

The Impacts of Microcredit: Evidence from Ethiopia
by
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Online Appendix

TABLE D1—IMPACTS ON BORROWING, COMPLETE RESULTS AND ALTERNATIVE SPECIFICATIONS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|-----------------------------|-------------------|-------------------------|---------------------|---------------------|----------------------|
| <i>Panel A. Credit access: Any loan from</i> | | | | | | |
| | ACSI & OCSSC | NGOs | Banks & Cooperatives | Informal Sources | All sources | All sources Women |
| | OLS - Base estimates | | | | | |
| Microcredit | 0.252*** (0.058) | 0.026 (0.030) | 0.019 (0.039) | -0.006 (0.022) | 0.252*** (0.064) | 0.081*** (0.025) |
| Family Planning (no microloans) | 0.025 (0.030) | 0.006 (0.017) | 0.003 (0.032) | 0.022 (0.024) | 0.048 (0.059) | 0.019 (0.018) |
| Microcredit × Family Planning | -0.079 (0.076) | -0.028 (0.029) | -0.016 (0.036) | 0.033 (0.022) | -0.058 (0.064) | 0.010 (0.031) |
| | 2SLS | | | | | |
| Microcredit | 0.357*** (0.093) | 0.042 (0.051) | 0.030 (0.060) | -0.015 (0.034) | 0.353*** (0.098) | 0.105** (0.035) |
| | OLS - No FP controls | | | | | |
| Microcredit | 0.189*** (0.039) | 0.006 (0.016) | 0.010 (0.022) | -0.014 (0.010) | 0.182*** (0.037) | 0.075*** (0.017) |
| | OLS - Village Fixed Effects | | | | | |
| Microcredit | 0.252*** (0.058) | 0.026 (0.031) | 0.019 (0.040) | -0.007 (0.022) | 0.251*** (0.064) | 0.081*** (0.025) |
| <i>Panel B. Loan amounts (in 2006 Birr)</i> | | | | | | |
| | ACSI & OCSSC | NGOs | Banks & Cooperatives | Informal Sources | All sources | All sources Women |
| | OLS - Base estimates | | | | | |
| Microcredit | 368*** (84) | 21 (29) | -1 (54) | 4 (8) | 389*** (90) | 134*** (32) |
| Family Planning (no microloans) | 42 (31) | -1 (13) | -39 (47) | 14 (10) | 14 (57) | 11 (15) |
| Microcredit × Family Planning | 116 (227) | -31 (28) | 156 (200) | 2 (9) | 250 (404) | 163 (166) |
| | 2SLS | | | | | |
| Microcredit | 460*** (120) | 37 (48) | -46 (105) | 5 (13) | 447*** (162) | 134* (77) |
| | OLS - No FP controls | | | | | |
| Microcredit | 392*** (112) | 5 (16) | 99 (100) | -2 (6) | 497** (199) | 203** (82) |
| | OLS - Village Fixed Effects | | | | | |
| Treated | 367*** (84) | 21 (29) | 2 (53) | 3 (9) | 390*** (90) | 135*** (32) |

Note: Data from 2003 and 2006 surveys. Standard errors (in parenthesis) are robust to intra-PA correlation. The dependent variables are defined as in Table 2. The base estimates corresponding to model (1) in the text are those labeled “OLS - Base estimates”. For these results, the estimates in the row labeled ‘Microcredit’ are identical to those in Table 2, while those in the rows below show the results for $\hat{\beta}_{FP}$ and $\hat{\beta}_{Both}$. The results labeled “2SLS” are obtained estimating model (1) replacing assigned treatment with actual treatment and using the former indicators as instruments for the latter. The estimates labeled “OLS - No FP controls” are obtained ignoring the presence of Family Planning Programs, that is, imposing $\beta_{FP} = \beta_{Both} = 0$ in model (1), with PA fixed effects. The results labeled “OLS - Village Fixed Effects” are obtained estimating the same model as in the base estimates but including village fixed effects instead of PA fixed effects. Asterisks denote statistical significance at the 10(*), 5(**) or 1(***)% level.

