

Supplemental Information for *Colonial Legacy, Private Property, and Rural Development: Evidence from Namibian Countryside*

January 15, 2021

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1 Summary Statistics

| Statistic | N | Mean | St. Dev. | Min | Max |
|----------------------|--------|-------------|------------|-------------|-------------|
| Latitude | 61,824 | -20.190 | 0.918 | -21.834 | -18.320 |
| Longitude | 61,824 | 17.330 | 1.445 | 14.325 | 19.679 |
| Rainfall | 61,824 | 8.055 | 1.747 | 3 | 11 |
| Elevation | 61,824 | 12.922 | 1.721 | 0.000 | 16.169 |
| Temperature | 61,824 | 6.719 | 0.802 | 5 | 8 |
| Carrying capacity | 61,824 | 4.237 | 1.201 | 2 | 6 |
| Crop | 4,144 | 0.254 | 0.688 | 0 | 3 |
| Livestock | 2,201 | 0.312 | 0.747 | 0 | 3 |
| Poultry | 1,053 | 0.148 | 0.533 | 0 | 3 |
| Wealth | 10,331 | 1.512 | 1.552 | 0 | 5 |
| Toilet | 10,279 | 0.468 | 0.499 | 0 | 1 |
| Floor | 8,593 | 0.350 | 0.477 | 0 | 1 |
| Roof | 10,245 | 0.558 | 0.497 | 0 | 1 |
| Heat | 10,331 | 0.281 | 0.450 | 0 | 1 |
| Literacy | 51,980 | 0.700 | 0.458 | 0 | 1 |
| ECD | 9,738 | 0.077 | 0.267 | 0 | 1 |
| Education | 49,436 | 4.845 | 4.517 | 0 | 20 |
| Direct rule | 61,824 | 0.896 | 0.306 | 0 | 1 |
| Distance to Red Line | 61,824 | 1,966.023 | 2,866.339 | 0 | 9,687 |
| Distance to Windhoek | 61,824 | 292,816.400 | 90,111.670 | 116,659.400 | 461,552.000 |

2 Climatic Covariate Balance Along the Red Line

Table 1: Climatic Covariate Balance

| | <i>Dependent variable:</i> | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|
| | Rainfall (1) | Elevation (2) | Temperature (3) | Carrying Cap. (4) |
| Direct rule | -0.814*** (0.024) | 0.039* (0.022) | -0.410*** (0.010) | -0.113*** (0.016) |
| ln(Distance to Windhoek) | 1.913*** (0.025) | -1.783*** (0.023) | 0.073*** (0.010) | 1.280*** (0.016) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ |
| Observations | 61,824 | 61,824 | 61,824 | 61,824 |
| Adjusted R ² | 0.344 | 0.424 | 0.511 | 0.382 |

Standard errors are in parentheses.

