# Appendix

Table A1: Asset ownership by group and year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Control | | Treatment | |
|  | 2013 | 2015 | 2013 | 2015 |
| *N* | *349* | | *131* | |
| *Number of rooms* |  |  |  |  |
| 1 | 0.10 | 0.08 | 0.04 | 0.07 |
| 2 | 0.17 | 0.15 | 0.15 | 0.15 |
| 3 | 0.22 | 0.20 | 0.21 | 0.24 |
| 4 | 0.15 | 0.19 | 0.18 | 0.15 |
| 5 or more | 0.35 | 0.37 | 0.42 | 0.37 |
| *Dwelling ownership* |  |  |  |  |
| Owned | 0.83 | 0.85 | 0.89 | 0.90 |
| Rented | 0.17 | 0.09 | 0.11 | 0.05 |
| Other | 0.00 | 0.05 | 0.00 | 0.05 |
| Bathroom | 0.96 | 0.93 | 0.95 | 0.98 |
| Toilet | 0.37 | 0.36 | 0.41 | 0.42 |
| *Main source of drinking water* |  |  |  |  |
| Pipe borne water inside | 0.12 | 0.18 | 0.11 | 0.16 |
| Pipe borne water outside | 0.29 | 0.30 | 0.21 | 0.18 |
| Borehole | 0.32 | 0.30 | 0.34 | 0.35 |
| Dug well | 0.13 | 0.09 | 0.13 | 0.14 |
| Tanker service | 0.00 | 0.01 | 0.00 | 0.00 |
| Stream/river/lake | 0.09 | 0.09 | 0.15 | 0.12 |
| Rain water | 0.01 | 0.00 | 0.01 | 0.01 |
| Bottled or sachet water | 0.05 | 0.01 | 0.05 | 0.04 |
| Other | 0.00 | 0.01 | 0.00 | 0.00 |
| *Floor material* |  |  |  |  |
| Mud | 0.20 | 0.19 | 0.28 | 0.16 |
| Raw wood, boards | 0.00 | 0.01 | 0.00 | 0.00 |
| Cement/concrete | 0.77 | 0.77 | 0.69 | 0.80 |
| Burnt brick | 0.01 | 0.00 | 0.02 | 0.01 |
| Terrazo | 0.00 | 0.01 | 0.00 | 0.02 |
| Floor tile | 0.00 | 0.01 | 0.01 | 0.02 |
| Polished wood | 0.01 | 0.00 | 0.01 | 0.00 |
| *Wall material* |  |  |  |  |
| Bamboo or other organic materials | 0.04 | 0.04 | 0.05 | 0.05 |
| Cloth, cardboard, cans | 0.01 | 0.00 | 0.00 | 0.00 |
| Zinc | 0.05 | 0.11 | 0.02 | 0.16 |
| Raw wood | 0.00 | 0.00 | 0.00 | 0.00 |
| Mud, adobe, cane wall | 0.36 | 0.35 | 0.40 | 0.32 |
| Block, bricks, stone, prefabricated material, polished wood | 0.50 | 0.49 | 0.50 | 0.46 |
| Other | 0.03 | 0.01 | 0.03 | 0.01 |

Source: Authors’ calculations based on MooP Ghana panel study.

Table A2 :First and second moments of covariates after applying entropy balancing weights, by group in 2013

