

AI POLICY & GOVERNANCE

When Operations Research Meets Governance: A Computational Case for Uganda's Cabinet Reform

The argument that 35 ministers can govern Uganda better than 83 is not a political claim. It is a structural one. And structural claims can be tested.

Appendix A: Cabinet Rosters Under Alternative Weighting Scenarios

The following four tables show the full 35-minister cabinet roster under each alternative weighting scenario. Candidates marked ★ (green) also appear in the baseline List A — they form the stable core. Candidates marked → (amber) are new to this scenario — they replaced a baseline selection when the weights changed.

Reading these tables alongside the baseline roster in Table 4 reveals the practical meaning of the stability percentages. The stable 20–31 ministers are not statistical abstractions — they are named individuals whose profiles are strong enough on every scoring dimension that no weighting philosophy dislodges them. The 4–8 who rotate are the genuinely contested selections: the zone where human judgment, contextual knowledge, and political considerations should apply.

S1 — Domain-heavy Weights: 0.70 domain · 0.20 corporate · 0.10 political **29 / 35 stable (83%)**

Formal credentials dominate. 6 baseline candidates replaced; advanced degree quota rises to 35/35.

Portfolio	Name	G	Age	Degree	Region	MP	Status	Score
ICT	★ Isaac Rwamturo	M	65	MSc	Western		✓ In baseline	1.185
Finance	★ Fatuma Rwamreba	F	41	MBA	Western		✓ In baseline	1.17
Health	★ Annet Tumwoza	F	52	MBChB	Western		✓ In baseline	1.155
ForeignAffairs	★ John Awibwa	M	32	LLM	Northern		✓ In baseline	1.141
Energy	★ Apio Nalnaku	F	53	MEng	Central		✓ In baseline	1.141
Agriculture	★ Patrick Ottnze	M	63	MSc	Northern		✓ In baseline	1.068
Commerce	★ Irene Tumwoza	F	54	MPA	Western		✓ In baseline	1.028
InternalAffairs	★ Grace Aturmpe	F	59	LLM	Eastern		✓ In baseline	0.962
LocalGov	★ Fred Achturo	M	61	MBA	Eastern		✓ In baseline	0.936
Works	★ Annet Lugazi	F	40	MSc	Central		✓ In baseline	0.902
SocialWelfare	★ Richard Ssewnze	M	39	MPA	Central		✓ In baseline	0.902

Justice	★ Paul Onymba	M	46	MBChB	Northern	✓ In baseline	0.802
State: Labour	★ Alex Ottmba	M	33	MA	Northern	✓ In baseline	0.646
State: Comms	★ Annet Kornono	F	32	MBA	Northern	✓ In baseline	0.589
State: EastAfrica	★ Phiona Labtete	F	31	LLM	Northern	✓ In baseline	0.582
State: Internal	★ Isaac Biskuru	M	30	MPA	Western	✓ In baseline	0.563
State: Agriculture	→ Beatrice Amereba	F	67	MSc	Eastern	New in scenario	0.562
State: Tourism	★ Nakato Kodi	F	29	MBChB	Northern	✓ In baseline	0.554
State: Water	→ Stephen Nammpa	M	42	MSc	Central	New in scenario	0.545
State: TechDigital	→ Stephen Onymba	M	37	MSc	Eastern	New in scenario	0.544
State: RegionalDev	★ Amina Achaku	F	34	MEng	Eastern	✓ In baseline	0.541
State: UrbanDev	★ Harriet Nkurreba	F	34	MSc	Western	✓ In baseline	0.522
State: Security	★ Paul Achturo	M	30	MA	Eastern	✓ In baseline	0.511
State: Infrastructure	★ Amina Kignaku	F	54	MBChB	Central	✓ In baseline	0.505
State: Energy	★ David Kagmba	M	66	MPA	Central	✓ In baseline	0.504
State: Education	★ Apio Kabnaku	F	33	MBChB	Western	✓ In baseline	0.492
Lands	★ Stephen Lanbwa	M	39	LLM	Northern	✓ In baseline	0.49
State: SocialDev	★ Patrick Ssewbwa	M	29	MBA	Central	✓ In baseline	0.48
VicePresident	★ Richard Opiondi	M	39	MEng	Eastern	✓ In baseline	0.469
Education	★ Nantale Karnono	F	30	MEng	Western	✓ In baseline	0.46
State: PublicHealth	→ Fatuma Onytete	F	51	MBChB	Eastern	New in scenario	0.449
State: Finance	★ Joyce Bisndi	F	30	MBA	Western	✓ In baseline	0.438
PrimeMinister	★ Fatuma Lankazi	F	54	MEng	Northern	✓ In baseline	0.425
State: Trade	→ Stephen Kagkuru	M	28	LLM	Central	New in scenario	0.405
Defence	→ Fatuma Nkurwoza	F	44	MBA	Western	New in scenario	0.332