***p < .01; **p < .05; *p < .1

3 Controlling for Soil Types

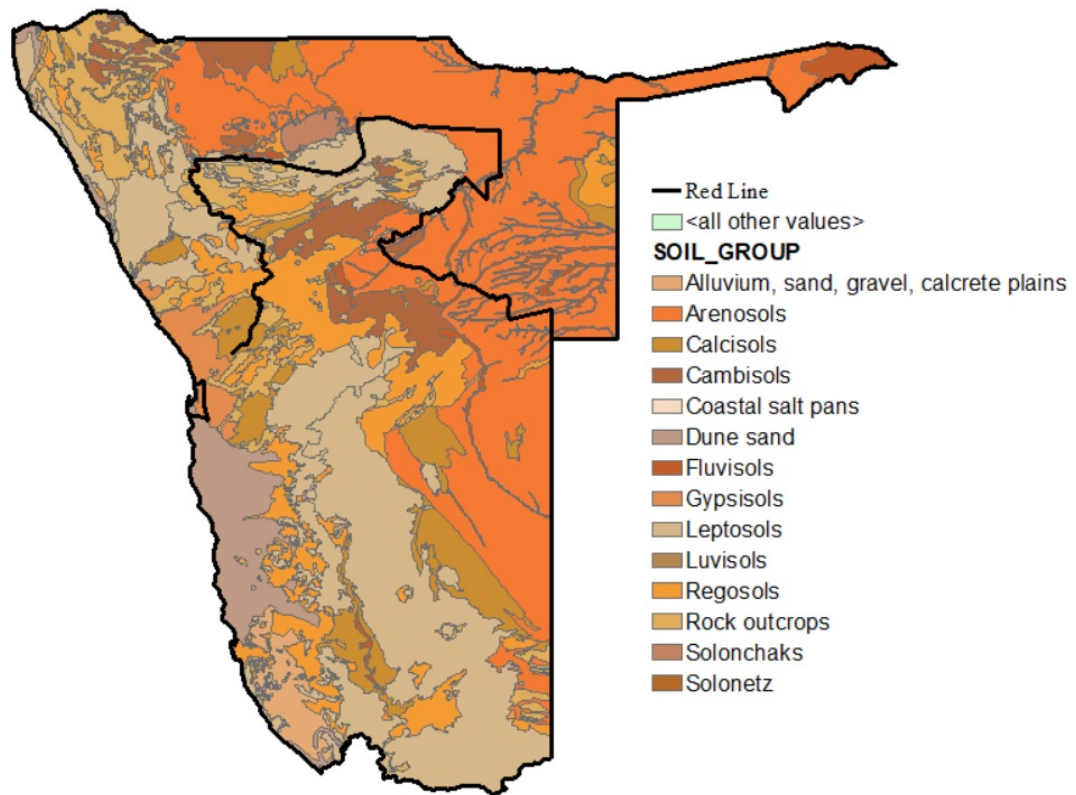


Figure 1: **Soil Types in Namibia**. Data come from [Mendelsohn et al. \(2002\)](#).

Table 2: Direct Rule and Commercialization of Agriculture

| | <i>Dependent variable:</i> | | | | | |
|--------------------------|----------------------------|----------------------|---------------------|----------------------|----------------------|----------------------|
| | Livestock | | Crop | | Poultry | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Direct rule | 0.972*** (0.195) | 0.854*** (0.206) | -0.225 (0.209) | -0.323* (0.174) | 3.756*** (0.640) | 4.586*** (0.776) |
| Temperature | 0.403*** (0.078) | 0.402*** (0.078) | 0.448*** (0.077) | -0.679*** (0.052) | 1.184*** (0.285) | 0.984*** (0.239) |
| Elevation | 0.204*** (0.029) | 0.203*** (0.029) | 0.285*** (0.017) | 0.349*** (0.016) | -0.551*** (0.130) | -0.265*** (0.063) |
| Rain | -0.453*** (0.035) | -0.416*** (0.041) | -0.075** (0.032) | 0.138*** (0.024) | 0.242 (0.167) | -0.208 (0.168) |
| Ferralic Arenosols | 2.333*** (0.312) | 2.313*** (0.311) | | -0.696*** (0.218) | 0.566 (1.105) | 0.873 (0.915) |
| Lithic Leptosols | 0.344 (0.339) | 0.398 (0.340) | | -0.141 (0.275) | -1.679*** (0.626) | -1.637*** (0.559) |
| Petric Calcisols | -0.631*** (0.093) | -0.663*** (0.094) | 0.168*** (0.047) | -0.165*** (0.049) | 1.186*** (0.316) | 1.091*** (0.266) |
| Rock outcrops | -0.645*** (0.104) | -0.718*** (0.112) | | 0.248*** (0.074) | 0.805** (0.384) | 1.566*** (0.392) |
| ln(Distance to Red Line) | | 0.016* (0.010) | | 0.032*** (0.006) | | -0.112** (0.046) |
| ln(Distance to Windhoek) | 0.644*** (0.224) | 0.443* (0.253) | 0.100 (0.150) | 0.275* (0.156) | 1.132*** (0.309) | 3.091*** (0.852) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,200 | 2,201 | 2,984 | 4,144 | 382 | 1,053 |
| Adjusted R ² | 0.227 | 0.227 | 0.158 | 0.223 | 0.322 | 0.188 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

