APPENDIX A: EFFECTIVE NUMBER OF PARTIES BY COUNTRY AND YEAR

The effective number of parties equals the reciprocal of the sum of the squared proportion of the vote received by each party with independent candidates each treated as separate parties.

Country	Year	Effective Number of Electoral Parties
Antigua and Barbuda	1994	2.05
Antigua and Barbuda	1999	2.09
Antigua and Barbuda	2004	2.07
Antigua and Barbuda	2009	2.07
Argentina	1991	3.98
Argentina	1993	3.57
Argentina	1995	3.61
Argentina	1997	3.65
Argentina	1999	3.28
Argentina	2001	6.08
Argentina	2003	5.39
Argentina	2005	6.38
Australia	1990	3.37
Australia	1993	2.90
Australia	1996	3.20
Australia	1998	3.46
Australia	2001	3.43
Australia	2004	3.18
Australia	2007	3.03
Australia	2010	3.83
Austria	1990	3.16
Austria	1994	3.87
Austria	1995	3.59
Austria	1999	3.82
Austria	2002	3.02
Austria	2006	3.71
Austria	2008	4.83
Bahamas	1992	1.98
Bahamas	1997	1.97
Bahamas	2002	2.28
Bahamas	2007	2.13
Barbados	1991	2.28
Barbados	1994	2.52
Barbados	1999	1.84
Barbados	2003	1.98

Country	Year	Effective Number of Electoral Parties
Barbados	2008	2.00
Belgium	1991	9.81
Belgium	1995	9.46
Belgium	1999	10.27
Belgium	2003	8.84
Belgium	2007	9.04
Belgium	2010	10.04
Belize	1993	2.00
Belize	1998	1.96
Belize	2003	2.04
Belize	2008	2.03
Botswana	1994	2.34
Botswana	1999	2.44
Botswana	2004	2.74
Botswana	2009	2.71
Brazil	1990	9.80
Brazil	1994	8.52
Brazil	1998	8.14
Brazil	2002	9.28
Brazil	2006	10.62
Brazil	2010	11.21
Bulgaria	1991	4.18
Bulgaria	1994	3.85
Bulgaria	1997	3.00
Bulgaria	2001	3.94
Bulgaria	2005	5.80
Bulgaria	2009	4.40
Canada	1993	3.93
Canada	1997	4.09
Canada	2000	3.77
Canada	2004	3.78
Canada	2006	3.75
Canada	2008	3.87
Canada	2011	3.43
Cape Verde	1995	2.13
Cape Verde	2001	2.41
Cape Verde	2006	2.14
Cape Verde	2011	2.18
Chile	1993	6.76
Chile	1997	7.29
Chile	2001	6.56

Country	Year	Effective Number of Electoral Parties
Chile	2005	6.58
Chile	2009	7.32
Costa Rica	1990	2.56
Costa Rica	1994	2.73
Costa Rica	1998	3.36
Costa Rica	2002	4.52
Costa Rica	2006	6.60
Costa Rica	2010	4.78
Cyprus	1991	3.67
Cyprus	1996	3.80
Cyprus	2001	3.78
Cyprus	2006	4.29
Cyprus	2011	3.86
Czech Republic	1990	3.50
Czech Republic	1992	7.31
Czech Republic	1996	5.33
Czech Republic	1998	4.72
Czech Republic	2002	4.82
Czech Republic	2006	3.91
Czech Republic	2010	6.75
Denmark	1990	4.65
Denmark	1994	4.76
Denmark	1998	4.73
Denmark	2001	4.69
Denmark	2005	5.19
Denmark	2007	5.41
Denmark	2011	5.71
Dominica	1990	2.69
Dominica	1995	2.99
Dominica	2000	2.58
Dominica	2005	2.16
Dominica	2009	2.00
Dominican Republic	1990	3.66
Dominican Republic	1994	3.06
Dominican Republic	1998	2.74
Dominican Republic	2002	3.33
Dominican Republic	2006	3.08
Dominican Republic	2010	3.06
El Salvador	1991	3.34
El Salvador	1994	3.48
El Salvador	1997	3.95

Country	Year	Effective Number of Electoral Parties
El Salvador	2000	3.68
El Salvador	2003	4.10
El Salvador	2006	3.06
El Salvador	2009	2.91
Estonia	1992	8.85
Estonia	1995	5.99
Estonia	1999	6.88
Estonia	2003	5.43
Estonia	2007	5.02
Estonia	2011	4.78
Finland	1991	5.91
Finland	1995	5.79
Finland	1999	5.93
Finland	2003	5.65
Finland	2007	5.88
Finland	2011	6.47
France	1993	6.89
France	1997	6.56
France	2002	5.22
France	2007	4.32
Germany	1990	3.75
Germany	1994	3.75
Germany	1998	3.78
Germany	2002	3.87
Germany	2005	4.46
Germany	2009	5.58
Ghana	1992	1.57
Ghana	1996	2.55
Ghana	2000	2.66
Ghana	2004	2.46
Ghana	2008	2.39
Greece	1990	2.63
Grenada	1990	3.85
Grenada	1995	3.65
Grenada	1999	2.14
Grenada	2003	2.29
Grenada	2008	2.03
Iceland	1991	4.23
Iceland	1995	4.29
Iceland	1999	3.55
Iceland	2003	3.94

Country	Year	Effective Number of Electoral Parties
Iceland	2007	4.06
Iceland	2009	4.55
India	1991	5.12
India	1996	6.92
India	1998	6.91
India	1999	6.74
India	2004	7.56
India	2009	7.74
Ireland	1992	3.94
Ireland	1997	4.03
Ireland	2002	4.13
Ireland	2007	3.77
Ireland	2011	4.77
Israel	1992	4.92
Israel	1996	6.14
Israel	1999	10.04
Israel	2003	7.05
Israel	2006	8.98
Israel	2009	7.37
Italy	1992	6.63
Jamaica	1993	1.94
Jamaica	1997	2.13
Jamaica	2002	2.02
Jamaica	2007	2.00
Latvia	1993	6.21
Latvia	1995	9.61
Latvia	1998	6.94
Latvia	2002	6.79
Latvia	2006	7.49
Latvia	2010	4.43
Lesotho	1993	1.64
Lesotho	1998	2.29
Lesotho	2002	2.79
Liechtenstein	1993	2.43
Liechtenstein	1994	2.33
Liechtenstein	1997	2.45
Liechtenstein	2001	2.34
Liechtenstein	2005	2.50
Liechtenstein	2009	2.36
Luxembourg	1994	4.70
Luxembourg	1999	4.71

Country	Year	Effective Number of Electoral Parties
Luxembourg	2004	4.26
Luxembourg	2009	4.25
Malta	1992	2.06
Malta	1996	2.06
Malta	1998	2.04
Malta	2003	2.02
Malta	2008	2.08
Mauritius	1991	2.20
Mauritius	1995	3.78
Mauritius	2000	2.56
Mauritius	2005	2.46
Mauritius	2010	2.40
Monaco	1998	1.93
Mongolia	1992	2.72
Mongolia	1996	2.56
Mongolia	2000	3.23
Mongolia	2004	2.27
Mongolia	2008	2.26
Namibia	1994	1.69
Namibia	1999	1.67
Namibia	2004	1.70
Namibia	2009	1.72
Netherlands	1994	5.72
Netherlands	1998	5.15
Netherlands	2002	6.03
Netherlands	2003	4.99
Netherlands	2006	5.80
Netherlands	2010	6.97
New Zealand	1990	2.78
New Zealand	1993	3.52
New Zealand	1996	4.39
New Zealand	1999	3.86
New Zealand	2002	4.16
New Zealand	2005	3.04
New Zealand	2008	3.07
New Zealand	2011	3.15
Norway	1993	4.73
Norway	1997	5.07
Norway	2001	6.18
Norway	2005	5.11
Norway	2009	4.55

Country	Year	Effective Number of Electoral Parties
Peru	1990	5.03
Peru	1995	3.42
Peru	2000	4.00
Peru	2001	6.64
Peru	2006	7.25
Peru	2011	5.71
Poland	1991	13.79
Poland	1993	8.75
Poland	1997	4.59
Poland	2001	4.50
Poland	2005	5.86
Poland	2007	3.32
Poland	2011	3.74
Portugal	1991	2.74
Portugal	1995	2.97
Portugal	1999	3.06
Portugal	2002	3.02
Portugal	2005	3.13
Portugal	2009	3.83
Portugal	2011	3.98
Romania	1990	2.21
Romania	1992	6.95
Romania	1996	6.08
Romania	2000	5.23
Romania	2004	3.94
Romania	2008	3.93
Samoa	1991	3.88
Samoa	1996	3.90
Samoa	2001	3.73
Samoa	2006	3.56
Samoa	2011	2.76
St. Kitts and Nevis	1993	3.08
St. Kitts and Nevis	1995	2.64
St. Kitts and Nevis	2000	2.60
St. Kitts and Nevis	2004	2.70
St. Kitts and Nevis	2010	2.94
St. Lucia	1992	1.97
St. Lucia	1997	1.92
St. Lucia	2001	2.18
St. Lucia	2006	2.01
St. Lucia	2011	2.08