TABLE D2—IMPACTS ON SELF-EMPLOYMENT ACTIVITIES: EXPENSES AND REVENUES, COMPLETE RESULTS AND ALTERNATIVE SPECIFICATIONS

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|--------------------------|---|----------------------------------|--------------------------------------|---------------------------|------------------------------|-----------------------------|
| <i>A. Non-farm Self-employment activities</i> | | | | | | | |
| | Has non-farm Business | Has female-led non-farm Business | Started business last 3 years | Revenues last 12 months | Investment last 12 months | All expenses last 12 months | Net Revenues last 12 months |
| OLS - Base estimates | | | | | | | |
| Microcredit | -0.006 (0.043) | -0.027 (0.032) | -0.018 (0.016) | 573 (414) | 10 (9) | 47 (129) | 526 (403) |
| Family Planning | -0.010 (0.048) | 0.013 (0.043) | -0.008 (0.018) | -32 (249) | -3 (3) | 2 (167) | -34 (224) |
| Microcredit × FP | -0.056 (0.054) | 0.013 (0.031) | -0.015 (0.019) | -591 (387) | -13 (9) | -178* (96) | -413 (382) |
| 2SLS | | | | | | | |
| Microcredit | 0.007 (0.064) | -0.039 (0.050) | -0.021 (0.024) | 917 (611) | 17 (15) | 111 (185) | 806 (614) |
| OLS - No FP controls | | | | | | | |
| Microcredit | -0.016 (0.032) | -0.016 (0.028) | -0.017 (0.011) | 149 (197) | 6 (5) | -32 (101) | 181 (194) |
| <i>B. Crop Cultivation and Animal Husbandry</i> | | | | | | | |
| | Cash revenues from crops | Expenses for crop cultivation last 12 m | Net revenues from crop last 12 m | Land cultivated last 12 m (hectares) | Value of livestock owned | Value of large animals owned | Livestock sales last 12 m |
| OLS - Base estimates | | | | | | | |
| Microcredit | 63 (219) | 154** (75) | 1 (196) | 0.08 (0.13) | 206 (258) | 198 (243) | 77** (38) |
| Family Planning | -198 (174) | -56 (60) | -216 (152) | 0.01 (0.14) | 315 (436) | 337 (407) | 105 (94) |
| Microcredit × FP | -290* (171) | -150** (75) | -240 (155) | -0.17 (0.13) | 235 (302) | 252 (309) | -10 (64) |
| 2SLS | | | | | | | |
| Microcredit | 148 (320) | 241** (107) | 53 (292) | 0.157 (0.217) | 230 (389) | 217 (365) | 112* (60) |
| OLS - No FP controls | | | | | | | |
| Microcredit | 6 (139) | 99* (50) | -31 (117) | -0.017 (0.129) | 39 (361) | 46 (340) | 24 (64) |

Note: Data from 2003 and 2006 surveys. Standard errors (in parenthesis) are robust to intra-PA correlation. All estimates are obtained from 2SLS. The base estimates are those labeled “PA Fixed Effects with FP-treatment controls”, corresponding to model (1) in the text. For these results, the estimates in the row labeled ‘Microcredit’ are identical to those in Table 3, while those in the rows below show the results for $\hat{\beta}_{FP}$ and $\hat{\beta}_{Both}$. The results labeled “2SLS” are obtained estimating model (1) replacing assigned treatment with actual treatment and using the former indicators as instruments for the latter. The estimates labeled “OLS - No FP controls” are obtained ignoring the presence of Family Planning Programs, that is, imposing $\beta_{FP} = \beta_{Both} = 0$ in model (1), with PA fixed effects. Asterisks denote statistical significance at the 10(*), 5(**) or 1(***)% level.

TABLE D3—IMPACTS ON INCOME INDICATORS, COMPLETE RESULTS AND ALTERNATIVE SPECIFICATIONS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------------|--|---|--|---------------|---------------|------------------|
| Household income last 12 months | | | | | | |
| | Total revenues from self employment activities | Total costs from self employment activities | Total net revenues from self employment activities | Wages | Transfers | Other Income |
| Microcredit | 712 (479) | 199 (156) | 513 (431) | 48.7 (84) | -10.8 (17) | 28.1 (19) |
| Family Planning | -125 (306) | -116 (157) | -8.66 (285) | 106 (92) | 0.47 (14) | -55.9 (39) |
| Microcredit × FP | -891** (448) | -336** (136) | -555 (415) | 2.06 (73) | -29.2 (34) | -68.2*** (21) |
| | 2SLS | | | | | |
| Microcredit | 1177* (682) | 347 (215) | 830 (645) | 71.3 (127) | -6.31 (30) | 51.9* (27) |
| | OLS - No FP controls | | | | | |
| Microcredit | 179 (261) | 94.7 (104) | 83.9 (233) | -12.3 (51) | -0.522 (5) | 8.67 (9) |