4 Excluding Households with European Ancestry

Table 3: Direct Rule and Commercialization of Agriculture

| | <i>Dependent variable:</i> | | | | | |
|--------------------------|----------------------------|-------------|----------------|-------------|----------------|-------------|
| | Livestock | | Crop | | Poultry | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Direct rule | 0.295* | 0.354** | 1.651*** | 0.096 | 1.687** | 1.283** |
| | (0.157) | (0.169) | (0.317) | (0.131) | (0.714) | (0.510) |
| Temperature | -0.029 | -0.020 | -0.633*** | -0.653*** | 0.694*** | 0.515*** |
| | (0.060) | (0.060) | (0.060) | (0.045) | (0.250) | (0.144) |
| Elevation | 0.311*** | 0.303*** | 0.338*** | 0.358*** | -0.308* | -0.147** |
| | (0.029) | (0.030) | (0.022) | (0.017) | (0.163) | (0.064) |
| Rainfall | -0.241*** | -0.261*** | 0.078*** | 0.181*** | 0.090 | 0.165 |
| | (0.023) | (0.031) | (0.022) | (0.021) | (0.064) | (0.112) |
| Carrying capacity | 0.013 | 0.027 | -0.048 | -0.189*** | 0.160 | -0.108** |
| | (0.043) | (0.046) | (0.036) | (0.034) | (0.425) | (0.042) |
| ln(Distance to Red Line) | | -0.009 | | 0.042*** | | 0.046 |
| | | (0.010) | | (0.006) | | (0.036) |
| ln(Distance to Windhoek) | 1.506*** | 1.573*** | 1.502*** | 0.390*** | 0.318 | 0.618 |
| | (0.223) | (0.231) | (0.275) | (0.147) | (1.637) | (0.694) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,134 | 2,160 | 2,968 | 4,122 | 374 | 1,049 |
| Adjusted R ² | 0.190 | 0.189 | 0.186 | 0.211 | 0.204 | 0.154 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

Table 4: Living Standards

| | <i>Dependent variable:</i> | | | | | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Wealth | | Toilet | | Floor | | Roof | | Heat | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Direct rule | 2.468*** (0.389) | 2.196*** (0.112) | 5.312*** (0.769) | 8.531*** (0.314) | 4.073*** (0.755) | 2.957*** (0.328) | 5.161*** (0.824) | 9.284*** (0.385) | 4.520*** (1.211) | 5.754*** (0.327) |
| Temperature | -0.562*** (0.126) | 0.991*** (0.069) | 13.186 (70.341) | 7.735*** (0.307) | 0.366 (0.447) | 1.483*** (0.278) | -0.316 (0.377) | 0.254 (0.244) | -1.633*** (0.508) | 4.268*** (0.328) |
| Elevation | 0.246*** (0.036) | 0.359*** (0.020) | 0.426*** (0.076) | 0.229*** (0.037) | 0.290*** (0.082) | -0.106** (0.044) | 0.587*** (0.079) | 0.346*** (0.041) | 0.863*** (0.108) | 0.975*** (0.042) |
| Rainfall | 0.400*** (0.035) | 0.088*** (0.023) | 0.530*** (0.078) | 0.333*** (0.047) | 0.360*** (0.084) | 0.017 (0.053) | 0.521*** (0.082) | 0.260*** (0.053) | 0.506*** (0.111) | 0.146*** (0.054) |
| Carrying capacity | -0.435*** (0.061) | -0.385*** (0.042) | -0.837*** (0.128) | 0.169* (0.087) | -0.369*** (0.120) | -0.095 (0.100) | -0.621*** (0.113) | -0.183* (0.094) | -1.909*** (0.305) | -0.726*** (0.105) |
| ln(Distance to Red Line) | 0.041*** (0.007) | 0.041*** (0.007) | -0.050*** (0.012) | -0.050*** (0.012) | -0.223*** (0.014) | -0.223*** (0.014) | -0.123*** (0.012) | -0.123*** (0.012) | 0.093*** (0.015) | 0.093*** (0.015) |
| ln(Distance to Windhoek) | 1.898*** (0.354) | 2.573*** (0.146) | 4.918*** (0.702) | 5.477*** (0.291) | 3.006*** (0.690) | 2.286*** (0.272) | 3.645*** (0.770) | 6.317*** (0.399) | 7.190*** (0.902) | 6.603*** (0.325) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 4,118 | 9,282 | 4,122 | 9,230 | 4,066 | 8,208 | 4,104 | 9,215 | 4,118 | 9,282 |
| Adjusted R ² | 0.148 | 0.132 | | | | | | | | |
| AIC | | | 4,851.097 | 10,684.890 | 4,697.297 | 9,329.964 | 4,972.095 | 9,956.540 | 2,825.883 | 7,904.380 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