Country	Year	Effective Number of Electoral Parties
St. Vincent and the Grenadines	1994	2.43
St. Vincent and the Grenadines	1998	1.99
St. Vincent and the Grenadines	2001	2.05
St. Vincent and the Grenadines	2005	1.98
St. Vincent and the Grenadines	2010	2.01
San Marino	1993	3.68
San Marino	1998	3.73
San Marino	2001	3.55
San Marino	2006	4.22
São Tomé and Príncipe	1991	2.14
São Tomé and Príncipe	1994	3.20
São Tomé and Príncipe	1998	2.76
São Tomé and Príncipe	2002	2.95
São Tomé and Príncipe	2006	3.59
São Tomé and Príncipe	2010	3.14
Slovakia	1990	5.80
Slovakia	1992	5.36
Slovakia	1994	5.81
Slovakia	1998	5.33
Slovakia	2002	8.85
Slovakia	2006	6.11
Slovakia	2010	5.53
Slovenia	1992	8.35
Slovenia	1996	6.32
Slovenia	2000	5.15
Slovenia	2004	5.97
Slovenia	2008	4.94
South Africa	1994	2.29
South Africa	1999	2.16
South Africa	2004	1.97
South Africa	2009	2.13
Spain	1993	3.47
Spain	1996	3.21
Spain	2000	3.02
Spain	2004	2.95
Spain	2008	2.76
Spain	2011	3.44
Suriname	1991	2.69
Suriname	1996	3.62
Suriname	2000	3.74
Suriname	2005	3.92

Country	Year	Effective Number of Electoral Parties
Suriname	2010	3.49
Sweden	1991	4.57
Sweden	1994	3.65
Sweden	1998	4.54
Sweden	2002	4.51
Sweden	2006	4.66
Sweden	2010	4.90
Switzerland	1991	7.41
Switzerland	1995	6.86
Switzerland	1999	5.87
Switzerland	2003	5.46
Switzerland	2007	5.61
Switzerland	2011	6.35
United Kingdom	1992	3.06
United Kingdom	1997	3.22
United Kingdom	2001	3.33
United Kingdom	2005	3.59
United Kingdom	2010	3.72
USA	1990	2.14
USA	1992	2.20
USA	1994	2.14
USA	1996	2.11
USA	1998	2.13
USA	2000	2.16
USA	2002	2.12
USA	2004	2.10
USA	2006	2.09
USA	2008	2.16
USA	2010	2.14

APPENDIX B: EXCLUSION MAGNITUDE, THRESHOLD OF EXCLUSION, AND DETERMINANTS OF THE THRESHOLD

Electoral systems are numbered according to the Lijphart (1994: 13-14) criteria with a new electoral system for a change in electoral formula, or a change of 20% or more in district magnitude, national legal threshold, or assembly size. Electoral systems with no number did not change according to these criteria over the course of the study. The exclusion magnitude equals 100/(threshold of exclusion) - 1. The determinant of the threshold of exclusion varies and is indicated in the last column. Multiple entries exist for a single electoral system if district magnitudes changed, as indicated by the year in the final column.

Country and Electoral System Number	Exclusion Magnitude	Threshold of Exclusion	Threshold Determinant (and Years if District Magnitudes Varies)
Antigua and Barbuda	1.0	50	Majoritarian
Argentina	5.9	14.4	District magnitude in the single tier (staggered elections, 1991 and every 4 years after that)
Argentina	5.8	14.6	District magnitude in the single tier (staggered elections, 1993 and every 4 years after that)
Australia	1.0	50	Majoritarian
Austria 1 (1990)	19.4	4.9	Legal district threshold of one Hare quota at the Land level to qualify for upper tier seats
Austria 2 (1994-)	24.0	4	Legal national threshold of 4%
Bahamas	1.0	50	Majoritarian
Barbados	1.0	50	Majoritarian
Belgium 1 (1991)	9.6	9.4	Legal district threshold of winning 2/3 of a Hare quota in lower tier district to participate in distribution of seats for that province
Belgium 2 (1995-9)	17.2	5.5	District magnitude in the higher tier (provincial level including Brabant)
Belgium 3 (2003-)	16.5	5.7	District magnitude in the single tier
Belize	1.0	50	Majoritarian
Botswana 1 (1994)	1.0	50	Majoritarian
Botswana 2 (1999-)	1.0	50	Majoritarian
Brazil	17.9	5.3	District magnitude in the single tier
Bulgaria 1 (1990)	24.0	4	Legal national threshold of 4%
Bulgaria 2 (1991-)	24.0	4	Legal national threshold of 4%
Canada	1.0	50	Majoritarian
Cape Verde	4.0	20.1	District magnitude in the single tier
Chile	2.0	33.3	District magnitude in the single tier (very low, 2 in all districts)
Costa Rica	8.4	10.6	District magnitude in the single tier, 1994-2002

Country and Electoral System Number	Exclusion Magnitude	Threshold of Exclusion	Threshold Determinant (and Years if District Magnitudes Varies)
Costa Rica	7.9	11.2	District magnitude in the single tier, 2006-10
Cyprus 1 (1991)	11.5	8	Legal national threshold of 8%
Cyprus 2 (1996-)	54.6	1.8	Legal national threshold of 1.8% (same as indicated by district magnitude at national tier)
Czech Republic 1 (1990-98)	19.0	5	Legal national threshold of 5%
Czech Republic 2 (2002-)	14.4	6.5	District magnitude in the single tier
Denmark	49.0	2	Legal national threshold of 2%
Dominica	1.0	50	Majoritarian
Dominican Republic 1 (1990-94)	4.5	18.3	District magnitude in the single tier
Dominican Republic 2 (1998)	5.6	15.1	District magnitude in the single tier
Dominican Republic 3 (2002-)	3.3	23.2	District magnitude in the single tier, 2002
Dominican Republic 3 (2002-)	3.9	20.6	District magnitude in the single tier, 2006
Dominican Republic 3 (2002-)	3.8	21.0	District magnitude in the single tier, 2010
El Salvador 1 (1991-2003)	19.8	4.8	District magnitude (national district of 20 seats distributed without regard to provincial distribution so just treated as another district)
El Salvador 2 (2006-)	6.4	13.6	District magnitude in the single tier (national district abolished)
Estonia	19.0	5	Legal national threshold of 5%
Finland	13.9	6.7	District magnitude in the single tier
France	1.0	50	Majoritarian
Germany 1 (1990)	19.0	5	Legal national threshold of 5% (applied separately in Eastern and Western Germany as if a district threshold)
Germany 2 (1994-)	19.0	5	Legal national threshold of 5%
Ghana	1.0	50	Majoritarian
Greece 1 (1990)	21.7	4.4	District magnitude of major (2nd tier) districts with the separate national district treated as one more major district
Grenada	1.0	50	Majoritarian
Iceland 1 (1991-99)	6.5	13.4	District magnitude in the lower tier
Iceland 2 (2003-)	19.0	5	Legal national threshold of 5%
India	1.0	50	Majoritarian
Ireland	4.1	19.7	District magnitude in the single tier, 1992-7

Country and Electoral System Number	Exclusion Magnitude	Threshold of Exclusion	Threshold Determinant (and Years if District Magnitudes Varies)
Ireland	4.0	20.0	District magnitude in the single tier, 2002
Ireland	3.9	20.4	District magnitude in the single tier, 2007-11
Israel 1 (1992-2003)	65.7	1.5	Legal national threshold of 1.5%
Israel 2 (2006-)	49.0	2	Legal national threshold of 2%
Italy 1 (1992)	22.3	4.3	Imperiali quota to win a district level seat based on district magnitudes
Jamaica	1.0	50	Majoritarian
Latvia 1 (1993)	20.3	4.7	District magnitude in the single tier
Latvia 2 (1995-)	19.0	5	Legal national threshold of 5%
Lesotho 1 (1993)	1.0	50	Majoritarian
Lesotho 2 (1998)	1.0	50	Majoritarian
Lesotho 3 (2002)	124.0	0.8	Total number of seats (MMP system with no threshold)
Liechtenstein	11.5	8	Legal national threshold of 8%
Luxembourg	15.4	6.1	District magnitude in the single tier
Malta	5.0	16.7	District magnitude in the STV (lower) tier
Mauritius	1.0	50	Majoritarian
Monaco 1 (1993-98)	1.0	50	Majoritarian
Mongolia 1 (1992)	1.0	50	Majoritarian
Mongolia 2 (1996-2004)	1.0	50	Majoritarian
Mongolia 3 (2008)	1.0	50	Majoritarian
Namibia	70.4	1.4	Total number of seats (72) in the single national district
Netherlands	148.3	0.67	Legal national threshold of one Hare quota in the single national district
New Zealand 1 (1990-93)	1.0	50	Majoritarian
New Zealand 2 (1996-)	19.0	5	Legal national threshold of 5%
Norway 1 (1993-2001)	24.0	4	Legal national threshold to receive top-up seats (higher tier) of 4% (lower than the lower tier threshold based on district magnitude)
Norway 2 (2005-)	24.0	4	Legal national threshold to receive top-up seats (higher tier) of 4% (lower than the lower tier threshold based on district magnitude)
Peru 1 (1990)	8.0	11.1	District magnitude in the single tier
Peru 2 (1995-2000)	124.0	0.8	Total number of seats (120) in the single national district