S2 — Private-sector-heavy

Weights: 0.30 domain · 0.60 corporate · 0.10 political **27 / 35 stable (77%)**

Business leadership depth dominates. 8 baseline candidates replaced; corporate DNA quota rises to 35/35.

Portfolio	Name	G	Age	Degree	Region	MP	Status	Score
ICT	★ Isaac Rwamturo	M	65	MSc	Western		✓ In baseline	1.191
Finance	★ Irene Tumwoza	F	54	MPA	Western		✓ In baseline	1.186
ForeignAffairs	★ Grace Aturmpe	F	59	LLM	Eastern		✓ In baseline	1.179
Energy	★ Apio Nalnaku	F	53	MEng	Central		✓ In baseline	1.163
Commerce	★ Fatuma Rwamreba	F	41	MBA	Western		✓ In baseline	1.135
Works	★ Nantale Karnono	F	30	MEng	Western		✓ In baseline	1.125
Agriculture	★ Patrick Ottnze	M	63	MSc	Northern		✓ In baseline	1.106
InternalAffairs	★ John Awibwa	M	32	LLM	Northern		✓ In baseline	1.07
Health	★ Annet Lugazi	F	40	MSc	Central		✓ In baseline	0.966
LocalGov	★ Fred Achturo	M	61	MBA	Eastern		✓ In baseline	0.958
SocialWelfare	★ Apio Ottni	F	45	MPA	Northern		✓ In baseline	0.934
Justice	★ Annet Tumwoza	F	52	MBChB	Western		✓ In baseline	0.905
State: Security	→ Joseph Bisbwa	M	44	MSc	Western		New in scenario	0.837
State: Internal	★ Alex Ottmba	M	33	MA	Northern		✓ In baseline	0.834
State: Comms	★ Annet Kornono	F	32	MBA	Northern		✓ In baseline	0.81
State: Trade	★ Nantale Nsinono	F	30	BSc	Western		✓ In baseline	0.804
VicePresident	★ Paul Onymba	M	46	MBChB	Northern		✓ In baseline	0.774
Education	★ Richard Opiondi	M	39	MEng	Eastern		✓ In baseline	0.768
State: Agriculture	→ Beatrice Amereba	F	67	MSc	Eastern		New in scenario	0.766
State: Energy	★ Isaac Biskuru	M	30	MPA	Western		✓ In baseline	0.756
State: Education	→ Sylvia Mukkazi	F	70	MBChB	Central		New in scenario	0.752
State: Water	★ Amina Kignnaku	F	54	MBChB	Central		✓ In baseline	0.751
State: SocialDev	★ Apio Kabnaku	F	33	MBChB	Western		✓ In baseline	0.731

State: RegionalDev	→ Alex Nabmba	M	34	MBA	Central		New in scenario	0.724
Defence	→ Alex Oyumpa	M	35	MPA	Northern		New in scenario	0.722
PrimeMinister	★ Prossy Nsitete	F	51	MPA	Western		✓ In baseline	0.718
State: PublicHealth	→ Fatuma Onytete	F	51	MBChB	Eastern		New in scenario	0.713
Lands	★ Richard Ssewnze	M	39	MPA	Central		✓ In baseline	0.7
State: TechDigital	→ Stephen Onymba	M	37	MSc	Eastern		New in scenario	0.7
State: Labour	★ Patrick Ssewbwa	M	29	MBA	Central		✓ In baseline	0.695
State: Finance	★ Nakato Kodi	F	29	MBChB	Northern		✓ In baseline	0.687
State: UrbanDev	★ Amina Achnaku	F	34	MEng	Eastern		✓ In baseline	0.687
State: Infrastructure	★ Harriet Nkurreba	F	34	MSc	Western		✓ In baseline	0.663
State: Tourism	★ Phiona Labtete	F	31	LLM	Northern		✓ In baseline	0.646
State: EastAfrica	→ Irene Lugwoza	F	32	MEng	Central		New in scenario	0.546

S3 – Parliamentary-heavy

Weights: 0.30 domain · 0.20 corporate · 0.50 political **29 / 35 stable (83%)**

Parliamentary mandate dominates. 6 baseline candidates replaced; advanced degree and corporate quotas fall but remain above minimums.