5 Excluding Etosha National Park

Table 5: Direct Rule and Commercialization of Agriculture

| | <i>Dependent variable:</i> | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| | Livestock | | Crop | | Poultry | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Direct rule | 0.309** (0.155) | 0.335** (0.168) | 1.164*** (0.356) | 0.073 (0.128) | 1.549** (0.726) | 1.374*** (0.510) |
| Temperature | -0.031 (0.060) | -0.027 (0.061) | -0.574*** (0.064) | -0.643*** (0.045) | 0.713*** (0.255) | 0.459*** (0.143) |
| Elevation | 0.334*** (0.028) | 0.330*** (0.030) | 0.302*** (0.022) | 0.358*** (0.017) | -0.370** (0.162) | -0.158** (0.064) |
| Rainfall | -0.236*** (0.023) | -0.245*** (0.031) | 0.073*** (0.023) | 0.177*** (0.020) | 0.115* (0.065) | 0.178 (0.112) |
| Carrying capacity | -0.016 (0.042) | -0.010 (0.045) | -0.034 (0.037) | -0.196*** (0.034) | 0.331 (0.422) | -0.103** (0.042) |
| ln(Distance to Red Line) | | -0.004 (0.010) | | 0.042*** (0.006) | | 0.047 (0.036) |
| ln(Distance to Windhoek) | 1.606*** (0.224) | 1.634*** (0.234) | 1.071*** (0.307) | 0.400*** (0.147) | -0.284 (1.637) | 0.626 (0.695) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,200 | 2,201 | 2,984 | 4,144 | 382 | 1,053 |
| Adjusted R ² | 0.196 | 0.196 | 0.173 | 0.216 | 0.205 | 0.167 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

Table 6: Living Standards

| | <i>Dependent variable:</i> | | | | | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Wealth | | Toilet | | Floor | | Roof | | Heat | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Direct rule | 3.923*** (0.429) | 2.057*** (0.121) | 5.465*** (0.772) | 9.049*** (0.327) | 4.059*** (0.774) | 3.101*** (0.354) | 7.416*** (1.002) | 10.501*** (0.449) | 5.149*** (1.234) | 6.158*** (0.322) |
| Temperature | -0.770*** (0.140) | 1.157*** (0.076) | 1.417* (0.728) | 7.944*** (0.304) | 0.080 (0.484) | 2.000*** (0.312) | -0.475 (0.420) | 0.601** (0.254) | -2.293*** (0.411) | 4.656*** (0.314) |
| Elevation | 0.351*** (0.039) | 0.587*** (0.021) | 0.465*** (0.076) | 0.423*** (0.035) | 0.398*** (0.082) | 0.067* (0.041) | 0.677*** (0.081) | 0.592*** (0.040) | 0.926*** (0.110) | 1.096*** (0.039) |
| Rainfall | 0.499*** (0.039) | 0.254*** (0.025) | 0.486*** (0.078) | 0.367*** (0.044) | 0.542*** (0.084) | 0.146*** (0.051) | 0.528*** (0.084) | 0.199*** (0.049) | 0.575*** (0.112) | 0.287*** (0.050) |
| Carrying capacity | -0.507*** (0.064) | -0.882*** (0.044) | -0.861*** (0.127) | -0.131 (0.088) | -0.440*** (0.120) | -0.307*** (0.101) | -0.680*** (0.113) | -0.574*** (0.098) | -1.958*** (0.305) | -1.084*** (0.102) |
| ln(Distance to Red Line) | 0.107*** (0.007) | 0.107*** (0.007) | -0.002 (0.011) | -0.002 (0.011) | -0.184*** (0.014) | -0.184*** (0.014) | -0.071*** (0.012) | -0.071*** (0.012) | 0.152*** (0.013) | 0.152*** (0.013) |
| ln(Distance to Windhoek) | 2.920*** (0.391) | 3.457*** (0.160) | 5.103*** (0.703) | 6.809*** (0.300) | 2.712*** (0.715) | 2.723*** (0.271) | 5.254*** (0.926) | 8.674*** (0.428) | 7.812*** (0.959) | 7.579*** (0.328) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 4,148 | 10,331 | 4,134 | 10,279 | 4,096 | 8,593 | 4,134 | 10,245 | 4,148 | 10,331 |
| Adjusted R ² | 0.241 | 0.211 | | | | | | | | |
| AIC | | | 4,851.244 | 11,701.040 | 4,748.302 | 9,970.093 | 4,865.386 | 10,883.370 | 2,904.349 | 9,393.606 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

6 Including Observations with Greater Distance from the Red Line

Table 7: Direct Rule and Commercialization of Agriculture (Observations Within 30km of the Red Line)