Country and Electoral System Number	Exclusion Magnitude	Threshold of Exclusion	Threshold Determinant (and Years if District Magnitudes Varies)
Peru 3 (2001)	5.3	15.8	District magnitude in the single tier
Peru 4 (2006-)	5.3	15.8	District magnitude in the single tier, 2006
Peru 4 (2006-)	5.0	16.6	District magnitude in the single tier, 2011
Poland 1 (1991)	19.0	5	Legal threshold of 5% for seats in the national district
Poland 2 (1993-7)	13.3	7	Legal threshold of 7% for seats in the national district
Poland 3 (2001-)	11.3	8.1	District magnitude in the single tier, 2001
Poland 3 (2001-)	11.2	8.2	District magnitude in the single tier, 2005-11
Portugal	11.2	8.2	District magnitude in the single tier, 1991-5
Portugal	11.3	8.1	District magnitude in the single tier, 1999-2011
Romania 1 (1990)	332.3	0.3	Total number of seats (full Hare quota to get district seats with remainder votes combined at national level and seats distributed by d'Hondt)
Romania 2 (1992-6)	32.3	3	Legal national threshold of 3%
Romania 3 & 4 (2000-)	19.0	5	Legal national threshold of 5%
Samoa	1.0	50	Majoritarian
San Marino 1 (1993-2006)	61.5	1.6	Total number of seats (60) in the single national district
São Tomé and Príncipe	8.0	11.1	District magnitude in the single tier
Slovakia 1 (1990)	32.3	3	Legal national threshold of 3%
Slovakia 2 (1992-4)	19.0	5	Legal national threshold of 5%
Slovakia 3 (1998-)	19.0	5	Legal national threshold of 5%
Slovenia 1 (1992-6)	28.4	3.4	Legal requirement of winning 3 seats in either lower or upper tier; easier to do in the upper tier, 3.37% (= 3 * 1/89)
Slovenia 2 (2000-)	24.0	4	Legal national threshold of 4%
South Africa	499.0	0.2	District magnitude (400) in the national tier
Spain	6.9	12.7	Legal district threshold of 5% (Barcelona and Madrid) and thresholds based on magnitude of other districts
St. Kitts and Nevis	1.0	50	Majoritarian
St. Lucia	1.0	50	Majoritarian
St. Vincent and the Grenadines	1.0	50	Majoritarian
Suriname	5.3	15.8	District magnitude in the single tier

Country and Electoral System Number	Exclusion Magnitude	Threshold of Exclusion	Threshold Determinant (and Years if District Magnitudes Varies)
Sweden	24.0	4	Legal national threshold of 4%
Switzerland	8.9	10.1	District magnitude in the single tier, 1991
Switzerland	8.8	10.2	District magnitude in the single tier, 1995-9
Switzerland	8.9	10.1	District magnitude in the single tier, 2003-11
United Kingdom	1.0	50	Majoritarian
USA	1.0	50	Majoritarian

Appendix C: Effective Number of Ethnic Groups

The text explains the method used to derive and to calculate the effective number of electorally relevant ethnoregional groups (EREG), the reciprocal of the sum of the squares of the proportion of each ethnic group in the population. Minority ethnic groups unable to pass the threshold of exclusion are treated as part of the majority group. This appendix lists EREG for each country in the dataset, the minority groups used in its estimation, and the sources of the data. Additional notes sometimes give further information for each country. EG is an alternative calculation of the number of ethnoregional groups that ignores whether groups exceed the exclusion threshold.

Antigua and Barbuda

EREG: 1.04. Barbudans, 2.07%.

EG: 1.22. Total, 10.22%. Barbudans, 2.07%. Mixed Race, 4.39%. White, 1.74%. East Indian, 0.71%. Amerindian/Caribbean, 0.34%. Chinese, 0.21%. Portuguese, 0.16%. Source: 2001 Census.

Note: 2001 Census had open-ended ethnicity question.

Argentina

EREG: 1.00. None. Note: Indigenous Argentines do not exceed the threshold of exclusion in any of Argentina's provinces.

EG: 1.03. Indigenous, 1.7%.

Sources: INDEC. Encuesta Complementaria de Pueblos Indígenas (ECPI) 2004-2005; Complementaria del Censo Nacional de Población, Hogares y Viviendas 2001.

Australia

EREG: 1.00. None. Note: Aboriginals do not form a majority in any region.

EG: 1.05. Indigenous, 2.4%.

Source: 2001 Census.

Austria

EREG: 1.00. None. Note: Neither Croatian nor Slovene speakers exceed the threshold of exclusion according to the 2001 Census.

EG: 1.02. Total, 1.15%. Hungarian, 0.35%. Burgenland-Croatian, 0.26%. Slovene, 0.25%. Czech, 0.15%. Romany, 0.06%. Slovak, 0.05%. Note: Percentages based on vernacular speakers of recognized Austrian nationalities among all Austrian citizens.

Source: 2001 Census.

Bahamas

EREG: 1.00. None. Note: Whites do not form a majority in any region.

EG: 1.13. Total, 6.0%. White, 2.7% (includes White and Other). Black Mixed, 2.7% (includes Black and White, Black and Other). Asian, 0.4%. East Indian, 0.2%.

Source: Table 8.0 (2012), "Total Population by Sex, Age Group, and Racial Group," Department of Statistics of the Bahamas.

Barbados

EREG: 1.00. None.

EG: 1.16. Total, 7.3%. Mixed Race, 3.1%. White, 2.7%. East Indian, 1.3%. Oriental, 0.1%. Middle Eastern, 0.1%.

Source: Table 02.03: Population by Sex, Age Group and Ethnic Origin, *Population and Housing Census 2010*, Vol. 1, Barbados Statistical Service.

Belgium

EREG: 1.95. Total, 40.2%. Francophones in Wallonia and Brussels-Halle-Vilvoorde, 39.5%. Germanophones in Liege, 0.7%. Note: Germanophones narrowly exceed the threshold of exclusion in Liege under each of the three different Belgian electoral systems.

EG: 1.97. Total, 41.7. Francophones, 41.0%. Germanophones, 0.7%.

Sources: Kenneth McRae, *Conflict and Compromise in Multilingual Societies: Belgium* (Wilfred Laurier 1986); "Etude sur la pratique du français par les habitants de Flandre" (Dedicated Research, September 2009).

Belize

EREG: 1.59. Total, 22.7%. Creole or Black/African in Belize District, 16.2%. Maya in Toledo, 6.5%.

EG: 3.01. Creole or Black/African, 25.2%. Maya, 10.6%. Garifuna, 6.1%. Mennonite or Caucasian/White, 4.3%. East Indian, 3.0%. Chinese, 0.7%.

Source: 2000 Census.

Botswana

EREG: 1.14. Kalanga (BaKalaka) in North-East District, 6.4%.

EG: 1.51. Kalanga (BaKalaka), 11.0%. BaSarwa (Khoisan), 2.8%. Herero (BaHerero), 1.7%. Kgalagadi (BaKgalagadi), 1.4%. BaYei (Wayeyi, Bayeyi), 1.4%. Hambukushu, 0.6%. BaSubiya, 0.5%.

Sources: 2001 Census; Ethnologue; Lydia Nyati-Rmahobo, "The Language Situation in Botswana" in Richard B. Baldauf and Robert B. Kaplan, eds., *Language Planning and Policy in Africa* (Multilingual Matters 2004), 37; L. Anderson and T. Janson, *Languages in Botswana: Language Ecology in Southern Africa* (Gaborone: Longman 1997); H.M. Batibo, J.T. Mathangwane and N. Mosaka, "Prospects for sociolinguistic research undertakings in Botswana" in B. Smeja, ed., *Working Papers in Preparation for the LICCA Conference* (Duisburg: University of Duisburg 1997), 27-36.

Brazil

EREG: 1.00. None. Note: Indigenous Brazilians do not exceed the threshold of exclusion in any of Brazil's states according to the 2000 Census.

EG: 1.01. Indigenous, 0.4%.

