**Chinese aid and local ethnic identification**

**Online Appendix**

**Table of contents**

Section A: Appendix Figures and Tables discussed in the text 1

Figure A1: Country share identifying in ethnic rather than national terms 1

Figure A2: Timeline to illustrate estimation strategy 1

Figure A3: Estimated effects when using different time restrictions on ongoing and future 2

Figure A4: World Bank aid and ethnic identity: different geographical cut-offs 2

Figure A5: World Bank aid and ethnic identity: sensitivity analysis 3

Table A1: Summary statistics 4

Table A2: Variable descriptions 5

Table A3: Chinese aid and ethnic identity: Different geographical cut-offs 5

Table A4: Chinese aid and ethnic identity: Sensitivity analysis 6

Table A5: Chinese project localization: in- and out-group variation in proximity to project sites? 7

Table A6: Chinese aid and ethnic identity: variation across in- and out-group 7

Table A7: World Bank aid and ethnic identity 8

Section B: Sample balance 9

Table B1: Sample balance 9

Section C: Chinese and other bilateral aid compared 9

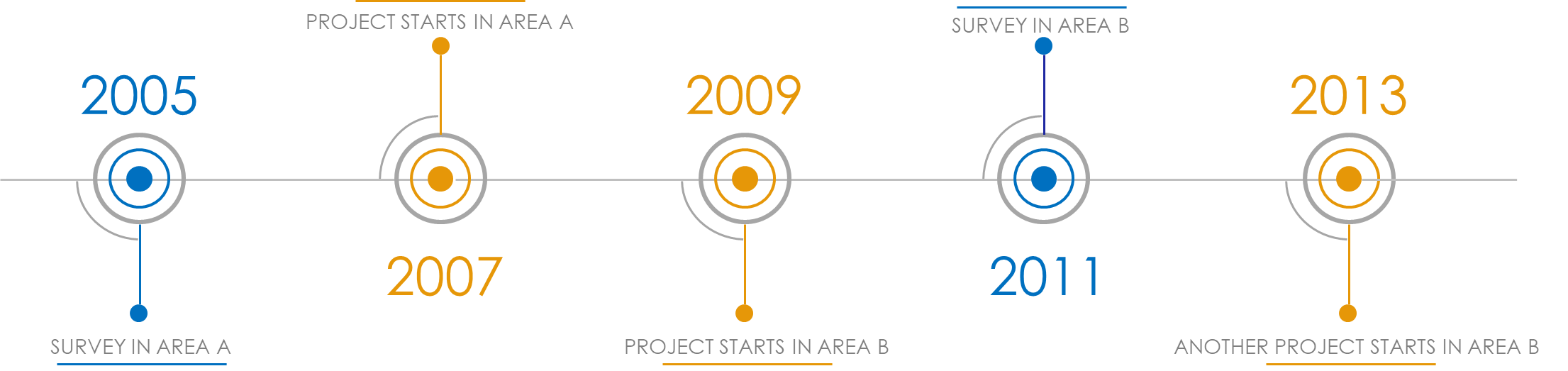
Table C1: Other bilateral aid and ethnic identities in Malawi, Nigeria, Senegal, and Uganda 10

**Section A: Appendix Figures and Tables discussed in the text**

Figure A1: Country share identifying in ethnic rather than national terms



Figure A2: Timeline to illustrate estimation strategy



Notes: In this example, people living in area A, surveyed in 2005, are connected to a future project starting in 2007, and people living in area B, surveyed in 2011, are connected to an ongoing project that started in 2009. Hence, although the project in area B started two years later than the project in area A, it is still the project in area A that is classified as a future project, all depending on when the survey covered the areas in question.