| | <i>Dependent variable:</i> | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|--------------------|---------------------|
| | Livestock | | Crop | | Poultry | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Direct rule | 0.444*** (0.154) | 0.549*** (0.161) | 1.025*** (0.093) | 0.075 (0.109) | 1.077** (0.514) | 0.897*** (0.347) |
| Temperature | -0.028 (0.060) | 0.003 (0.062) | -0.161*** (0.034) | -0.586*** (0.040) | 0.249 (0.188) | 0.230 (0.142) |
| Elevation | 0.144*** (0.023) | 0.136*** (0.023) | 0.143*** (0.012) | 0.242*** (0.013) | -0.098 (0.103) | -0.115** (0.057) |
| Rainfall | -0.226*** (0.023) | -0.247*** (0.025) | -0.029*** (0.011) | 0.105*** (0.015) | 0.082 (0.052) | 0.130*** (0.041) |
| Carrying capacity | 0.111*** (0.036) | 0.141*** (0.035) | -0.078*** (0.020) | -0.048** (0.023) | -0.001 (0.227) | 0.006 (0.039) |
| ln(Distance to Red Line) | | -0.006* (0.004) | | 0.010*** (0.002) | | 0.009* (0.005) |
| ln(Distance to Windhoek) | 1.307*** (0.229) | 1.399*** (0.227) | 1.030*** (0.091) | 0.166 (0.126) | 0.531 (0.985) | 0.159 (0.341) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,556 | 3,284 | 5,614 | 5,892 | 508 | 1,846 |
| Adjusted R ² | 0.145 | 0.118 | 0.096 | 0.179 | 0.191 | 0.081 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

Table 8: Living Standards (Observations Within 30km of the Red Line)

| | <i>Dependent variable:</i> | | | | | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Wealth | | Toilet | | Floor | | Roof | | Heat | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Direct rule | 1.024*** (0.031) | 0.343*** (0.014) | 6.524*** (0.417) | 4.655*** (0.188) | 6.759*** (0.378) | 3.991*** (0.216) | 13.282*** (0.648) | 16.503*** (0.535) | 7.577*** (0.528) | 3.233*** (0.191) |
| Temperature | -0.039*** (0.010) | 0.150*** (0.009) | -1.698*** (0.198) | 1.017*** (0.106) | -1.486*** (0.215) | 1.202*** (0.142) | -2.636*** (0.212) | -1.834*** (0.128) | -2.640*** (0.221) | 0.277** (0.135) |
| Elevation | -0.392*** (0.006) | 0.080*** (0.003) | 0.472*** (0.042) | 0.547*** (0.027) | 0.074* (0.042) | 0.157*** (0.030) | 0.395*** (0.049) | 0.568*** (0.034) | 1.130*** (0.047) | 1.142*** (0.030) |
| Rainfall | 0.056*** (0.005) | -0.079*** (0.003) | 0.225*** (0.053) | -0.297*** (0.028) | 0.822*** (0.058) | 0.166*** (0.030) | 0.433*** (0.062) | 0.089** (0.036) | 0.019 (0.057) | -0.305*** (0.031) |
| Carrying capacity | 0.085*** (0.004) | -0.277*** (0.006) | -0.701*** (0.070) | -1.070*** (0.057) | -0.309*** (0.067) | -0.848*** (0.062) | -0.577*** (0.068) | -0.913*** (0.075) | -0.428*** (0.108) | -1.188*** (0.061) |
| ln(Distance to Red Line) | -0.004*** (0.001) | -0.004*** (0.001) | 0.029*** (0.006) | 0.029*** (0.006) | 0.059*** (0.006) | 0.059*** (0.006) | 0.018*** (0.007) | 0.018*** (0.007) | 0.087*** (0.007) | 0.087*** (0.007) |
| ln(Distance to Windhoek) | -0.193*** (0.022) | -0.412*** (0.021) | 6.875*** (0.402) | 7.440*** (0.265) | 3.791*** (0.333) | 4.813*** (0.253) | 9.953*** (0.623) | 14.233*** (0.457) | 8.310*** (0.470) | 6.882*** (0.264) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 14,802 | 62,970 | 8,716 | 15,158 | 8,424 | 12,366 | 8,602 | 15,007 | 8,732 | 15,215 |
| Adjusted R ² | 0.626 | 0.450 | | | | | | | | |
| AIC | | | 10,318.950 | 18,346.710 | 10,535.610 | 15,780.560 | 10,473.370 | 15,872.500 | 6,987.629 | 14,664.320 |

Standard errors are in parentheses. Constant estimated but not displayed.
*** p < .01; ** p < .05; * p < .1