Source: 2000 Census and Table 9.1, *Síntese de Indicatores Sociais 2006* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística – IBGE 2006). Note: In racial statistics, most Brazilians identify as White (49.9%) or Brown (43.2%) with 6.3% stating Black and 0.7% labeled as Yellow or Indigenous, a combined category. In Brazil, race is usually perceived as continuum along the White to Black spectrum rather than sharply delineated.

Bulgaria (1991-2009)

EREG: 1.21. Turkish, 9.6%. Note: Roma below the threshold to win seats.

EG: 1.32. Total, 13.7%. Turkish, 9.6%. Romany, 4.1%

Source: Mother tongue question from 2001 Census.

Canada

EREG: 1.46. Total, 19.5%. Francophones in Quebec, 19.4%. Inukitut speakers in Nunavut, 0.1%.

EG: 1.55. Total, 23.0%. Francophones, 22.6%. Indigenous (Cree and Inukitut speakers), 0.3%.

Source: Mother Tongue question in 2001 Census.

Cape Verde

EREG and EG: 1.00. None.

Chile

EREG: 1.03. Indigenous in Region IX, 1.3%.

EG: 1.10. Indigenous, 4.6%.

Source: 2002 Census.

Costa Rica

EREG: 1.00. None. Note: Black or Afro-Costa Ricans are slightly below the threshold of exclusion in Limón Province. Indigenous Costa Ricans are below the threshold of exclusion in all provinces.

EG: 1.08. Total, 3.6%. Black or Afro-Costa Ricans, 1.9%. Indigenous, 1.7%

Source: 2000 Census.

Cyprus

EREG: 1.00. None. Note: Includes only territory under the control of the government of the Republic of Cyprus. Turkish Cypriots cannot vote due to the division of the island.

EG: 1.02. Total, 0.8%. Maronite, 0.6%. Armenian, 0.2%.

Source: 2001 Census of Population, Vol. 1, pp. 32-3.

Czech Republic

Czech Republic 1 (First Electoral System, 1990-98)

EREG: 1.30. Moravians, 13.2%. Note: The share of Moravians exceeded the 5% legal national threshold.

EG: 1.45. Total, 18.2%. Moravians, 13.2%. Slovaks, 3.1%. Polish, 0.6%. Germans, 0.5%. Silesians, 0.4%. Hungarians, 0.2%. Ukrainians, 0.1%. Russians, 0.1%.

Source: 1991 Census question on nationality.

Czech Republic 2 (Second Electoral System, 2002-10)

EREG: 1.00. None. Note: Moravians composed only 3.7% of the population according to the 2001 Census, below the 5% legal national threshold.

EG: 1.15. Total, 7.0%. Moravians, 3.7%. Slovaks, 1.9%. Polish, 0.5%. Germans, 0.4%. Ukrainians, 0.2%. Silesians, 0.1%. Hungarians, 0.1%. Russians, 0.1%.

Source: 2001 Census question on nationality.

Denmark

EREG: 1.00. None. Note: All calculations for Denmark exclude the Faroe Islands and Greenland. The German minority in Denmark is smaller than the threshold of exclusion.

EG: 1.02. Total, 1.1%. Faroese in Denmark, 0.4%. Greenlanders in Denmark, 0.4%. North Schleswig Germans, 0.3%

Sources: North Schleswig German minority organization; Statistics Denmark; Kalaalliit Danmarkimi Najugallit/Grønlændere Bosiddende i Danmark (The North Atlantic Group in the Danish Parliament 2007); Hagtøl um Føroyskar Útisetar (The North Atlantic Group in the Danish Parliament 2006).

Dominica

EREG and EG: 1.06. Caribs, 2.9%. Note: Caribs are concentrated in the Carib Reserve, which is coterminous with Salybia constituency.

Source: 2001 Census.

Dominican Republic

EREG and EG: 1.00 None.

El Salvador

EREG and EG: 1.00. None.

Estonia

EREG: 1.32. Russian speakers (including Ukrainians, Byelorussians and Jews), 14.2%. Note: Only citizens are included in all calculations of the minority share of the population. The share of Russian speakers includes Ukrainians and Byelorussians as all are Russophones and use Russian as their primary lingua franca.

EG: 1.36. Total: 15.5%. Russian speakers (including Ukrainians, Byelorussians and Jews), 14.2%. Finnish, 0.8%. Tatar, 0.1%. Latvian, 0.1%. Polish, 0.1%. Lithuanian, 0.1%. German, 0.1%.

Source: Based on the ethnic nationality and citizenship questions, 2000 Census.

Finland

EREG: 1.12. Finland Swedes in Helsinki, Uusimaa, Varsinais-Suomi, Vaasa, and Åland constituencies, 5.5%. Sami fall below the threshold of exclusion in Lapland and all other constituencies.

EG: 1.12. Total: 5.7%. Finland Swedes, 5.7%. Sami, 0.03%.

Source: Statistics Finland, 1999 questions on citizenship and language.

France

EREG: 1.00. None. Note: None of France's linguistic minorities form a majority in any region.

EG: 1.23. Total: 10.1%. Occitan, 3.1%. Oïl, 2.4%. Alsatian and other German dialects, 1.9%. Breton, 1.3%. Corsican, 0.4%. Franco-Provençal, 0.4%. Catalan, 0.4%. Western Flemish, 0.2%.

None. Source: Enquête Linguistique 1999; Jean Sibille, "Les Langues Autochtones de France Métropolitaine: Pratiques et Savoirs" in Claude Gruaz and Christine Jacquet-Pfau, *Autour du mot : pratiques et* compétences. Séminaire du Centre du français moderne, Tome II, 2006-2009 (Limoges: Lambert-Lucas), 69-85.

Germany

EREG: 1.00. None. Note: Danish, Frisian, Romani, and Sorb minorities all fall below the threshold of exclusion.

EG: 1.01. Total, 0.4%. Frisians, 0.1%. Romany or Sinti, 0.1%. Sorbs, 0.1%. Danish, 0.1%

Source: First Report submitted by the Federal Republic of Germany under Article 25, paragraph 1, of the Council of Europe's Framework Convention for the Protection of National Minorities (1999)

Ghana

EREG: 1.25. Mole-Dagbon in Northern, Upper East, and Upper West Regions, 11.2%. Note: Ewe not counted as a minority group because a majority live outside Volta Region.

EG: 3.22. Total, 50.9%. Mole-Dagbon, 16.5%. Ewe, 12.7%. Ga-Adangbe, 8.0%. Guan, 4.4%. Gurma, 3.9%. Grusi, 2.8%. Mande-Busanga, 1.1%. (Other Tribes, 1.5%.)

Source: E. Gyimah-Boadi and Richard Asante, "Minorities in Ghana," Paper prepared for the Sub-Commission on Promotion and Protection of Human Rights Working Group on Minorities, Commission on Human Rights, Ninth Session, 12-16 May 2003; Republic of Ghana, 2000 Population and Housing Census, Ghana Statistical Service, March 2000.

Greece (1990)

EREG: 1.02. Muslims in Rhodope and Xanthi Prefectures, 0.9%. Note: Muslims did not exceed the threshold of exclusion in Evros Prefecture.

EG: 1.03. Total, 1.5%. Muslims in Evros, Rhodope, and Xanthi Prefectures, 1.0%. Slavic Macedonians, 0.5%.

Source: 1991 and 2001 Census; Ministry of Foreign Affairs; U.S. State Department Reports on Human Rights; Victor Roudometof, *Collective Memory, National Identity and Ethnic Conflict: Greece, Bulgaria, and the Macedonian Question* (2002), 117.

Grenada

EREG: 1.00. None.

EG: 1.23. Total: 10.36%. Mixed Race, 8.16%. East Indian, 1.61%. White/Caucasian, 0.39%. Indigenous, 0.12%. Syrian/Lebanese, 0.04%. Portuguese, 0.04%.

Sources: 2001 Census; "Caricom Capacity Development Programme (CCDP), 2000 Round of Population and Housing Census Data Analysis Sub-Project: National Census Report, Grenada" (Georgetown, Guyana: The Regional Statistics Sub-Programme Information and Technologies Caribbean Community (CARICOM) Secretariat 2009), 10.

Iceland

EREG and EG: 1.00. None.

India

EREG: 2.76. Total: 41.5%. Bengali speakers in West Bengal and Tripura, 6.9%. Marathi speakers in Maharashtra, 6.5%. Telugu speakers in Andhra Pradesh, 6.2%. Tamil speakers in Tamil Nadu and Puducherry, 5.5%. Gujarati speakers in Gujarat and Daman and Diu, 4.2%. Kannada speakers in Karnataka, 3.4%. Malayalam speakers in Kerala and Lakshadweep, 3.0%. Oriya speakers in Orissa, 3.0%. Punjabi speakers in Punjab, 2.2%. Kashmiri speakers in Kashmir, 0.5%. Manipuri speakers in Manipur, 0.1%. Lushai/Mizo speakers in Mizoram, 0.1%. Note: Several groups are excluded either because speakers of the language do not comprise a majority in the relevant state (e.g. Assamese speakers in Assam) or because a majority of speakers of a language do not live in states where they are in the majority (e.g. Nepali speakers in Sikkim).