Figure A3: Estimated effects when using different time restrictions on ongoing and future



Figure A4: World Bank aid and ethnic identity: different geographical cut-offs



Notes: Estimated effect with 95% confidence intervals

Figure A5: World Bank aid and ethnic identity: sensitivity analysis



Notes: Estimated effect with 95% confidence intervals; The benchmark estimation corresponds to that in Column 1 och Table A7; Rather than excluding respondents with completed projects within the cut-off distance, as in the benchmark setup, the ‘completed included’ estimation includes (but controls for) respondents having a completed World Bank project within the cut-off distance; The extended sample relaxes the restriction that each sample country must have both a post- and a pre-treatment group of respondents and consists of 17 countries (on top of the 13 benchmark countries, also including Cape Verde, Tanzania, Togo and Zimbabwe); The restricted sample excludes countries not part of the Chinese estimation sample (Ghana, Mozambique, South Africa, Uganda); The geo-matched sample drops all respondents in enumeration areas further than 100 km away from World Bank projects sites.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table A1: Summary statistics | | | | | |
| Variable | Obs. | Mean | Std. Dev. | Min | Max |
| *Ethnic identity* | 50,520 | 0.147 | 0.354 | 0 | 1 |
| *Ethnic ordinal* | 48,433 | 2.469 | 1.196 | 1 | 5 |
| *Ongoing25* | 50,520 | 0.180 | 0.384 | 0 | 1 |
| *Future25* | 50,520 | 0.060 | 0.238 | 0 | 1 |
| *Completed25* | 50,520 | 0.019 | 0.136 | 0 | 1 |
| *Ongoing10* | 50,520 | 0.117 | 0.321 | 0 | 1 |
| *Future10* | 50,520 | 0.043 | 0.203 | 0 | 1 |
| *Completed10* | 50,520 | 0.009 | 0.094 | 0 | 1 |
| *Ongoing50* | 50,520 | 0.277 | 0.447 | 0 | 1 |
| *Future50* | 50,520 | 0.108 | 0.311 | 0 | 1 |
| *Completed50* | 50,520 | 0.048 | 0.214 | 0 | 1 |
| *Ongoing75* | 50,520 | 0.363 | 0.481 | 0 | 1 |
| *Future75* | 50,520 | 0.141 | 0.348 | 0 | 1 |
| *Completed75* | 50,520 | 0.060 | 0.237 | 0 | 1 |
| *In-group* | 50,520 | 0.180 | 0.384 | 0 | 1 |
| *In-group x Future25* | 50,520 | 0.016 | 0.126 | 0 | 1 |
| *In-group x Ongoing25* | 50,520 | 0.031 | 0.174 | 0 | 1 |
| *Age* | 50,520 | 35.980 | 14.279 | 18 | 100 |
| *Female* | 50,520 | 0.498 | 0.500 | 0 | 1 |
| *Urban* | 50,520 | 0.406 | 0.491 | 0 | 1 |

Table A2: Variable descriptions

*Dependent variables, ethnic identification*

Ethnic identification: Dummy equal to one if the respondent reports to identify more in ethnic than in national terms, i.e. providing a response falling in response category 1 or 2 to the following question (zero otherwise): “Let us suppose that you had to choose between being a [national ID] and being a [respondent’s ethnic group]. Which of the following best expresses your feelings?” 1=I feel only [Respondent’s ethnic group], 2=I feel more [Respondent’s ethnic group] than [national ID], 3=I feel equally [national ID] and [Respondent’s ethnic group], 4=I feel more [national ID] than [Respondent’s ethnic group] 5=I feel only [national ID], 7=Not applicable.

Ethnic ordinal: Ordinal variable based on the question described above, ranging from 1-5 and rescaled to be increasing in ethnic identification

*Proximity to Chinese project sites*

Ongoing25: Dummy variable equal to one if the respondent lives within 25 km of a site where a Chinese aid project is being implemented at the time of the interview, zero otherwise.

Ongoing10: Same as Ongoing25 but using a 10 km cut-off.

Ongoing50: Same as Ongoing25 but using a 50 km cut-off.

Ongoing75: Same as Ongoing25 but using a 75 km cut-off.

Future25: Dummy variable equal to one if the respondent lives within 25 km of a Chinese projects site where the implementation of the project had not yet started at the time of the interview and do not have any ongoing or completed project within this same distance, zero otherwise.

Future10: Same as Future25 but using a 10 km cut-off.

Future50: Same as Future25 but using a 50 km cut-off.

Future75: Same as Future25 but using a 75 km cut-off.