Table 9: Direct Rule and Commercialization of Agriculture (Observations Within 40km of the Red Line)

| | <i>Dependent variable:</i> | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|--------------------|----------------------|
| | Livestock | | Crop | | Poultry | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Direct rule | 0.620*** (0.160) | 0.476*** (0.166) | 0.966*** (0.093) | 0.164 (0.109) | 1.092** (0.504) | 0.455 (0.339) |
| Temperature | -0.023 (0.060) | -0.091* (0.050) | -0.173*** (0.030) | -0.392*** (0.030) | 0.257 (0.173) | -0.411*** (0.054) |
| Elevation | 0.141*** (0.024) | 0.160*** (0.024) | 0.137*** (0.013) | 0.230*** (0.014) | -0.104 (0.084) | 0.013 (0.056) |
| Rainfall | -0.243*** (0.024) | -0.205*** (0.026) | -0.012 (0.012) | 0.134*** (0.015) | 0.083* (0.049) | 0.143*** (0.044) |
| Carrying capacity | 0.061 (0.039) | -0.015 (0.032) | -0.121*** (0.018) | -0.133*** (0.020) | 0.007 (0.195) | -0.165*** (0.035) |
| ln(Distance to Red Line) | | 0.015*** (0.004) | | 0.027*** (0.002) | | 0.029*** (0.005) |
| ln(Distance to Windhoek) | 1.707*** (0.235) | 1.627*** (0.232) | 1.072*** (0.090) | 0.182 (0.130) | 0.512 (0.879) | 0.353 (0.350) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,610 | 3,845 | 6,066 | 7,021 | 518 | 2,298 |
| Adjusted R ² | 0.113 | 0.086 | 0.065 | 0.127 | 0.189 | 0.087 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

Table 10: Living Standards (Observations Within 40km of the Red Line)

| | <i>Dependent variable:</i> | | | | | | | | | |
|--------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Wealth | | Toilet | | Floor | | Roof | | Heat | |
| | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> | <i>matched</i> | <i>full</i> |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Direct rule | 0.070*** (0.015) | 0.580*** (0.010) | 6.021*** (0.358) | 4.365*** (0.174) | 6.469*** (0.332) | 3.458*** (0.179) | 11.723*** (0.557) | 11.719*** (0.319) | 7.278*** (0.481) | 3.571*** (0.175) |
| Temperature | -0.031*** (0.007) | 0.118*** (0.007) | -1.539*** (0.118) | 0.192** (0.076) | -0.833*** (0.102) | 0.125 (0.081) | -0.668*** (0.094) | -1.001*** (0.086) | -2.614*** (0.181) | -0.126 (0.098) |
| Elevation | -0.029*** (0.001) | 0.029*** (0.001) | 0.313*** (0.035) | 0.519*** (0.023) | -0.108*** (0.035) | 0.030 (0.027) | 0.260*** (0.042) | 0.422*** (0.029) | 0.900*** (0.038) | 0.991*** (0.026) |
| Rainfall | -0.194*** (0.002) | -0.084*** (0.002) | 0.357*** (0.044) | -0.342*** (0.027) | 0.806*** (0.048) | 0.160*** (0.029) | 0.372*** (0.052) | 0.182*** (0.031) | 0.199*** (0.049) | -0.278*** (0.029) |
| Carrying capacity | 0.043*** (0.003) | -0.311*** (0.005) | -0.753*** (0.064) | -1.061*** (0.050) | -0.524*** (0.060) | -0.879*** (0.050) | -0.865*** (0.061) | -1.442*** (0.060) | -0.523*** (0.105) | -1.109*** (0.055) |
| ln(Distance to Red Line) | -0.0002 (0.001) | -0.0002 (0.001) | 0.004 (0.005) | 0.004 (0.005) | 0.004 (0.005) | 0.048*** (0.005) | 0.033*** (0.006) | 0.033*** (0.006) | 0.080*** (0.007) | 0.080*** (0.007) |
| ln(Distance to Windhoek) | 0.133*** (0.004) | 0.094*** (0.006) | 5.820*** (0.338) | 7.064*** (0.253) | 3.908*** (0.302) | 4.157*** (0.240) | 9.485*** (0.538) | 11.734*** (0.354) | 7.434*** (0.405) | 6.222*** (0.244) |
| Constituency FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 23,688 | 78,197 | 11,584 | 17,360 | 11,242 | 14,513 | 11,450 | 17,204 | 11,604 | 17,431 |
| Adjusted R ² | 0.510 | 0.434 | | | | | | | | |
| AIC | | | 13,213.410 | 20,806.710 | 13,969.430 | 18,614.620 | 13,871.130 | 18,955.990 | 8,834.903 | 16,182.970 |

Standard errors are in parentheses. Constant estimated but not displayed.