EG: 4.33. Total, 55.3%. Bengali, 8.1%. Telugu, 7.2%. Marathi, 7.0%. Tamil, 5.9%. Urdu, 5.0%. Gujarati, 4.5%. Kannada, 3.7%. Malayalam, 3.2%. Oriya, 3.2%. Punjabi, 2.8%. Assamese, 1.3%. Maithili, 1.2%. Santali, 0.6%. Kashmiri, 0.5%. Nepali, 0.3%. Sindhi, 0.2%. Konkani, 0.2%. Dogri, 0.2%. Manipuri, 0.1%. Bodo, 0.1%.

Source: 2001 Census.

Ireland

EREG: 1.00. None. Note: Protestants insufficiently concentrated to exceed the threshold of exclusion in any constituency.

EG: 1.06. Protestants (Church of Ireland, Presbyterian, Methodist), 3.0%

Source: 2002 Census.

Israel

EREG and EG: 1.43. Arabs, 18.3%.

Source: Central Bureau of Statistics, 2000.

Italy (1992)

EREG: 1.08. Total: 3.9%. Sardinian speakers in Cagliari-Sassari-Nuoro-Oristano, 2.3%. Friulian speakers in Udine-Belluno-Gorizia-Pordenone, 0.9%. German and Ladin speakers in Trentino-Alto Adige, 0.6%. Valdotain (French or Franco-Provençal), 0.1%.

EG: 1.09. Total: 4.3%. Sardinian, 2.3%. Friulian, 0.9%. German, 0.6%. Albanian, 0.2%. Valdotain (French or Franco-Provençal), 0.1%. Slovene, 0.1%. Ladin, 0.05%. Catalan, 0.04%. Greek, 0.04%. Croatian, 0.002%.

Sources: 2001 Census, Ethnologue; Euromosaic; Fondation Emile Chanoux; Arturo Tosi. *Language and Society in a Changing Italy* (Buffalo: Multilingual Matters 2001), 31-5. Speakers of Italian dialects (i.e. languages viewed as part of the Italian family of dialects or languages) are not treated here as linguistic minorities with the exception of speakers of Sardinian. Most speakers of Italian dialects also speak standard Italian; Sardinian is the only legally recognized minority language among Italian dialects. Italy also recognizes Albanian, Catalan, German, Greek, Slovene, Croatian, French, Franco-Provençal, Friulian, Ladin, and Occitan as minority languages but only the members of language minority groups listed above exceeded the threshold of exclusion defined by the Imperiali quota for the 1992 elections in any constituencies.

Jamaica

EREG: 1.00. None.

EG: 1.16. Total, 7.5%. Mixed Race, 6.2%. East Indian, 0.9%. Chinese, 0.2%. White, 0.2%.

Source: 2001 Census; "Caricom Capacity Development Programme (CCDP), 2000 Round of Population and Housing Census Project: National Census Report, Jamaica" (Georgetown, Guyana: The Regional Statistics Sub-Programme Information and Communication Technologies Caribbean Community (CARICOM) Secretariat 2009), 35.

Latvia

EREG: 1.48. Russian speakers (including Ukrainians and Byelorussians), 20.2%.

EG: 1.63. Total, 24.3%. Russian speakers (including Ukrainians and Byelorussians), 20.2%. Poles, 2.2%. Lithuanians, 0.9%. Jews, 0.4%. Roma, 0.4%. Germans, 0.1%. Estonians, 0.1%.

Source: Population Register, 2004. Note: Only citizens are included in calculation of the minority share of the population. The share of Russian speakers includes Ukrainians and Byelorussians as all are Russophones and use Russian as their primary lingua franca.

Lesotho (1993-2002)

EREG and EG: 1.00. None.

Liechtenstein

EREG: 1.00. None.

EG: 1.07. Protestants, 3.2%. Note: Data for Liechtenstein citizens. Citizens who speak a language other than German at home compose 1.1% of the population.

Source: Tables 3 and 7, “Liechtensteinische Volkszählung 2000: Religion und Hauptsprache,” Vol. 2 (Vaduz, Liechtenstein: Amt für Volkswirtschaft, Abteilung Statistik 2000), 14, 19.

Luxembourg

EREG and EG: 1.00. None. Note: Citizens overwhelmingly speak Luxembourgeois (88.8%) or French (4.2%) or German (1.1%). The remaining 5.8% speak immigrant languages. Luxembourgeois is mainly a spoken rather than written language. It is closely related to German; French is heavily preferred for official and government purposes. Citizens are more likely to state they speak French in communes near the French border and German in communes near the German border. Data by religion not available by nationality/citizenship but residents are overwhelmingly Roman Catholic or have no religion with only a small percentage belonging to other/immigrant religions.

Sources: Fernand Fehlen, Andreas Heinz, François Peltier and Germaine Thill, “La langue principale, celle que l’on maîtrise le mieux,” *Recensement de la population 2011*, Premiers résultats N, 17 (Luxembourg: Institut national de la statistique et des études économiques, STATEC and University of Luxembourg Integrative Research Unit on Social and Individual Development, INSIDE, June 2013); Monique Borsenberger and Paul Dickes, “Religions au Luxembourg. Quelle evolution entre 1999-2008?” *Les Cahiers du CEPS/INSTEAD: Population & Emploi* N. 2011-02 (January 2011).

Malta: 1.00

EREG and EG: 1.00. None. Note: Eurobarometer reports that 2% of the population claims English as their mother tongue. This percentage is similar the share of English speaking non-citizens living in Malta. English is an official language in Malta and very widely spoken.

Sources: Census of Population and Housing 2005, Vol. 1: Population; “Europeans and their Languages,” *Eurobarometer* (Special 243, February 2006).

Mauritius

EREG: 1.06. Rodriguans, 3.0%. Note: Creole, Muslim, Sino and Franco Mauritians are all not sufficiently concentrated in any region on the island of Mauritius such that they form a majority or that a majority of members of that group live in the region.

EG: 2.82. Total, 48.2%. Creole (excludes Rodriguans and Franco-Mauritians), 23.7%. Muslims, 16.6%. Rodriguans, 3.0%. Sino-Mauritians, 2.9%. Franco-Mauritians, 2%.

Sources: 2000 Census; A.J. Christopher, "Ethnicity, Community and the Census in Mauritius, 1830-1990," *The Geographical Journal* 158: 1(March 1992), 57-64; 1989 estimates in "Mauritius: Ethnicity, Religion, and Language" *Country Studies*.

Monaco (1993-8)

EREG and EG: 1.00. None. Note: The share of Monegasque citizens in the total population was estimated at 16.9% in 1990, 19.0% in 2000, and 21.6% in 2008. These numbers roughly correspond to the Monegasque ethnicity share reported in the CIA Factbook. Ligurian (or Monegasque) is the language of "national identity" according to Ethnologue while French is the official language. The estimated number of Ligurian speakers corresponds closely to the number of citizens.

Sources: CIA Factbook; Ethnologue; *Monaco Statistiques Pocket*, Edition 2007 (Monaco: Division des Statistiques et des Études Économiques de la Direction de l'Expansion Économique, Government of Monaco); *Monaco en Chiffres*, Edition 2013 (Monaco: IMSEE, Monaco Statistics).

Mongolia (1992-2008)

EREG: 1.07. Kazakhs in Bayan Olgii, 3.4%.

EG: 1.48. Total: 18.21%. Kazakh, 4.35%. Durvud, 2.82%. Bayad, 2.15%. Buryat, 1.72%. Dariganga, 1.35%. Zakhchin, 1.26%. Uriankhai, 1.06%. Darkhad, 0.80%. Ööld, 0.62%. Torguud, 0.53%. Khoton, 0.38%. Khotogoid, 0.31%. Myangad, 0.26%. Tuvan, 0.20%. Barga, 0.11%. Uzemchin, 0.10%. Sartuul, 0.07%. Khamnigan, 0.02%. Uzbek (Chantuu), 0.02%. Eljigan, 0.01%. Tsaatan, 0.01%. Kharchin, 0.01%. Tsakhar (Chahar), 0.01%. Other Ethnic Mongolians, 0.01%. Other Non-Ethnic Mongolians, 0.03%.

Sources: 2000 and 2010 Census (ХҮН АМ, ОРОН СУУЦНЫ 2010 ОНЫ УЛСЫН ТООЛЛОГЫН ҮР ДҮН: МОНГОЛ УЛСЫН СУУРИН ХҮН АМ, ХАРЬЯАЛАЛ, ЯСТАН, ҮНДЭСТЭНЭЭР, 2000, 2010 ОН); and Alexander C. Diener, *One Homeland or Two? The Nationalization and Transnationalization of Mongolia's Kazakhs* (Washington, DC and Stanford, CA: Woodrow Wilson Center and Stanford University Press 2009), 124, 175.

