

## Effective district magnitude

Codebook

Citation: Bochsler, Daniel, Miriam Hänni, and Bernard Grofman. forthcoming. "How proportional are electoral systems? A universal measure of electoral rules." *Electoral Studies*.

## Effective district magnitude

m\_eff Effective district magnitude (all rules 1-4 applied)

m\_eff0000

...

m\_eff1234 District magnitude with transformations (rules 1-4) applied modularly

		District magnitude		... and Legal thresholds	
		no transform.	PR formula	no transform.	PR formula
		-	<b>Rule 1</b>	<b>Rule 2</b>	<b>Rules 1+2</b>
only lower tier	-	m_eff0000	m_eff1000	m_eff0200	m_eff1200
Multi-tier	<b>Rule 3</b>	m_eff0030	m_eff1300	m_eff0230	m_eff1230
Multi-tier + MMP	<b>Rules 3+4</b>	m_eff0034	m_eff1340	m_eff0234	m_eff = m_eff1234
Lower m. + upper %	<b>C-G</b>	m_eff0000 + Nupper	m_eff1000 + Nupper	m_eff0200 + Nupper	m_eff1200 + Nupper

Reading example. The "effective district magnitude", m\_eff, is an index based on all four rules, i.e. m\_eff=m\_eff1234. Lower-tier district magnitude is m\_eff0000.

We don't allow for rule 4 being used independently of rule 3, i.e. the distinction between MMM/MMP systems is not applicable if rule 3 (MMM systems) is not applied.

m\_eff0000 Lower-tier district magnitude  
m\_eff1000 Lower-tier district magnitude with rule 1 (different PR seat allocation formula)  
m\_eff1200 Lower-tier district magnitude with rules 1+2 (different PR seat allocation formula and legal thresholds)  
m\_eff1230 District magnitude in both tiers with rules 1+2+3 (different PR seat allocation formula and legal thresholds, MMM/multi-tier systems)  
m\_eff1234 District magnitude in both tiers with rules 1+2+3 (different PR seat allocation formula and legal thresholds, MMM/multi-tier systems, MMP/compensatory)

m\_efsC Effective district magnitude (rules 1-4) with an extension for MMP systems with small number of upper-tier seats  
ms\_lishugart MS seat product (Taagepera & Shugart, Li & Shugart)  
m\_renwick Effective district magnitude calculation based on arithmetic mean

upper Upper-tier seat share

elsys	Type of electoral system
elsysr	Type of electoral system, reduced categories (1 PR 2 plurality 3 runoff/AV 4 MMM/multi-tier 5 MMP/multi-tier compensatory 6 PR bonus)

Dependent variables

lnn2seat	Effective number of parties in parliament (by seats), logarithm
lnn2vote	Effective number of elective parties (by votes), logarithm
lnlsq	Disproportionality (least-square index)

Control variables and subsets

ln_ethfract	Ethnic fractionalisation index, logarithm
ln_pop	Population, logarithm
polity	Polity IV
dpi_pres	Presidential regimes