Completed25: Dummy variable equal to one if the respondent lives within 25 km of a completed Chinese project and do not have any ongoing project within this same distance, zero otherwise.

Completed10: Same as Completed25 but using a 10 km cut-off.

Completed50: Same as Completed25 but using a 50 km cut-off.

Completed75: Same as Completed 25 but using a 75 km cut-off.

*In-group*

In-group: Dummy variable equal to 1 if the respondent belongs to the same ethnic group as the country president at the time of the survey. Based on self-reported group affiliation using the question: “What is your ethnic community, cultural group or tribe?”. coupled with externally compiled data on the ethnic background of the president at the time of the survey. For the ethnic groups of president, I consult at least two sources for each country, drawing most heavily on the compilation in Dreher et al (2015), when necessary updated with more recent data from other sources (e.g. encyclopedia britannica, wikipedia, aljazeera, washington post, africareview.com etc. ).

In-group\*Ongoing: A multiplicative term between the in-group dummy and the Ongoing25 dummy.

In-group\*Future: A multiplicative term between the in-group dummy and the Future25 dummy.

*Individual control variables*

Female: Dummy variable equal to one if the respondent is female; zero otherwise.

Urban: Dummy variable equal to one if the respondent lives in an urban area; zero otherwise.

Age variables: Age in years and age squared.