Namibia

EREG: 2.94. Total: 45.5%. Nama/Damara speakers, 11.5%. Afrikaans speakers, 11.4%. RuKavango speakers, 9.7%. OtjiHerereo speakers, 7.9%. SiLozi/Caprivi speakers, 5.1%.

EG: 3.19. Total: 48.1%. Nama/Damara speakers, 11.5%. Afrikaans speakers, 11.4%. RuKavango speakers, 9.7%. OtjiHerero speakers, 7.9%. SiLozi/Caprivi speakers, 5.1%. Bushman, 1.2%. German, 1.1%. Setswana, 0.3%.

Source: 1991, 2001, and 2011 Censuses; Table 6.5, "Distribution of households by main language spoken, Namibia," *Namibia 2011 Population and Housing Census Main Report* (Windhoek: Namibia Statistics Agency, Republic of Namibia 2011), 65.
Martin Pütz, *Discrimination Through Language in Africa? Perspectives on the Namibian Experience* (New York: Mouton de Gruyter 1995), 161; "Namibian languages." http://www.biodiversity.org.na/dbase/NamLanguages.php. (Namibia Biodiversity Database, NaBiD). Viewed 6 July 2009.

At 1.9%, English speakers exceed the threshold of exclusion but English is not included as a minority language because it is a second language for most of its speakers. English serves as Namibia's official language precisely because it is not the language of any ethnic group. The great majority of Namibian whites speak Afrikaans or German. Afrikaans is also the language of most Namibia's Coloureds. The 2001 Census, based on households rather than individuals, confirms the size of the OjiHerero and larger groups.

Netherlands

EREG and EG: 1.08. Frisian, 3.9%.

Source: "Frisian." http://taal.phileon.nl/eng/frisian.php. (Language in the Netherlands, Streektaal.net). Viewed 21 January 2013. Based on the estimated percentage that understands Frisian according to a 1994 survey and the population of Friesland according to the 2001 Census.

New Zealand:

New Zealand 1 (Single-Member Plurality, 1990-93)

EREG: 1.00. None. Note: Māori are not regionally concentrated.

EG: 1.28. Maori, 12.7%.

New Zealand 2 (Mixed-Member Proportional, 1996-)

EREG and EG: 1.31. Māori, 13.8%.

Source: Ethnicity question in the 1991 Census and 2001 Census.

Norway

EREG: 1.01. Sami in Finnmark, 0.46%. Note: Sami are too few to pass the national legal threshold of 4% but are sufficiently numerous to exceed the threshold of exclusion for a constituency mandate in Finnmark fylke. Kven speak a mutually intelligible dialect of Finnish; they form 0.3% of the population and live in Finnmark and Troms fylker but are too few to surpass the threshold of exclusion for a constituency seat in either.

EG: 1.02. Total, 1.15%. Sami, 0.85%. Kven, 0.3%.

Source: Sami Statistics 2008, Statistics Norway

Peru

Peru 1 (First Electoral System, 1990)

EREG: 1.35. Quechua in Ancash, Apurímac, Arequipa, Ayacucho, Cusco, Huancavelica, Huánuco, Junín, Puno, and Lima Regions, 15.3%.

EG: 1.48. Total, 19.5%. Quechua, 16.5%. Aymará, 2.3%. Other Indigenous, 0.7%.

Source: 1993 Census. Note: Mandates awarded entirely within regions in 1990.

Peru 2 (Second Electoral System, 1995)

EREG: 1.38. Quechua in Peru, 16.5%.

EG: 1.48. Total, 19.5%. Quechua, 16.5%. Aymará, 2.3%. Other Indigenous, 0.7%.

Source: 1993 Census. Note: Mandates awarded in a single national district.

Peru 2 (Second Electoral System, 2000)

EREG: 1.29. Quechua in Peru, 13.0%.

EG: 1.37. Total, 15.7%. Quechua, 13.0%. Aymará, 1.7%. Asháninka, 0.3%. Other Indigenous, 0.7%.

Source: 2007 Census. Note: Mandates awarded in a single national district.

Peru 3 & 4 (Third and Fourth Electoral Systems, 2001-11)

EREG: 1.25. Quechua in Ancash, Apurímac, Arequipa, Ayacucho, Cusco, Huancavelica, Huánuco, Junín, Puno, and Lima Regions, 11.3%.

EG: 1.37. Total, 15.7%. Quechua, 13.0%. Aymará, 1.7%. Asháninka, 0.3%. Other Indigenous, 0.7%.

Source: 2007 Census. Note: Mandates awarded entirely within regions in 2001-11.

Poland

Poland 1 (First Electoral System, 1991)

EREG: 1.02. Total: 0.8%. Silesians, 0.4%. Germans, 0.4%. Note: Belorussians below the threshold of exclusion.

EG: 1.02. Total: 1.14%. Silesian, 0.46%. German, 0.39%. Belorussian, 0.13%. Ukrainian, 0.07%. Romany, 0.03%. Lithuanian, 0.02%. Ruthenian, 0.02%. Kashubian, 0.01%. Russian, 0.01%.

Poland 2 & 3 (Second & Third Electoral Systems, 1993-2011)

EREG: 1.01. Germans and Silesians in Opole, 0.3%. Note: Belorussians below the threshold of exclusion.

EG: 1.02. Total: 1.14%. Silesian, 0.46%. German, 0.39%. Belorussian, 0.13%. Ukrainian, 0.07%. Romany, 0.03%. Lithuanian, 0.02%. Ruthenian, 0.02%. Kashubian, 0.01%. Russian, 0.01%.

Source: 2002 Census; "Table 36: Population in 2002 by Nationality Declaration and Ownership Polish Citizenship," *Demographic Yearbook of Poland 2008* (Warsaw: Central Statistical Office), 180.

Portugal

EREG: 1.00. None.

EG: 1.11. Total, 5.09%. Madeira, 2.34%. Azores, 2.32%. Mirandese, 0.14%. Galician, 0.14%. Asturian, 0.09%. Caló, 0.05%. Barranquian, 0.01%. Note: Azores and Madeira are regional citizen populations in 2005; the others are linguistic minorities.

Source: Ethnologue. "Tables II.1.2 - Resident population according to age groups and sex, 31/12; II.1.4 - Foreign population with legal status of residence, according to the most representative nationalities; II.1.5 - Foreign population who have applied for resident status, according to the most representative nationalities; II.1.6 - Foreign population who have lost their resident status, according to the most representative nationalities," *Statistical Yearbook of Portugal*, Vol. II (Lisbon: Instituto Nacional de Estatística 2005), 50-54.

Romania

Romania 1 (First Electoral System, 1990)

EREG: 1.22. Total, 9.6%. Hungarian, 6.6%. Roma, 2.5%. Ukrainian, 0.3%. German, 0.3%.

EG: 1.24. Total, 10.4%. Hungarian, 6.6%. Roma, 2.5%. Ukrainian, 0.3%. German, 0.3%. Russians-Lipovenians, 0.2%. Turks, 0.2%. Tatars, 0.1%. Serbs, 0.1%. Slovaks, 0.1%.

Romania 2, 3 & 4 (1992-2008)

EREG: 1.14. Hungarian, 6.6%.

EG: 1.24. Total, 10.4%. Hungarian, 6.6%. Roma, 2.5%. Ukrainian, 0.3%. German, 0.3%. Russians-Lipovenians, 0.2%. Turks, 0.2%. Tatars, 0.1%. Serbs, 0.1%. Slovaks, 0.1%.

Source: 2002 Census.

St. Kitts and Nevis

EREG: 1.57. Nevisians, 24.0%.

EG: 1.86. Total, 30.8%. Nevisians, 24.0%. Mixed Race, 3.0%. White/Caucasian, 2.1%. East Indian, 1.5%. Portuguese, 0.1%. Syrian/Lebanese, 0.1%. Note: Assumption is that the same percentage of racial minorities lives on Nevis as St. Kitts; those that live on Nevis are included here as Nevisians rather than racial minorities.

Source: 2001 Census; Table 2.2: Total and Percentage Distribution of Population by Sex and Ethnic Origin: 2001 and 1991, “Caricom Capacity Development Programme (CCDP), 2000 Round of Population and Housing Census Data Analysis Sub-Project: National Census Report, St. Kitts and Nevis” (Georgetown, Guyana: The Regional Statistics Sub-Programme Information and Technologies Caribbean Community (CARICOM) Secretariat 2009), 23.

St. Lucia

EREG: 1.00. None.

EG: 1.39. Total, 16.09%. Mixed Race, 12.39%. East Indian, 2.40%. White/Caucasian, 0.64%. Indigenous, 0.54%. Chinese, 0.04%. Syrian/Lebanese, 0.07%. Portuguese, 0.01%.