Note: Data from 2003 and 2006 surveys. Standard errors (in parenthesis) are robust to intra-PA correlation. The base estimates are those labeled “PA Fixed Effects with FP-treatment controls”, corresponding to model (1) in the text. For these results, the estimates in the row labeled ‘Microcredit’ are identical to those in Table 4, while those in the rows below show the results for $\hat{\beta}_{FP}$ and $\hat{\beta}_{Both}$. The results labeled “2SLS” are obtained estimating model (1) replacing assigned treatment with actual treatment and using the former indicators as instruments for the latter. The estimates labeled “OLS - No FP controls” are obtained ignoring the presence of Family Planning Programs, that is, imposing $\beta_{FP} = \beta_{Both} = 0$ in model (1), with PA fixed effects. Revenues (column 1) is the sum of revenues from sales of crop or livestock and products from non-farm businesses. Costs (column 2) is the sum of all costs for crop cultivation or non-farm businesses plus costs for animals purchased. Net revenues (column 3) is the difference between the two. See Appendix A for additional details. All figures expressing monetary values are in 2006 Birr. The PPP exchange rate according to the latest World Bank figures is 2.25 Birr/1USD (World Bank 2008). Asterisks denote statistical significance at the 10(*), 5(**) or 1(***)% level.

TABLE D4—IMPACTS ON INCOME INDICATORS, COMPLETE RESULTS AND ALTERNATIVE SPECIFICATIONS

| | (1) | (2) | (3) | (4) | (5) |
|--|---------------------------------|----------------------------------|-------------------------------------|-----------------------------|--------------------------------|
| <i>Panel A: Hours work / week: members 16-75 years old</i> | | | | | |
| | All adults All Activities | All adults Self employment | All adults Outside employment | Women Self employment | Women Outside employment |
| OLS - Base estimates | | | | | |
| Microcredit | 1.09 (1.43) | 0.949 (1.17) | 0.139 (0.68) | -1.11 (1.04) | 0.979 (1.03) |
| Family Planning | -0.728 (1.31) | -1.59 (1.52) | 0.862 (0.78) | -1.38 (1.16) | 2.12** (1.05) |
| Microcredit×FP | -2.09 (1.29) | -2.11* (1.19) | 0.0205 (0.66) | -0.0481 (0.81) | 0.16 (0.89) |
| 2SLS | | | | | |
| Microcredit | 1.9 (2.17) | 1.67 (1.88) | 0.231 (1.01) | -1.52 (1.54) | 1.36 (1.53) |
| OLS - No FP controls | | | | | |
| Microcredit | -0.315 (0.62) | -0.156 (0.62) | -0.159 (0.42) | -0.326 (0.56) | -0.0595 (0.59) |
| <i>Panel B: Hours work / week: teens 13-19 years old</i> | | | | | |
| | All teens All Activities | All teens Self employment | All teens Outside employment | Girls Self employment | Girls Outside employment |
| OLS - Base estimates | | | | | |
| Microcredit | -0.72 (1.42) | -1.72 (1.53) | 1* (0.54) | -2.64* (1.52) | 0.531 (0.66) |
| Family Planning | -2.03 (2.57) | -3.38 (2.82) | 1.35** (0.63) | -1.89 (1.77) | -0.329 (0.72) |
| Microcredit×FP | -1.34 (1.60) | 0.2 (1.64) | -1.54*** (0.58) | 0.747 (1.35) | -0.599 (0.57) |
| 2SLS | | | | | |
| Microcredit | -0.647 (1.98) | -2.38 (2.18) | 1.74* (0.90) | -3.54* (2.13) | 0.787 (0.90) |
| OLS - No FP controls | | | | | |
| Microcredit | -1.56 (1.01) | -1.36 (0.94) | -0.204 (0.32) | -1.42* (0.75) | 0.0412 (0.38) |

Note: Data from 2003 and 2006 surveys. Standard errors (in parenthesis) are robust to intra-PA correlation. The base estimates are those labeled “PA Fixed Effects with FP-treatment controls”, corresponding to model (1) in the text. For these results, the estimates in the row labeled ‘Microcredit’ are identical to those in Table 5, while those in the rows below show the results for $\hat{\beta}_{FP}$ and $\hat{\beta}_{Both}$. The results labeled “2SLS” are obtained estimating model (1) replacing assigned treatment with actual treatment and using the former indicators as instruments for the latter. The estimates labeled “OLS - No FP controls” are obtained ignoring the presence of Family Planning Programs, that is, imposing $\beta_{FP} = \beta_{Both} = 0$ in model (1), with PA fixed effects. Hours of work are estimated from recall data about time allocation in the previous 12 months, see Appendix A for details. Asterisks denote statistical significance at the 10(*), 5(**) or 1(***)% level.