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mean | | Variance | | Standardized difference |
|  | Treated | Control | Treated | Control |
| Dependency ratio | 0.660 | 0.658 | 0.846 | 0.844 | 0.002 |
| Female household head | 0.299 | 0.298 | 0.211 | 0.210 | 0.001 |
| Highest level of education in household |  |  |  |  |  |
| Primary | 0.075 | 0.075 | 0.070 | 0.069 | 0.000 |
| Middle/Junior | 0.224 | 0.224 | 0.175 | 0.174 | 0.001 |
| High/Senior | 0.313 | 0.313 | 0.217 | 0.216 | 0.001 |
| College/Technical | 0.343 | 0.343 | 0.227 | 0.226 | 0.001 |
| Ethnicity of head |  |  |  |  |  |
| Akan | 0.194 | 0.194 | 0.158 | 0.157 | 0.001 |
| Ewe | 0.194 | 0.194 | 0.158 | 0.157 | 0.000 |
| Mole Dagbani | 0.231 | 0.231 | 0.179 | 0.178 | 0.001 |
| Main income source |  |  |  |  |  |
| Private sector | 0.052 | 0.052 | 0.050 | 0.050 | 0.000 |
| Own business | 0.269 | 0.268 | 0.198 | 0.197 | 0.001 |
| Own farm | 0.500 | 0.499 | 0.252 | 0.251 | 0.003 |
| Private transfers | 0.075 | 0.075 | 0.070 | 0.069 | 0.000 |
| Others | 0.030 | 0.030 | 0.029 | 0.029 | 0.000 |
| Asset purchases in preceding 2 years |  |  |  |  |  |
| Electronic goods | 0.403 | 0.402 | 0.242 | 0.241 | 0.002 |
| White goods | 0.187 | 0.186 | 0.153 | 0.152 | 0.000 |
| Livestock | 0.284 | 0.283 | 0.205 | 0.204 | 0.001 |
| Generator | 0.022 | 0.022 | 0.022 | 0.022 | 0.000 |
| Car | 0.067 | 0.067 | 0.063 | 0.063 | 0.000 |
| Computer | 0.052 | 0.052 | 0.050 | 0.050 | 0.000 |
| Electric Appliances | 0.082 | 0.082 | 0.076 | 0.076 | 0.000 |
| Other Investments | 0.104 | 0.105 | 0.094 | 0.094 | -0.001 |
| Agricultural land | 0.224 | 0.224 | 0.175 | 0.174 | 0.001 |
| Agricultural machinery | 0.022 | 0.022 | 0.022 | 0.022 | 0.000 |
| Non-agricultural land | 0.127 | 0.127 | 0.112 | 0.111 | 0.000 |
| New house | 0.313 | 0.313 | 0.217 | 0.216 | 0.001 |
|  |  |  |  |  |  |
| Household size (excluding migrants) | 7.299 | 7.280 | 9.640 | 9.615 | 0.006 |
| Age of household head | 55.276 | 55.136 | 218.021 | 217.450 | 0.009 |
| Marital status |  |  |  |  |  |
| Married/ living with partner | 0.739 | 0.737 | 0.194 | 0.194 | 0.004 |
| Separated/ Divorced/ Widowed | 0.216 | 0.216 | 0.171 | 0.170 | 0.001 |
| Main occupation of head |  |  |  |  |  |
| self employed | 0.522 | 0.521 | 0.251 | 0.250 | 0.003 |
| unpaid/unemployed | 0.246 | 0.246 | 0.187 | 0.186 | 0.001 |
| inactive etc. | 0.090 | 0.090 | 0.082 | 0.082 | 0.000 |
| Community employment rate | 0.090 | 0.090 | 0.005 | 0.005 | 0.003 |
| Household has returnee | 0.246 | 0.246 | 0.187 | 0.186 | 0.001 |
| Household receives remittances | 0.545 | 0.543 | 0.250 | 0.249 | 0.003 |
| Number of current migrants | 2.090 | 2.084 | 1.842 | 1.837 | 0.004 |
| Number of rooms |  |  |  |  |  |
| 2 | 0.149 | 0.149 | 0.128 | 0.127 | 0.000 |
| 3 | 0.201 | 0.201 | 0.162 | 0.161 | 0.001 |
| 4 | 0.179 | 0.179 | 0.148 | 0.147 | 0.000 |
| 5 or more | 0.425 | 0.424 | 0.246 | 0.245 | 0.002 |
| Dwelling ownership(Base = Owned) |  |  |  |  |  |
| Rented | 0.119 | 0.119 | 0.106 | 0.105 | 0.000 |
| Bathroom | 0.403 | 0.402 | 0.242 | 0.241 | 0.002 |
| Main source of drinking water (Base = pipe borne water inside) |  |  |  |  |  |
| Pipe borne water outside | 0.209 | 0.209 | 0.167 | 0.166 | 0.001 |
| Borehole | 0.343 | 0.343 | 0.227 | 0.226 | 0.001 |
| Dug well | 0.127 | 0.127 | 0.112 | 0.111 | 0.000 |
| Tanker service | 0.000 | 0.000 | 0.000 | 0.000 |  |
| Stream/river/lake | 0.149 | 0.149 | 0.128 | 0.127 | 0.000 |
| Rain water | 0.007 | 0.007 | 0.007 | 0.007 | 0.000 |
| Bottled or sachet water | 0.052 | 0.052 | 0.050 | 0.050 | 0.000 |
| Floor material(base = Polished wood) |  |  |  |  |  |
| Mud | 0.291 | 0.291 | 0.208 | 0.207 | 0.001 |
| Raw wood, boards | 0.000 | 0.000 | 0.000 | 0.000 |  |
| Cement/concrete | 0.679 | 0.677 | 0.220 | 0.219 | 0.004 |
| Burnt brick | 0.015 | 0.015 | 0.015 | 0.015 | 0.000 |
| Floor tile | 0.007 | 0.007 | 0.007 | 0.007 | 0.000 |
| Wall material (base = others) |  |  |  |  |  |
| Bamboo or other organic materials | 0.060 | 0.060 | 0.057 | 0.056 | 0.000 |
| Cloth, cardboard, cans | 0.022 | 0.022 | 0.022 | 0.022 | 0.000 |
| Zinc | 0.396 | 0.395 | 0.241 | 0.240 | 0.002 |
| Mud, adobe, cane wall | 0.493 | 0.491 | 0.252 | 0.251 | 0.002 |
| Block, bricks, stone, prefabricated material, polished wood | 0.030 | 0.030 | 0.029 | 0.029 | 0.000 |
| Access to public services |  |  |  |  |  |
| Electricity | 0.634 | 0.633 | 0.234 | 0.233 | 0.003 |
| Natural gas | 0.142 | 0.142 | 0.123 | 0.122 | 0.000 |
| Safe drinking water | 0.694 | 0.692 | 0.214 | 0.214 | 0.004 |
| Sewerage system | 0.067 | 0.067 | 0.063 | 0.063 | 0.000 |
| Garbage collection | 0.112 | 0.112 | 0.100 | 0.100 | 0.000 |
| Telephone | 0.291 | 0.291 | 0.208 | 0.207 | 0.001 |
| Region(Base = Brong Ahafo) |  |  |  |  |  |
| Northern | 0.142 | 0.142 | 0.123 | 0.122 | 0.000 |
| Upper East | 0.201 | 0.201 | 0.162 | 0.161 | 0.001 |
| Upper West | 0.134 | 0.134 | 0.117 | 0.117 | 0.000 |
| Volta | 0.224 | 0.224 | 0.175 | 0.174 | 0.001 |