***p < .01; **p < .05; *p < .1

7 Matching

Table 1, Model (1)

| Sample Sizes | | |
|------------------|---------|---------|
| | Control | Treated |
| All | 1,101 | 1,100 |
| Matched | 1,100 | 1,100 |
| Unmatched | 1 | 0 |

| Summary of Balance for All Data | | | | |
|---------------------------------|---------------|---------------|------------|-----------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.61 | 7.00 | 0.00 | 0.61 |
| elevation | 11.23 | 12.41 | 0.26 | -1.18 |
| rainfall | 5.06 | 10.97 | 0.18 | -5.91 |
| carrying capacity | 2.22 | 5.24 | 0.43 | -3.02 |
| latitude | -21.32 | -18.71 | 0.06 | -2.60 |
| longitude | 15.64 | 18.96 | 0.15 | -3.31 |

| Summary of Balance for Matched Data | | | | |
|-------------------------------------|---------------|---------------|------------|-----------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.61 | 7.00 | 0.00 | 0.61 |
| elevation | 11.23 | 12.41 | 0.27 | -1.18 |
| rainfall | 5.06 | 10.97 | 0.18 | -5.91 |
| carrying capacity | 2.22 | 5.24 | 0.43 | -3.02 |
| latitude | -21.32 | -18.72 | 0.06 | -2.60 |
| longitude | 15.64 | 18.96 | 0.15 | -3.31 |

Table 1, Model (3)

| Sample Sizes | | |
|------------------|---------|---------|
| | Control | Treated |
| All | 1,492 | 2,652 |
| Matched | 1,492 | 1,492 |
| Unmatched | 0 | 1,160 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.70 | 7.00 | 0.00 | 0.70 |
| elevation | 11.31 | 12.40 | 0.27 | -1.09 |
| rainfall | 4.94 | 10.95 | 0.23 | -6.01 |
| carrying capacity | 2.06 | 5.22 | 0.41 | -3.16 |
| latitude | -21.45 | -18.71 | 0.06 | -2.73 |
| longitude | 15.49 | 18.96 | 0.16 | -3.46 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.73 | 7.00 | 0.00 | 0.73 |
| elevation | 11.20 | 12.40 | 0.27 | -1.21 |
| rainfall | 4.80 | 10.95 | 0.23 | -6.15 |
| carrying capacity | 2.00 | 5.22 | 0.41 | -3.22 |
| latitude | -21.48 | -18.71 | 0.06 | -2.77 |
| longitude | 15.44 | 18.96 | 0.16 | -3.51 |

Table 1, Model (5)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 862 | 191 |
| Matched | 191 | 191 |
| Unmatched | 671 | 0 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.14 | 7.00 | 0.00 | 0.14 |
| elevation | 12.38 | 12.45 | 0.23 | -0.07 |
| rainfall | 6.09 | 11.00 | 0.05 | -4.91 |
| carrying capacity | 2.35 | 5.28 | 0.45 | -2.93 |
| latitude | -21.46 | -18.72 | 0.05 | -2.74 |
| longitude | 15.89 | 19.01 | 0.12 | -3.12 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.14 | 7.00 | 0.00 | 0.14 |
| elevation | 12.38 | 12.30 | 0.00 | 0.09 |
| rainfall | 6.09 | 11.00 | 0.00 | -4.91 |
| carrying capacity | 2.35 | 5.00 | 0.00 | -2.76 |
| latitude | -21.46 | -18.70 | 0.00 | -2.76 |
| longitude | 15.89 | 19.12 | 0.00 | -3.24 |

Table 2, Model (1)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 2,074 | 8,257 |
| Matched | 2,074 | 2,074 |
| Unmatched | 0 | 6,183 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.69 | 7.00 | 0.00 | 0.69 |
| elevation | 11.71 | 12.36 | 0.28 | -0.65 |
| rainfall | 5.88 | 10.83 | 0.38 | -4.95 |
| carrying capacity | 2.22 | 5.21 | 0.41 | -2.99 |
| latitude | -21.13 | -18.72 | 0.06 | -2.41 |
| longitude | 15.73 | 18.91 | 0.18 | -3.18 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.75 | 7.00 | 0.00 | 0.75 |
| elevation | 11.75 | 12.36 | 0.28 | -0.60 |
| rainfall | 5.63 | 10.83 | 0.38 | -5.20 |
| carrying capacity | 2.00 | 5.21 | 0.41 | -3.21 |
| latitude | -21.33 | -18.72 | 0.06 | -2.61 |
| longitude | 15.53 | 18.91 | 0.18 | -3.38 |