TABLE D5—IMPACTS ON CHILD SCHOOLING AND OTHER SOCIO-ECONOMIC INDICATORS, COMPLETE RESULTS AND ALTERNATIVE SPECIFICATIONS

| | (1) | (2) | (3) | (4) | (5) |
|---|--|--|--------------------------|---|-----------------------------|
| <i>Panel A: School attendance and time allocation of children</i> | | | | | |
| | % of children 6-15 in school | Average hours/week worked by children 10-15 Self employment | Outside activities | % of 10-15 girls for whom housework is primary activity | % of 16-20 in school |
| OLS - Base estimates | | | | | |
| Microcredit | 0.02 (0.05) | -0.61 (1.71) | -0.01 (0.59) | 0.05 (0.04) | 0.01 (0.03) |
| Family Planning | 0.06 (0.05) | -3.97 (2.93) | 0.61 (0.72) | -0.01 (0.03) | 0.05 (0.03) |
| Microcredit×FP | 0.04 (0.04) | -2.68 (2.10) | -0.49 (0.49) | -0.06 (0.04) | 0.06 (0.04) |
| 2SLS | | | | | |
| Microcredit | 0.023 (0.064) | -0.186 (2.470) | 0.163 (0.90) | 0.07 (0.054) | -0.0005 (0.0433) |
| OLS - No FP controls | | | | | |
| Microcredit | 0.025 (0.029) | -2.050* (1.120) | -0.634** (0.314) | 0.006 (0.028) | 0.007 (0.037) |
| <i>Panel B: Other indicators</i> | | | | | |
| | Empowerment: % decisions with woman's involvement | | Value of selected assets | Someone seriously ill last 3 years | # Months of food insecurity |
| | All | Economic | | | |
| OLS - Base estimates | | | | | |
| Microcredit | -0.043 (0.029) | -0.038 (0.032) | -5 (13) | -0.015 (0.034) | 0.524 (0.26) |
| Family Planning | -0.063 (0.04) | -0.08 (0.06) | 23* (12) | 0.028 (0.031) | 0.102 (0.23) |
| Microcredit×FP | 0.01 (0.03) | 0.02 (0.04) | -19 (14) | 0.004 (0.034) | -0.126 (0.30) |
| 2SLS | | | | | |
| Microcredit | -0.06 (0.05) | -0.06 (0.05) | -3 (19) | -0.018 (0.052) | 0.74 (0.422) |
| OLS - No FP controls | | | | | |
| Microcredit | -0.002 (0.023) | 0.003 (0.027) | 2 (9) | -0.029 (0.024) | 0.20 (0.165) |

Note: Data from 2003 and 2006 surveys. Standard errors (in parenthesis) are robust to intra-PA correlation. The base estimates are those labeled “PA Fixed Effects with FP-treatment controls”, corresponding to model (1) in the text. For these results, the estimates in the row labeled ‘Microcredit’ are identical to those in Table 5, while those in the rows below show the results for $\hat{\beta}_{FP}$ and $\hat{\beta}_{Both}$. The results labeled “2SLS” are obtained estimating model (1) replacing assigned treatment with actual treatment and using the former indicators as instruments for the latter. The estimates labeled “OLS - No FP controls” are obtained ignoring the presence of Family Planning Programs, that is, imposing $\beta_{FP} = \beta_{Both} = 0$ in model (1), with PA fixed effects. The results in column 4, Panel B, use only information from the endline survey because no information was collected at baseline (in this case we exclude the PA-specific fixed effects and the *Post* dummy and we include a region fixed effect). All regressions use sampling weights. The unit of observation is a child in all regressions of panel A, a woman in columns 1 and 2 of Panel B, and a household in columns 3 to 5 of Panel B. Asterisks denote statistical significance at the 10(*), 5(**) or 1(***)% level.