Source: Authors’ calculations based on MooP Ghana panel study.

Table A3: Effect of having a new migrant on asset index excluding local employment rate, weighted least squares

|  |  |
| --- | --- |
|  | Asset index |
| New Migrant \* 2015 | -0.016 |
|  | (0.011) |
| 2015 (=1) | 0.010 |
|  | (0.010) |
| Household has return migrant (=1) | -0.015\* |
|  | (0.009) |
| Dependency ratio | 0.001 |
|  | (0.004) |
| *Occupation of household head (base = inactive/others)* | |
| Employee | 0.015 |
|  | (0.015) |
| Self-employed | 0.001 |
|  | (0.015) |
| Unpaid work / unemployed | -0.002 |
|  | (0.018) |
| Entropy balancing weights | Yes |
| Household fixed effects | Yes |
| *Observations* | *960* |
| Adjusted R-squared | 0.524 |
| Number of clusters | 93 |

Notes: \* p<.10, \*\* p<.05, \*\*\* p<.01; S.E. clustered at community level

Source: Authors’ calculations based on MooP Ghana panel study

Table A4: Effect of having a new migrant on asset index using pooled data to construct index, weighted least squares

|  |  |
| --- | --- |
|  | *Asset index* |
| New Migrant \* 2015 | -0.016 |
|  | (0.010) |
| Household fixed effects | Yes |
| Entropy balancing weights | Yes |
| Other controls | Yes |
| Observations | *960* |
| Adjusted R-squared | 0.539 |
| Number of clusters | 93 |
|  | |

Notes: \* p<.10, \*\* p<.05, \*\*\* p<.01; S.E. clustered at community level; Other controls include whether the household has a returned migrant, occupation of the household head, dependency ratio and community employment rate.

Source: Authors’ calculations based on MooP Ghana panel study.

Table A5: Effect of new migrant on household welfare applying propensity score matching at baseline

|  |  |  |
| --- | --- | --- |
|  | Dependent variable: Wealth index | |
| *Migrant characteristics:* | All migrants | Female migrant |
| New Migrant\*2015 | -0.013 | -0.020 |
|  | (0.011) | (0.013) |
| Household fixed effects | Yes | Yes |
| Observations | *982* | *886* |
| Adjusted R-squared | 0.0005 | 0.0043 |

Notes: \* p<.10, \*\* p<.05, \*\*\* p<.01; S.E. robust. The estimation is a difference-in-difference with propensity score matching at baseline.