat Share	-0.745*** (0.120)	0.227* (0.096)
Gender equality	0.694*** (0.085)	-0.112 (0.073)
Gender*Vulnerability	-0.587*** (0.151)	0.503*** (0.133)
Gender*Election Proximity	-0.069+ (0.037)	-0.105** (0.033)
Vulnerability*Election Proximity	0.048 (0.076)	-0.151* (0.067)
Gender*Vulnerability*Election Proximity	0.057 (0.150)	-0.152 (0.134)
Constant	-1.012*** (0.209)	-0.845*** (0.172)
N	43449	43449
Akaike Inf. Crit.	79,783.570	79,783.570

Note: +p<0.1; *p<0.05; **p<0.01; ***p<0.001

Coefficients estimated with multinomial logit regression.

A control variable for legislature fixed effects is included in the models but not displayed.

Table A.6 – Citizens views of the most important problems facing the country (10 most cited)

	Average %	R1 (2000)	R2 (2002)	R3 (2006)	R4 (2008)	R5 (2011)	R6 (2015)	R9 (2022)
Unemployment (H)	41,2	39,0	59,2	39,4	35,9	45,4	45,2	24,2
Crime and security (H)	11,6	23,9	9,6	6,4	9,3	7,7	7,9	16,4
Poverty/ destitution (H)	6,8	4,4	7,2	10,5	9,8	7,3	6,8	1,4
Housing (N)	5,3	4,8	3,4	6,2	4,9	7,5	6,2	4,3
Health (includes Health, AIDS, Sickness) (S)	4,6	5,6	6,2	7,3	6,0	2,8	2,7	1,5
Management of economy (H)	4,2		1,1	3,1	11,9	3,8	3,0	2,5
Water supply (N)	3,8	1,8	1,9	3,2	3,0	4,1	3,4	9,1
Electricity (N)	3,1	0,9	0,3	1,7	1,9	2,7	3,7	10,2
Infrastructure/ roads (H)	2,9	1,8	0,3	3,9	1,9	3,4	2,0	6,7
Education (S)	2,6	2,5	1,7	3,2	2,4	2,4	3,2	2,8

Source: Afrobarometer, online analysis data available at <https://www.afrobarometer.org/>.

Question: In your opinion, what are the most important problems facing the country that the government should address?

Notes: The list of problems is not read, respondents offer up to three answers, and interviewers code based on the answers. The table displays data for the top 10 problems, which cover between 80% and 91% of the answers. H=Hard policy domains, S=Soft policy domains, N=Neutral policy domains in our coding scheme.