Year dummies: Dummies for interview year, 2005-2015

Country dummies: Dummies for the 18 countries in the sample

Country-year dummies: interacting the full set of year dummies with the full set of country dummies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table A3: Chinese aid and ethnic identity: Different geographical cut-offs | | | | |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | 10 km cutoff | 25 km cutoff | 50 km cutoff | 75 km cutoff |
|  |  |  |  |  |
| *Ongoing* | -0.012\* | -0.004 | -0.008 | -0.009 |
|  | (0.006) | (0.008) | (0.006) | (0.006) |
| *Future* | -0.031\*\* | -0.037\*\*\* | -0.038\*\*\* | -0.023\*\*\* |
|  | (0.012) | (0.011) | (0.009) | (0.009) |
|  |  |  |  |  |
| Diff ongoing-future | 0.0187 | 0.0323 | 0.0298 | 0.0144 |
| F test ongoing-future=0 | 2.229 | 8.986 | 10.96 | 2.680 |
| p value of F test | 0.136 | 0.00274 | 0.000940 | 0.102 |
| Observations | 50,072 | 49,573 | 48,089 | 47,497 |
| R-squared | 0.036 | 0.036 | 0.036 | 0.036 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; All regressions include baseline controls and year and country fixed effects.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table A4: Chinese aid and ethnic identity: Sensitivity analysis | | | | | | | | | | | | | | | | |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| VARIABLES | Logit | Ordinal dependent | Including completed | Extended sample | Precision code 1 | Only ODA | Region FEs | Geo-matched | Without wave 6 | Exclude next year future | Within 5 years | No turnover | Country timetrend | Country-year FEs | Region timetrend | Region-year FEs |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *ongoing* | -0.009 | -0.016 | -0.005 | -0.009\*\* | -0.012\* | -0.004 | 0.007 | -0.005 | -0.009 | -0.003 | -0.004 | -0.021\*\*\* | -0.010 | -0.009 | 0.010 | 0.013 |
|  | (0.009) | (0.039) | (0.008) | (0.004) | (0.007) | (0.008) | (0.009) | (0.009) | (0.006) | (0.008) | (0.008) | (0.006) | (0.008) | (0.007) | (0.009) | (0.009) |
| *future* | -0.035\*\*\* | -0.204\*\*\* | -0.037\*\*\* | -0.030\*\*\* | -0.029\*\*\* | -0.038\*\*\* | -0.016\* | -0.033\*\*\* | -0.034\*\*\* | -0.043\*\*\* | -0.039\*\*\* | -0.046\*\*\* | -0.029\*\* | -0.034\*\*\* | -0.015 | -0.016 |
|  | (0.012) | (0.059) | (0.011) | (0.011) | (0.011) | (0.012) | (0.010) | (0.012) | (0.011) | (0.015) | (0.012) | (0.013) | (0.011) | (0.011) | (0.010) | (0.010) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Diff ongoing-future | 0.0258 | 0.188 | 0.0322 | 0.0210 | 0.0173 | 0.0341 | 0.0228 | 0.0280 | 0.0256 | 0.0395 | 0.0347 | 0.0249 | 0.0190 | 0.0249 | 0.0249 | 0.0296 |
| F test ongoing-future | 4.72 | 8.939 | 8.976 | 4.078 | 2.193 | 9.525 | 4.014 | 6.483 | 4.827 | 8.560 | 10.36 | 3.806 | 3.345 | 5.602 | 4.127 | 5.43 |
| p value of F test | 0.0299 | 0.00281 | 0.00275 | 0.0435 | 0.139 | 0.00204 | 0.0452 | 0.0110 | 0.0281 | 0.00346 | 0.00130 | 0.0512 | 0.0675 | 0.0180 | 0.0423 | 0.0198 |
| Observations | 49,565 | 47,498 | 50,520 | 108,290 | 33,119 | 49,775 | 49,573 | 28,656 | 38,026 | 48,777 | 49,573 | 38,081 | 49,573 | 49,573 | 49,573 | 49,573 |
| R-squared | 0.0435 | 0.061 | 0.036 | 0.029 | 0.036 | 0.036 | 0.085 | 0.037 | 0.042 | 0.036 | 0.036 | 0.035 | 0.036 | 0.042 | 0.093 | 0.104 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; All regressions include baseline controls and year and country (or region, when specified) fixed effects; Column 1 presents marginal effects from a logit estimation, the presented difference ongoing-future refers to the difference between the concerned marginal effects, and the test-statistic and associated p-value to a chi2 distribution. The reported r-squared refers to the ‘pseudo r-squared’ ; Column 2 uses and ordinal dependent ranging from 1-5 (increasing in ethnic identification); Column 3 includes, but controls for, respondents having a completed project within the cut-off distance (rather than drop them, as in the benchmark setup); Column 4 relaxes the restriction that each sample country must have both a post- and a pre-treatment group of respondents . The resulting extended sample consists of 26 countries; Column 5 restricts the sample to include only observations in Afrobarometer enumeration areas geocoded with precision code 1;Column 6 restricts the sample of Chinese projects to include only those judged as ‘ODA-like’ by AidData coders; Column 7 includes sub-national region FEs rather than Country FEs; Column 8 excludes all respondents in enumeration areas further than 100 km away from Chinese projects sites; Column 9 excludes Afrobarometer survey wave 6 (which contains no observations connected to future Chinese project sites); Column 10 excludes observations connected to future projects starting within the next year (to evaluate pre-start effects); Column 11 restricts the pre-treatment group to respondents living close to sites where projects will start within a maximum of five years of the interview date; Column 12 restricts the sample for each country to include only survey rounds where the same party is in power; Column 13 controls for country specific linear time trends; Column 14 controls for country-year fixed effects; Column 15 controls for sub-national region specific linear time trends; Column 16 controls for sub-national region-year fixed effects.

Table A5: Chinese project localization: in- and out-group variation in proximity to project sites?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Ongoing project | Future project | Number of projects | Distance to nearest projects |
|  |  |  |  |  |
| In-group | 0.026 | 0.023\*\* | 0.562\*\*\* | -24.336\*\*\* |
|  | (0.016) | (0.010) | (0.182) | (4.938) |
| Baseline controls | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |
| Country FE | YES | YES | YES | YES |
| Observations | 50,520 | 50,520 | 50,520 | 50,520 |
| R-squared | 0.214 | 0.139 | 0.228 | 0.212 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A6: Chinese aid and ethnic identity: variation across in- and out-group