Source: 2001 Census; Table 2.3: Population by Sex and Ethnic Group, 2001, "Caricom Capacity Development Programme (CCDP), 2000 Round of Population and Housing Census Data Analysis Sub-Project: National Census Report, St. Lucia" (Georgetown, Guyana: The Regional Statistics Sub-Programme Information and Technologies Caribbean Community (CARICOM) Secretariat 2009), 13.

St. Vincent and the Grenadines

EREG: 1.00. None.

EG: 1.71. Total, 26.42%. Mixed Race, 20.05%. Indigenous, 3.59%. East Indian, 1.35%. White/Caucasian, 0.80%. Portuguese, 0.57%. Syrian/Lebanese, 0.06%.

Source: 2001 Census; Table 2.2: Total and Percentage Population by Ethnic Group, Sex, and Intercensal Change, 1991 and 2001, "Caricom Capacity Development Programme (CCDP), 2000 Round of Population and Housing Census Data Analysis Sub-Project: National Census Report, St. Vincent and the Grenadines" (Georgetown, Guyana: The Regional Statistics Sub-Programme Information and Technologies Caribbean Community (CARICOM) Secretariat 2009), 18.

Samoa

EREG: 1.00. None. Note: Euronesians are not a majority in any of Samoa's Districts.

EG: 1.15. Euronesians, 7%.

Source: Carl Skutsch, ed., *Encyclopedia of the World's Minorities* (New York: Routledge 2004), 445-6.

San Marino (1993-2006)

EG and EREG: 1.00. None. Note: Among the resident population, 82% are Sammarinese citizens.

São Tomé and Príncipe

EREG: 1.13. Angolares in Caué, 6.3%. Note: Angolares are counted as a minority but residents of Príncipe are not because Angolar is not mutually intelligible with Sãotomense but Principense is. The Angolares live in an isolated portion of the island of São Tomé.

EG: 1.24. Total: 10.6%. Angolares in Caué, 6.3%. Príncipe, 4.3%.

Source: Ethnologue; 2001 population statistics in Barry Turner, ed. *The Statesman's Yearbook*, 2008 edition (Basingstoke, Hants.: Palgrave Macmillan 2007).

Slovakia

EREG: 1.21. Hungarian, 9.66%. Note: No other group exceeds the threshold of exclusion.

EG: 1.30. Hungarian, 9.66%. Roma, 1.69%. Czech/Moravian/Silesian, 0.88%. Ruthenian, 0.45%. German, 0.10%. Polish, 0.05%. Russian, 0.03%.

Source: Population by Nationality, Statistical Office, 2001.

Slovenia

EREG: 1.00. None. Note: No ethnic minority groups, including the officially recognized Hungarian and Italian national minorities, exceed the threshold of exclusion.

EG: 1.15. Total, 6.7%. Serbs, 1.98%. Croats, 1.81%. Bosniacs/Muslims, 1.63%. Hungarians, 0.32%. Albanians, 0.31%. Macedonians, 0.20%. Roma, 0.17%. Montenegrins, 0.14%. Italians, 0.11%. Germans/Austrians, 0.04%. Ukrainians, 0.02%. Russians, 0.02%. Czechs, 0.01%. Turks, 0.01%. Slovaks, 0.01%. Poles, 0.01%. Bulgarians, 0.01%. Romanians, 0.01%.

Source: 2002 Census, Statistical Office of the Republic of Slovenia.

South Africa: 1.90

EREG: 1.90. Total, 46.22%. Black IsiZulu, 16.99%, Black IsiXhosa in Eastern Cape, 11.96%. Black Sepedi in Limpopo, 6.13%. Black SiSwati in Northern Cape and North West, 5.70%. Coloured in Western Cape, 5.44%. Note: Black Sesotho form a majority in the Free State but a narrow majority of Black Sesotho lives in other provinces. Majorities of Black Xitsonga and Black Tshivenda live in Limpopo but they are outnumbered by Black Sepedi. Black Setswana do not form a majority in any province. A majority of Black IsiNdebele live in Mpumalanga but they form only a fraction of that province’s population. Neither Whites nor Indians/Asians are a majority in any province.

EG: 7.59. Total, 75.95%. Black IsiXhosa, 17.60%. Black Sepedi, 9.38%. Black SiSwati, 8.16%. Black Sesotho, 7.91%. Black Xitsonga, 4.44%. Black Setswana, 2.66%. Black Tshivenda, 2.28%. Black IsiNdebele, 1.57%. Black Afrikaans, 0.57%. Black English, 0.41%. White, 9.58%. Coloured, 8.91%. Indian/Asian, 2.49%. Note: No group forms a majority in South Africa. The residual group includes the largest group, Black IsiZulu as well as other much smaller minorities.

Source: 2001 Census statistics on language and race. Note: South Africa's racial minorities are also linguistically defined. Most White, Coloured, and Indian/Asian South Africans speak Afrikaans or English; these three groups also compose the overwhelming share of speakers of these languages.

Spain

EREG: 1.67. Total: 24.3%. Catalan in Catalonia, 14.7%. Galician in Galicia, 6.5%. Basque in Basque Country or Navarre, 3.1%. Note:

EG: 2.05. Total, 35.4%. Catalan, 25.5%. Galician, 6.8%. Basque, 3.1%. Note: Catalan includes people who understand Catalan or Valencian in Catalonia, Valencia, Balearic Islands, Aragon (Franja), and Murcia (Alguer). Galician includes people who understand Galician in Galicia, Asturias, and Castile and León (Franxa).

Sources: "Població de 2 anys i més segons coneixement del català, Catalunya. Any 2011," *Cens de població i habitatges de l'INE* (Barcelona: Institut d'Estadística de Catalunya 2001); "Taula 7: Total de població que declara entendre, saber parlar i saber escriure als diferents territoris de llengua catalana. Milers de persones," *Informe sobre la situació de la llengua catalana* (Observatori de la Llengua Catalana 2011), p. 136; Patxi Juaristi, "6. Euskara," (Vitoria-Gasteiz: Instituto Vasco de Estadística, Eustat 2001); "IV. Inkesta Soziolinguistikoa," (Vitoria-Gasteiz: Servicio Central de Publicaciones del Gobierno Vasco 2008); "Poboación en vivendas familiares de 5 e máis anos segundo xénero, idade e coñecemento do galego," *Censos de poboación e vivendas 2001* (Instituto Galego de Estatística, IGE 2001); Alberto Gómez Bautista, "Algunhas notas sobre a lingua galega da Franxa Leste," *Madrygal* 7(2004), 64; "Espaciu y Tiempu de la llingua asturiana," http://www.asturies.com/espaciuytiempu/sociollinguistica (Viewed 31 January 2014); Alberto Bautista, "Linguas en contacto na bisbarra do Bierzo: castelán, astur-leonés e galego," *Ianua. Revista Philologica Romanica* 6(2006), 18. Note: Spain's Constitution recognizes the Basque Country, Catalonia, and Galicia as "historical nationalities." Basque nationalists claim Navarre but that claim is strongly dispute by a majority of its population. Navarre has its own separate history of independence and autonomy within Spain. Group strength estimated based on share of population that understand the language. Greater numbers of people can understand rather than speak, or write Basque, Catalan, or Galician, so basing the size of each group on the share who understand provides for a broader definition of each language group.

Suriname

EREG: 1.98. Total, 31.5%. Hindi/Sarnami in Nickerie, Paramaribo, and Saramacca, 14.5%. Maroons in Sipaliwini, Marowijne, and Paramaribo, 11.4%. Sranan/Creole in Coronie and Paramaribo, 4.1%. Note: Includes non-Dutch language groups in constituencies in which their population share exceeds the threshold of exclusion and a majority of the population lives in such constituencies.

EG: 3.22. Total, 49.9%. Hindi/Sarnami, 15.8%. Maroon, 15.2%. Sranan/Creole, 9.0%. Javanese, 5.6%. English, 2.1%. Chinese, 1.1%. Portuguese, 0.7%. Indigenous, 0.3%. French, 0.1%.

Source: 2004 Census, most spoken language in household.

Sweden

EREG: 1.00. None. Note: Meänkieli and Sami are below the threshold of exclusion.

EG: 1.05. Meänkieli, 2.3% (speak and understand). Sami, 0.3%.

Switzerland

EREG: 1.60. Total: 23.8%. Francophones in Cantons Bern, Fribourg, Geneva, Neuchâtel, Vaud, Jura, and Valais, 20.4%. Italian speakers in Canton Ticino, 3.4%. Note: Neither Italian nor Romansh speakers exceeded the threshold of exclusion in Graubünden.

EG: 1.68. Total: 25.9%. Francophones, 21.0%. Italian speakers, 4.3%. Romansh, 0.6%.

Source: 2000 Census language statistics for Swiss citizens.

United Kingdom

EREG and EG: 1.41. Total: 16.4%. Scotland, 8.6%. Wales, 4.9%. Northern Ireland, 2.9%.