Portfolio	Name	G	Age	Degree	Region	MP	Status	Score
Finance	★ Irene Tumwoza	F	54	MPA	Western		✓ In baseline	1.186
ForeignAffairs	★ Grace Aturmpe	F	59	LLM	Eastern		✓ In baseline	1.179
Energy	★ Apio Nalnaku	F	53	MEng	Central		✓ In baseline	1.163
ICT	→ Nantale Ottndi	F	69	MEng	Northern		New in scenario	1.098
Health	★ Nakato Kodi	F	29	MBChB	Northern		✓ In baseline	1.095
Agriculture	★ Patrick Ottnze	M	63	MSc	Northern		✓ In baseline	1.006
InternalAffairs	★ John Awibwa	M	32	LLM	Northern		✓ In baseline	0.99
Commerce	★ Isaac Rwamturo	M	65	MSc	Western		✓ In baseline	0.968
State: Security	★ Irene Opindi	F	53	MA	Eastern		✓ In baseline	0.849
State: Trade	★ David Lugndi	M	44	MPA	Central		✓ In baseline	0.848

Works	★ Annet Lugazi	F	40	MSc	Central	✓ In baseline	0.844
LocalGov	★ Fatuma Rwamreba	F	41	MBA	Western	✓ In baseline	0.839
PrimeMinister	→ Alex Kornze	M	66	LLM	Northern	New in scenario	0.836
Justice	★ Annet Tumwoza	F	52	MBChB	Western	✓ In baseline	0.805
<i>State: Tourism</i>	★ Nantale Nsinono	F	30	BSc	Western	✓ In baseline	0.744
<i>State: EastAfrica</i>	★ Richard Opiondi	M	39	MEng	Eastern	✓ In baseline	0.743
<i>State: Education</i>	★ Alex Ottmba	M	33	MA	Northern	✓ In baseline	0.734
<i>State: Water</i>	→ Richard Awikuru	M	59	LLM	Northern	New in scenario	0.73
<i>State: UrbanDev</i>	→ Nantale Odonzi	F	53	MA	Eastern	New in scenario	0.73
<i>State: Comms</i>	★ Annet Kornono	F	32	MBA	Northern	✓ In baseline	0.71
<i>State: Internal</i>	★ Phiona Labtete	F	31	LLM	Northern	✓ In baseline	0.688
<i>State: Agriculture</i>	★ Fatuma Lankazi	F	54	MEng	Northern	✓ In baseline	0.68
Education	★ Apio Ottni	F	45	MPA	Northern	✓ In baseline	0.675
Defence	★ Fred Achturo	M	61	MBA	Eastern	✓ In baseline	0.674
VicePresident	★ Paul Onymba	M	46	MBChB	Northern	✓ In baseline	0.674
<i>State: TechDigital</i>	★ Beatrice Nabnaku	F	50	MPA	Central	✓ In baseline	0.669
<i>State: SocialDev</i>	★ Isaac Biskuru	M	30	MPA	Western	✓ In baseline	0.666
SocialWelfare	★ Nantale Karnono	F	30	MEng	Western	✓ In baseline	0.659
Lands	★ Prossy Nsitete	F	51	MPA	Western	✓ In baseline	0.638
<i>State: Labour</i>	★ Paul Achturo	M	30	MA	Eastern	✓ In baseline	0.635
<i>State: Infrastructure</i>	→ Nakato Kabtete	F	29	BSc	Western	New in scenario	0.606
<i>State: Energy</i>	→ Patrick Arumba	M	33	BSc	Northern	New in scenario	0.584
<i>State: Finance</i>	★ Joyce Bisndi	F	30	MBA	Western	✓ In baseline	0.534
<i>State: RegionalDev</i>	★ Amina Achnaku	F	34	MEng	Eastern	✓ In baseline	0.465
<i>State: PublicHealth</i>	★ Patrick Ssewbwa	M	29	MBA	Central	✓ In baseline	0.425

S4 — Equal-weighted

Weights: 0.33 domain · 0.33 corporate · 0.34 political **31 / 35 stable (89%)**

No dominant dimension. Only 4 baseline candidates replaced — the highest stability of all scenarios.