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | Ethnic identity | Ethnic identity | Ethnic identity |
|  |  |  |  |
| *Ongoing* | -0.004 | -0.003 | 0.011 |
|  | (0.008) | (0.008) | (0.009) |
| *Future* | -0.035\*\*\* | -0.029\*\* | -0.011 |
|  | (0.011) | (0.014) | (0.011) |
| *In-group* | -0.027\*\*\* | -0.024\*\*\* | -0.015\* |
|  | (0.006) | (0.007) | (0.008) |
| *In-group\*Ongoing* |  | -0.003 | -0.019\* |
|  |  | (0.011) | (0.011) |
| *In-group\*Future* |  | -0.022 | -0.016 |
|  |  | (0.017) | (0.015) |
| Baseline controls | YES | YES | YES |
| Year FE | YES | YES | YES |
| Country FE | YES | YES | NO |
| Region FE | NO | NO | YES |
| Diff ongoing-future | 0.0312 | 0.0259 | 0.0225 |
| F test: ongoing-future=0 | 8.390 | 3.923 | 2.998 |
| p value of F test ongoing-future=0 | 0.00380 | 0.0477 | 0.0834 |
| Diff (ongoing+in-group\*ongoing)-(future+ in-group\*future) |  | 0.0446 | 0.0191 |
| F test (ongoing+ in-group\*ongoing)-(future+ in-group\*future)=0 |  | 11.20 | 2.20 |
| p-value of F test (ongoing+ in-group\*ongoing)-(future+ in-group\*future)=0 |  | 0.0008 | 0.1380 |
| Observations | 49,573 | 49,573 | 49,573 |
| R-squared | 0.037 | 0.037 | 0.085 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table A7: World Bank aid and ethnic identity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Ethnic identity | Ethnic identity | Ethnic identity | Ethnic identity |
|  |  |  |  |  |
| *Ongoing* | -0.013\*\* | -0.013\*\* | -0.009\* | 0.000 |
|  | (0.005) | (0.005) | (0.005) | (0.006) |
| *Future* | 0.038\*\*\* | 0.038\*\*\* | 0.046\*\*\* | 0.019\*\* |
|  | (0.010) | (0.010) | (0.010) | (0.009) |
| *In-group* |  | -0.007 | 0.010 | 0.013 |
|  |  | (0.005) | (0.010) | (0.009) |
| *In-group\*Ongoing* |  |  | -0.023\*\* | -0.011 |
|  |  |  | (0.012) | (0.011) |
| *In-group\*Future* |  |  | -0.079\*\*\* | -0.042\* |
|  |  |  | (0.023) | (0.022) |
| Baseline controls | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |
| Country FE | YES | YES | YES | NO |
| Region FE | NO | NO | NO | YES |
| Diff ongoing-future | -0.0507 | -0.0502 | -0.0553 | -0.0187 |
| F test: ongoing-future=0 | 29.37 | 28.83 | 30.34 | 4.607 |
| p value of F test ongoing-future=0 | 6.22e-08 | 8.21e-08 | 3.78e-08 | 0.0319 |
| Diff (ongoing+in-group\*ongoing)-(future+ in-group\*future) |  |  | 0.00132 | 0.0118 |
| F test |  |  | 0.00 | 0.35 |
| p value of F test |  |  | 0.9462 | 0.557 |
| Observations | 69,255 | 69,255 | 69,255 | 69,255 |
| R-squared | 0.029 | 0.029 | 0.029 | 0.067 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; The estimations are based on data from AidData (World Bank IBRD-IDA, Level 1, Version 1.4.1), covering all World Bank projects approved between 1995 and 2014. Again, the sample is limited to include only projects with precise geocodes and information about start year, resulting in 688 World Bank projects spread across 6,663 project locations. Restricting the estimation sample to include only countries with observations connected to both ongoing and future World Bank development projects results in a sample consisting of 13 countries (Benin, Botswana, Ghana, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Senegal, South Africa and Uganda).