Source: 2001 Census. Note: Racial minorities are not regionally concentrated and do not form a majority in any of the United Kingdom's countries or administrative divisions.

United States

EREG: 1.00. None. Note: African Americans, Latinos, and Asians do not separately form a majority in any state.

EG: 1.60. 22.3%. Total: Black/African American, 11.7%. Latino/Hispanic, 7.4%. Asian American, 2.4%. American Indian/Alaska Native, 0.8%. Note: Percentages for non-Latino/Hispanic groups exclude Latinos/Hispanics.

Source: 2000 Census CVAP (citizen voting-age population) reported in Jorge Chapa, Ana Henderson, Aggie Jooyoon Noah, Werner Schink, and Robert Kengle, "Redistricting: Estimating Citizen Voting Age Population," *Research Brief* (The Chief Justice Earl Warren Institute on Law and Social Policy, University of California, Berkeley Law School, September 2011), 7 (see Table 4).

Appendix D: Alternative Model with Triple Interaction

The Effective Number of Electorally Relevant Groups (EREG), the key variable in the models presented in Table 1, can be broken down into two parts, the effective number of all ethnic groups—regardless of whether they exceed the exclusion threshold—and the percentage who live in areas above the threshold.

If one breaks EREG into two parts and includes both parts in the model, the four key variables in the model are:

Y = Effective Number of Parties
X = Effective Number of Ethnic Groups (New)
W = Percent of X living in Areas Above Threshold (Geographic Concentration)
Z = ln(Exclusion Magnitude)

The new model excluding terms unrelated to the triple interaction:

$$Y = B_0 + B_1X + B_2W + B_3Z + B_4XW + B_5WZ + B_6XZ + B_7XWZ + \ldots$$

The table below presents the coefficients and standard errors for this new model. The marginal impact of the effective number of ethnic groups equals:

$$B_x + B_{xz}z + B_{xw}w + B_{xzw}zw$$

The figure below presents the results from these calculations for low, medium, and high levels of geographic concentration (i.e. percent of X living in areas above the threshold). Dashed lines indicate that the 95% confidence intervals around the estimate overlap zero (i.e. the estimate is not statistically distinguishable from zero according to the conventional measures). Here is how the confidence intervals were calculated. The variance of the Marginal Impact of the Effective Number of Ethnic Groups equals:

$$V(B_x) + z^2V(B_{xz}) + w^2V(B_{xw}) + z^2w^2V(B_{xzw}) + 2zC(B_x,B_{xz}) + 2wC(B_x,B_{xw}) + 2zwC(B_x,B_{xzw}) + 2zwC(B_{xz},B_{xw}) + 2z^2wC(B_{xz},B_{xw}) + 2zw^2C(B_{xw},B_{xzw})$$

where V indicates Variance and C indicates Covariance and all coefficients (B) are estimated values.

The confidence intervals equal the estimated marginal impact of the effective number of ethnic groups plus or minus 1.96(square root of the variance). This approach follows that outlined by Brambor, Clark and Golder (2006).

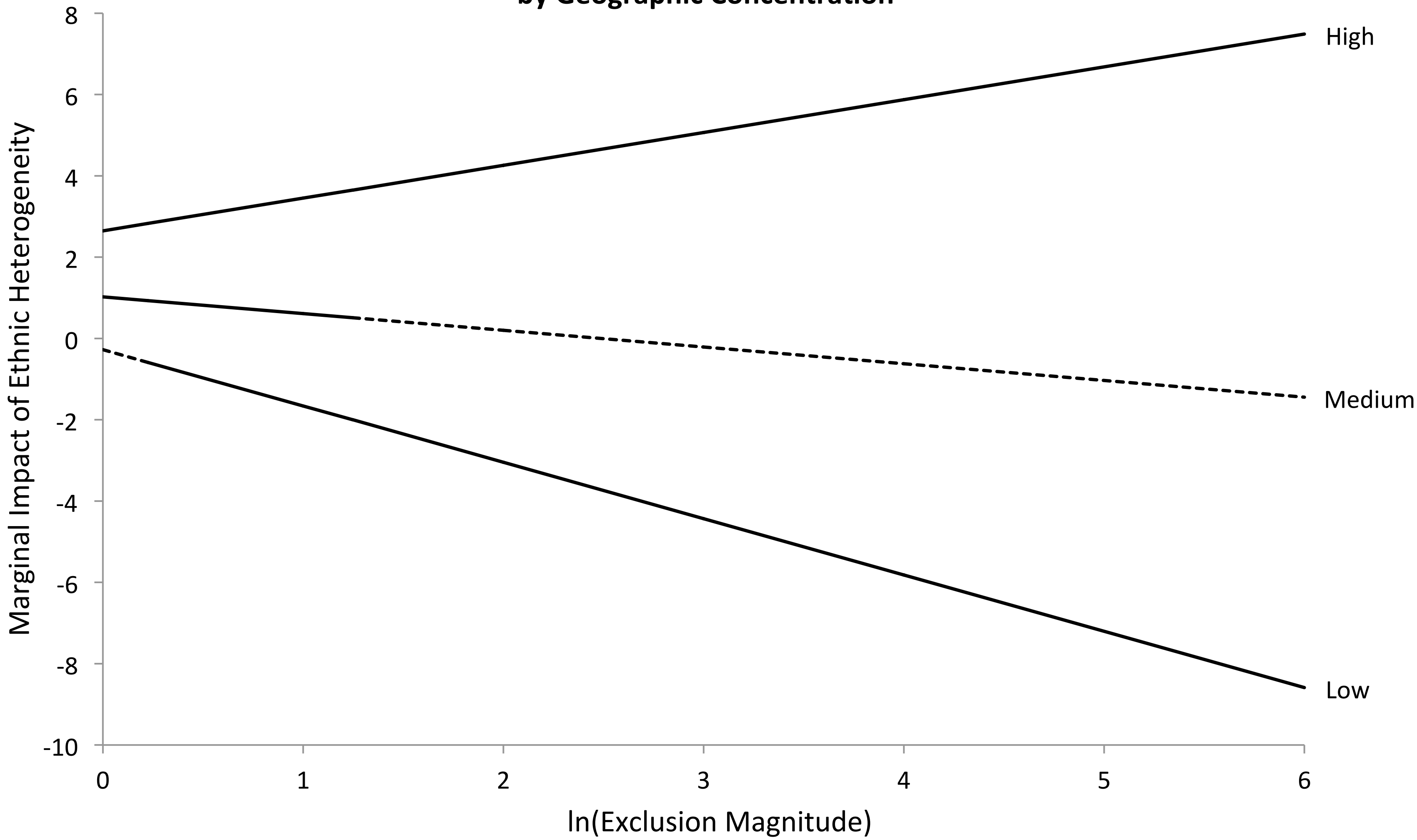
The figure supports the key finding very strong as ethnic diversity has a positive effect only when the ethnic groups are geographically concentrated. Additionally, the effect appears even in countries with majoritarian systems (i.e. the log of the Exclusion Magnitude equals zero) but also rises with ln(Exclusion Magnitude).

APPENDIX D TABLE: CLUSTERED OLS MODELS WITH ROBUST STANDARD ERRORS OF THE EFFECTIVE NUMBER OF ELECTORAL PARTIES, 1990-2011

	All Countries
Effective # of Ethnic Groups (New)	-.60
	(.38)
Geographic Concentration	.07
(% EG above Exclusion Threshold)	(.46)
ln(Exclusion Magnitude)	.54***
	(.14)
Effective # of Ethnic Groups (New) x Geographic Concentration	3.25***
	(.81)
Geographic Concentration x ln(Exclusion Magnitude)	-.07
	(.23)
Effective # of Ethnic Groups (New) * ln(Exclusion Magnitude)	-1.63**
	(.52)
Effective # of Ethnic Groups (New) x Geographic Concentration x ln(Exclusion Magnitude)	2.44**
	(.86)
Effective Number of Presidential Candidates	.26^
	(.13)
Proximity	-1.27
	(.84)
Proximity * Effective Number of Presidential Candidates	.54^
	(.30)
South Africa	-62.20**
	(19.49)
Namibia	-12.93***
	(2.99)
Constant	2.53***
	(.25)
Number of Observations	349
Number of Countries (Clusters)	65
R^2	.50

^p < .10, *p < .05, **p < .01, ***p < .001

Appendix D Figure: Marginal Impact of Ethnic Heterogeneity by Geographic Concentration



Note: Confidence intervals not shown but solid lines indicate that 95% confidence intervals do not overlap with 0 and dashed lines indicate that 95% confidence intervals overlap with 0. The percentage of share of all ethnic minorities living in areas where they exceed the threshold of exclusion (i.e. geographic concentration) are indicated by High (100%), Medium (50%), and Low (0%). Unlike in the figures in the article, the measure of ethnic heterogeneity does not take into account geographic concentration.