Appendix 1. Link to the full text of the included studies

|  |  |  |
| --- | --- | --- |
| **Study ID** | **Versions** | **Online links** |
| **Baird series** | 2010 | No longer available |
| 2011a | No longer available |
| 2011b | No longer available |
| 2012 | No longer available |
| 2015 | <http://scholar.harvard.edu/files/kremer/files/worms-at-work_2015-07-23.pdf>  |
| 2016 | <http://scholar.harvard.edu/files/kremer/files/worms-at-work_2016-01-28-clean.pdf>  |
| **Ozier series** | 2011 | No longer available |
| 2014 | <http://documents.worldbank.org/curated/en/236591468341338819/pdf/WPS7052.pdf>  |
| 2015 | <http://economics.ozier.com/owen/papers/ozier_early_deworming_20150417e.pdf>  |
| 2016 | <http://economics.ozier.com/owen/papers/ozier_early_deworming_20160727.pdf>  |
| **Croke 2014** | 2014 | <http://scholar.harvard.edu/files/kcroke/files/ug_lr_deworming_071714.pdf>  |

Appendix 2. Relationship between Miguel and Kremer 2004 and the follow-up studies Baird series and Ozier series

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Quasi-randomized groups** | **Miguel & Kremer 2004** |  | **Baird series1** |  | **Ozier series2** |
| **Received deworming intervention** |  | **Data collection: 2007 to 2009** |  | **Data collection: 2010 to 2011** |
| **1998** | **1999** | **2000** | **2001 onwards** |  | **Adults who participated in the base trial as children** |  | **Children born in 1998** | **Children born in 1999** |
| **Group 1** | **Yes** | **Yes** | **Yes** | **Yes** |  | **Intervention** |  | **Intervention** | **Intervention** |
| **Group 2** | **No** | **Yes** | **Yes** | **Yes** |  |  | **-** | **Intervention** |
| **Group 3** | **No** | **No** | **No** | **Yes** |  | **Control** |  | **Control** | **Control** |
| **Total participants** | **32 565** |  | **5084** |  | **Approx. 3003** | **Approx. 3003** |

1 Baird series: Recruited adults aged who had participated in the Miguel and Kremer 2004 trial as children. The analysis compares groups 1 and 2 with group 3, so the difference in deworming exposure is around 2.4 years.
2 Ozier series: Recruited children aged 8 to 15 from the schools originally quasi-randomized by Miguel and Kremer 2004. The analysis compares children aged less than 1 year living in communities where the deworming intervention had started with those living in communities where deworming had not yet started, so the difference between these groups is that the children in the intervention group may have benefitted from decreased worm prevalence among older siblings and the community during the first year of life.
3 The total sample size for cognitive assessments was 2584 including 7 birth cohorts from 1996 to 2001.

Appendix 3. Number of comparisons reported and tested for statistical significance in the five editions of the Baird publications

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of outcomes tested for statistical significance** | **Baird 2011a** | **Baird 2011b** | **Baird 2012** | **Baird 2015** | **Baird 2016** |
| **Total number of outcomes** | 228 | 290 | 350 | 642 | 650 |
| **Level of statistical significance** | **P < 0.1 > 0.05** | 19 | 28 | 34 | 59 | 63 |
| **P < 0.05 > 0.01** | 26 | 38 | 45 | 91 | 89 |
| **P < 0.01** | 28 | 50 | 48 | 97 | 96 |
| **Total P < 0.05** | 54 | 88 | 93 | 188 | 185 |
| **Proportion P < 0.05** | 0.24 | 0.30 | 0.27 | 0.29 | 0.28 |

Appendix 4. Comparison of outcome reporting in the abstracts of Baird 2011a, 2011b, 2012, 2015 and 2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Outcomes reported** | **Baird 2011a** | **Baird 2011b** | **Baird 2012** | **Baird 2015 (and Baird 2016a)** |
| **Tracking rate over a decade** | 83% | Not reported | Not reported | Not reported |
| **Self-reported health** | “Improved significantly” | Not reported | “Better” | Not reported |
| **Miscarriages**  | Not reported | Not reported | “Fewer” | Not reported |
| **Years enrolled in school** | “Improved significantly” | Not reported | Not reported | Boys: “stay enrolled for more years of primary school” |
| **Attended secondary school** | Not reported | Not reported | Not reported | “25% more likely” in women, “halving the gender gap” |
| **Test scores** | “Improved significantly” | Not reported | Not reported | Not reported |
| **Education overall comment** | Not reported | Not reported | Not reported | “Increased education among women” |
| **Hours worked** | 12% more | 12% more, or1.8 more hours/week (base of 15.2) | 3.4 more hours/week in men | 17% more hours/week in men |
| **Food eaten** | 0.1 meal/day more | 0.1 meal/day more (base of 2.2) | “More meals” consumed | “Men miss 1 meal fewer per week” |
| **Labour market** | - Earnings within the subsample working for wages: 20% higher - “Most of the earnings gain are explained by sectoral shifts, including a doubling of manufacturing employment”- Business performance: “improved among the self-employed” | - “Over 20%” higher (among wage earners no longer in school)- “with manufacturing employment tripling”- “Gains are concentrated outside of traditional agriculture, among small business owners and those working for wages” | - “More time” spent in entrepreneurship- Cash crops “more likely” to be grown- Women “reallocate labour time from agriculture to entrepreneurship”- Men “are more likely to hold manufacturing jobs with higher wage earnings.” | - Men “spend more time in entrepreneurship”- Labour supply increased among men, with shifts in labour market specialization. - Women “reallocate time from traditional agriculture into cash crops and entrepreneurship.”- Men “are more likely to hold manufacturing jobs” |
| **Annualised social internal rate of return** | Lower bound “is large, at 83%” | “A calibration of the model combining data on the impacts of deworming and the price responsive-ness of deworming take-up suggests that fully subsidizing deworming yields greater welfare than partial subsidies or laissez-faire” | “A calibration suggests that fully subsidizing deworming costs less than the additional net present value of government revenue it generates, creating an ‘expenditure Laffer effect’ in which government subsidies for health investments allow for reduced tax rates.” | “At least 32.2%” |
| **Positive externalities** | - “Substantial” within 6 km- “The externality benefits alone appear to justify fully subsidizing school-based deworming” | In “work hours and meals eaten” | “The deworming program generates positive externalities from reduced disease transmission” | Not reported |
| **Effects on out-of-school youth** | Not reported | “Both direct and externality effect are larger in our preferred subsample analysis on out-of-school youth” | Not reported | Not reported |

a Findings reported in the abstract of Baird 2016 do not substantially change from Baird 2015.