**Section B: Sample balance**

Exploring sample balance in terms of covariates between the treatment and pre-treatment groups (Table B1), it is difficult to ascertain that one captures differences that are truly exogenous to Chinese aid and do not themselves depend on the inflow of development finance. With this caveat in mind, we can note that whereas people living close to Chinese projects – both ongoing and future – tend to be slightly younger than those with no Chinese project near, there is no statistically significant age difference between the ongoing and future groups. Neither is there any gender imbalance between the groups. Next, people with ongoing or future Chinese project sites near are both more likely to live in urban areas. While this tendency is more pronounced for areas close to ongoing sites, we cannot rule out that this difference is to some extent endogenous (e.g. if Chinese projects attract firms to the area).

|  |  |  |  |
| --- | --- | --- | --- |
| Table B1: Sample balance | | | |
|  | (1) | (2) | (3) |
| Dependent variable is: | Age | Female | Urban |
|  |  |  |  |
| *Ongoing* | -1.704\*\*\* | 0.002\* | 0.469\*\*\* |
|  | (0.265) | (0.001) | (0.030) |
| *Future* | -2.201\*\*\* | 0.001 | 0.319\*\*\* |
|  | (0.533) | (0.003) | (0.049) |
| Difference ongoing-future | 0.497 | 0.00133 | 0.150 |
| F test: ongoing-future=0 | 0.995 | 0.218 | 11.10 |
| p value of F test | 0.319 | 0.641 | 0.000873 |
| Observations | 49,580 | 49,580 | 49,580 |
| R-squared | 0.034 | 0.000 | 0.198 |
| Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; All estimations include country and year FEs | | | |

**Section C: Chinese and other bilateral aid compared**

Do the different results obtained for Chinese and World Bank projects simply reflect differences in the impact of bilateral and multilateral aid? Indeed, a common argument is that bilateral aid is often tied to the political agenda of the donor country and that it is less focused on promoting good governance in the recipient country (see the discussion in Charron, 2011)[[1]](#footnote-1). It is thus a good idea to compare the effects of Chinese aid projects to those of other bilateral donors.

For other bilateral donors, geocoded aid project data is available on a large scale only for a small selection of African countries. In particular, for Malawi, Nigeria, Uganda and Senegal there is geocoded aid data for both China and other donor countries, thus allowing for comparison.[[2]](#footnote-2) Table C1 presents the results of the equivalent regressions for other bilateral donor projects in these countries.

Table C1: Other bilateral aid and ethnic identities in Malawi, Nigeria, Senegal, and Uganda

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | Ethnic identity | Ethnic identity | Ethnic identity |
|  |  |  |  |
| Ongoing | -0.028\*\*\* | -0.026\*\*\* | -0.0234\*\* |
|  | (0.010) | (0.010) | (0.010) |
| Future | -0.004 | -0.003 | -0.003 |
|  | (0.013) | (0.013) | (0.014) |
| In-group |  | -0.038\*\*\* | -0.0267\* |
|  |  | (0.008) | (0.015) |
| In-group\*ongoing |  |  | -0.0116 |
|  |  |  | (0.018) |
| In-group\*future |  |  | -0.0305 |
|  |  |  | (0.0233) |
|  |  |  |  |
| Diff ongoing-future | -0.0239 | -0.0232 | -0.0267 |
| F test: ongoing-future=0 | 3.768 | 3.660 | 4.41 |
| p value of F test ongoing-future=0 | 0.0524 | 0.0559 | 0.0358 |
| Diff (ongoing+in-group\*ongoing)-(future+ in-group\*future) |  |  | -.00780 |
| F test |  |  | 0.16 |
| p value of F test |  |  | 0.689 |
| Observations | 28,806 | 28,806 | 28,806 |
| R-squared | 0.023 | 0.024 | 0.024 |

Robust standard errors (clustered by the survey clusters) in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; All regressions include baseline controls and year and country fixed effects.

Again, the findings suggest a pattern different from that observed for Chinese projects. Just as for World Bank projects, the results for other bilateral aid, if anything, indicate that living near an ongoing as opposed to a future project comes with weaker ethnic identification. Furthermore, just as for World Bank projects, there is some indication that the effect is driven primarily by the out-group.

1. Charron, N. (2011) “Exploring the impact of foreign aid on corruption: Has the ‘anti-corruption movement’ been effective?”, *The Developing Economies*, 49(1), pp. 66–88. [↑](#footnote-ref-1)
2. The benchmark result for Chinese projects remains when using this restricted sample. [↑](#footnote-ref-2)