Table 2, Model (3)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 2,067 | 8,212 |
| Matched | 2,067 | 2,067 |
| Unmatched | 0 | 6,145 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.69 | 7.00 | 0.00 | 0.69 |
| elevation | 11.71 | 12.36 | 0.28 | -0.65 |
| rainfall | 5.88 | 10.83 | 0.38 | -4.95 |
| carrying capacity | 2.22 | 5.21 | 0.41 | -2.99 |
| latitude | -21.13 | -18.72 | 0.06 | -2.41 |
| longitude | 15.73 | 18.91 | 0.18 | -3.18 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.75 | 7.00 | 0.00 | 0.75 |
| elevation | 11.72 | 12.36 | 0.28 | -0.63 |
| rainfall | 5.61 | 10.83 | 0.38 | -5.22 |
| carrying capacity | 2.00 | 5.21 | 0.41 | -3.21 |
| latitude | -21.33 | -18.72 | 0.06 | -2.61 |
| longitude | 15.52 | 18.91 | 0.18 | -3.87 |

Table 2, Model (5)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 2,048 | 6,545 |
| Matched | 2,048 | 2,048 |
| Unmatched | 0 | 4,497 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.66 | 7.00 | 0.00 | 0.66 |
| elevation | 11.54 | 12.36 | 0.28 | -0.82 |
| rainfall | 5.78 | 10.83 | 0.38 | -5.06 |
| carrying capacity | 2.21 | 5.21 | 0.41 | 0.41 |
| latitude | -21.15 | -18.72 | 0.06 | -2.43 |
| longitude | 15.77 | 18.91 | 0.18 | -3.14 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.71 | 7.00 | 0.00 | 0.71 |
| elevation | 11.56 | 12.36 | 0.28 | -0.79 |
| rainfall | 5.37 | 10.83 | 0.38 | -5.46 |
| carrying capacity | 2.00 | 5.21 | 0.41 | -3.21 |
| latitude | -21.38 | -18.72 | 0.06 | -2.67 |
| longitude | 15.51 | 18.91 | 0.18 | -3.40 |

Table 2, Model (7)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 2,067 | 8,178 |
| Matched | 2,067 | 2,067 |
| Unmatched | 0 | 6,111 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.69 | 7.00 | 0.00 | 0.69 |
| elevation | 11.71 | 12.36 | 0.28 | -0.65 |
| rainfall | 5.89 | 10.83 | 0.37 | -4.95 |
| carrying capacity | 2.22 | 5.21 | 0.41 | -2.99 |
| latitude | -21.13 | -18.72 | 0.06 | -2.41 |
| longitude | 15.74 | 18.91 | 0.18 | -3.18 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.74 | 7.00 | 0.00 | 0.74 |
| elevation | 11.71 | 12.36 | 0.28 | -0.65 |
| rainfall | 5.58 | 10.83 | 0.37 | -5.25 |
| carrying capacity | 2.00 | 5.21 | 0.41 | -3.21 |
| latitude | -21.34 | -18.72 | 0.06 | -2.62 |
| longitude | 15.52 | 18.91 | 0.18 | -3.39 |

Table 2, Model (9)

| Sample Sizes | | |
|---------------------|----------------|----------------|
| | Control | Treated |
| All | 2,074 | 8,257 |
| Matched | 2,074 | 2,074 |
| Unmatched | 0 | 6,183 |

| Summary of Balance for All Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.69 | 7.00 | 0.00 | 0.69 |
| elevation | 11.71 | 12.36 | 0.28 | -0.65 |
| rainfall | 5.88 | 10.83 | 0.38 | -4.95 |
| carrying capacity | 2.22 | 5.21 | 0.41 | -2.99 |
| latitude | -21.13 | -18.72 | 0.06 | -2.41 |
| longitude | 15.73 | 18.91 | 0.18 | 0.18 |

| Summary of Balance for Matched Data | | | | |
|--|----------------------|----------------------|-------------------|------------------------|
| Variable | Treated Means | Control Means | SD Control | Mean Difference |
| distance | 1.00 | 0.00 | 0.00 | 1.00 |
| temperature | 7.74 | 7.00 | 0.00 | 0.74 |
| elevation | 11.74 | 12.36 | 0.28 | -0.61 |
| rainfall | 5.61 | 10.83 | 0.38 | -5.22 |
| carrying capacity | 2.00 | 5.21 | 0.41 | -3.21 |
| latitude | -21.33 | -18.72 | 0.06 | -2.61 |
| longitude | 15.53 | 18.91 | 0.18 | -3.38 |

References

Mendelsohn, J., Jarvis, A., Roberts, C., and Robertson, T. (2002). *Atlas of Namibia: A portrait of the land and its people.*