Portfolio	Name	G	Age	Degree	Region	MP	Status	Score
Finance	★ Irene Tumwoza	F	54	MPA	Western		✓ In baseline	1.185
ForeignAffairs	★ Grace Aturmpe	F	59	LLM	Eastern		✓ In baseline	1.175
Energy	★ Apio Nalnaku	F	53	MEng	Central		✓ In baseline	1.161
ICT	★ Isaac Rwamturo	M	65	MSc	Western		✓ In baseline	1.13
Health	★ Annet Tumwoza	F	52	MBChB	Western		✓ In baseline	1.095
Commerce	★ Fatuma Rwamreba	F	41	MBA	Western		✓ In baseline	1.071
Agriculture	★ Patrick Ottnze	M	63	MSc	Northern		✓ In baseline	1.043
InternalAffairs	★ John Awibwa	M	32	LLM	Northern		✓ In baseline	1.021
LocalGov	★ Fred Achturo	M	61	MBA	Eastern		✓ In baseline	0.896
Works	★ Annet Lugazi	F	40	MSc	Central		✓ In baseline	0.881
State: Security	★ Irene Opindi	F	53	MA	Eastern		✓ In baseline	0.834
Justice	★ Paul Onyamba	M	46	MBChB	Northern		✓ In baseline	0.833
State: Trade	★ David Lugndi	M	44	MPA	Central		✓ In baseline	0.833
State: Education	→ Joseph Bisbwa	M	44	MSc	Western		New in scenario	0.772
State: PublicHealth	★ Alex Ottmba	M	33	MA	Northern		✓ In baseline	0.76
State: Tourism	★ Stephen Lanbwa	M	39	LLM	Northern		✓ In baseline	0.756
State: Energy	★ Nantale Nsinono	F	30	BSc	Western		✓ In baseline	0.75
State: Comms	★ Annet Kornono	F	32	MBA	Northern		✓ In baseline	0.733
State: UrbanDev	→ Richard Awikuru	M	59	LLM	Northern		New in scenario	0.717
State: TechDigital	★ Beatrice Nabnaku	F	50	MPA	Central		✓ In baseline	0.691
State: SocialDev	★ Isaac Biskuru	M	30	MPA	Western		✓ In baseline	0.688
Education	★ Richard Opiondi	M	39	MEng	Eastern		✓ In baseline	0.688

VicePresident	★ Apio Ottndi	F	45	MPA	Northern	✓ In baseline	0.687
SocialWelfare	★ Nantale Karnono	F	30	MEng	Western	✓ In baseline	0.678
<i>State: Internal</i>	★ Phiona Labtete	F	31	LLM	Northern	✓ In baseline	0.666
PrimeMinister	★ Prossy Nsitete	F	51	MPA	Western	✓ In baseline	0.665
Lands	★ Nakato Kodi	F	29	MBChB	Northern	✓ In baseline	0.661
<i>State: Infrastructure</i>	★ Fatuma Lankazi	F	54	MEng	Northern	✓ In baseline	0.658
<i>State: EastAfrica</i>	→ Patrick Arumba	M	33	BSc	Northern	New in scenario	0.611
<i>State: Labour</i>	★ Paul Achturo	M	30	MA	Eastern	✓ In baseline	0.584
Defence	→ Nantale Ottndi	F	69	MEng	Northern	New in scenario	0.58
<i>State: RegionalDev</i>	★ Amina Achnaku	F	34	MEng	Eastern	✓ In baseline	0.543
<i>State: Agriculture</i>	★ Patrick Ssewbwa	M	29	MBA	Central	✓ In baseline	0.517
<i>State: Finance</i>	★ Joyce Bisndi	F	30	MBA	Western	✓ In baseline	0.516
<i>State: Water</i>	★ Apio Kabnaku	F	33	MBChB	Western	✓ In baseline	0.473

★ = appears in both this scenario and the baseline List A · → = new to this scenario · Green score ≥ 1.00 · Amber score 0.85–0.99

Technical & Legal References

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