

# Data set

Table 1: Studies used in the analysis - query

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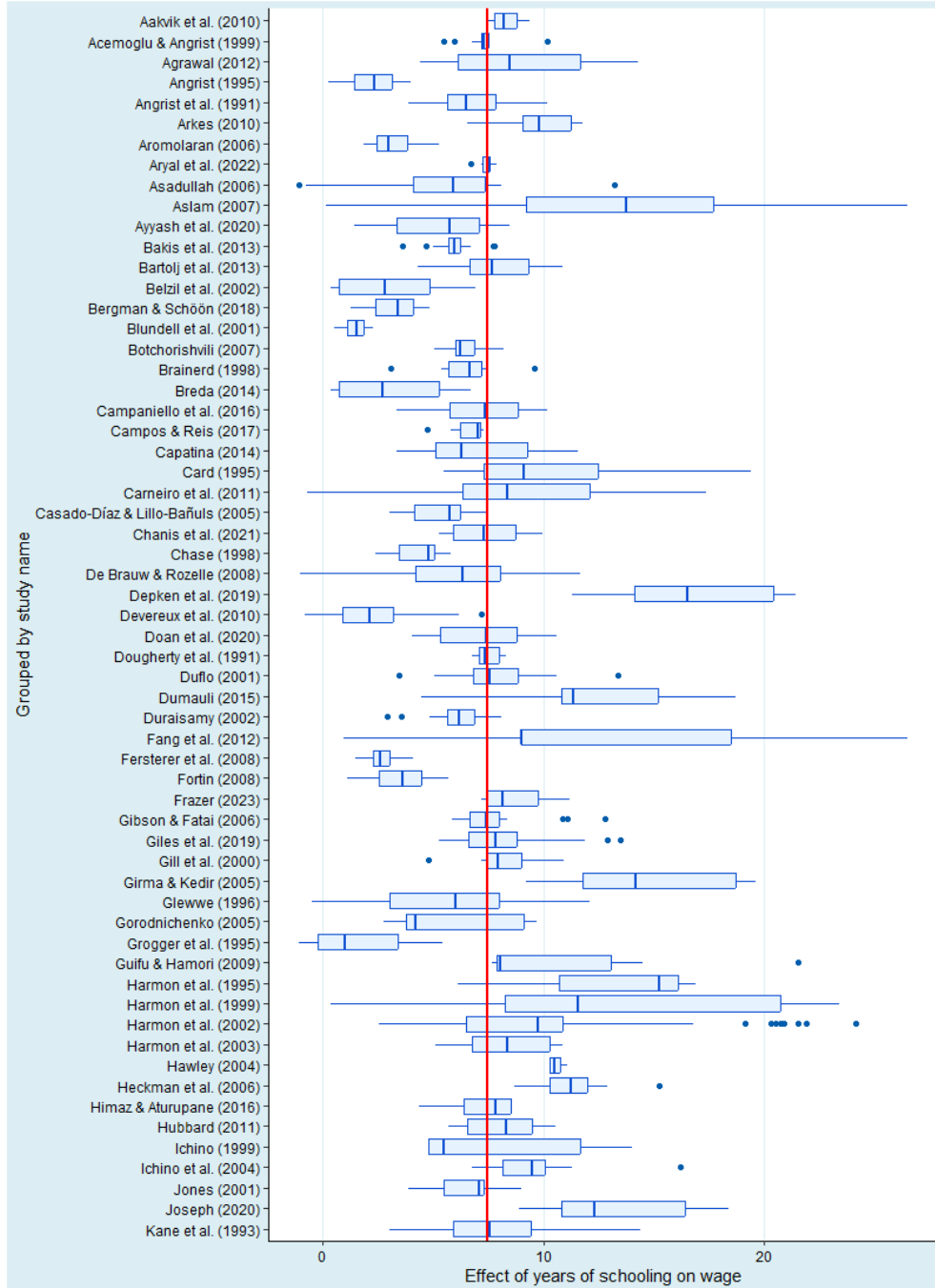
Acemoglu & Angrist (1999)	Leigh (2008)
Agrawal (2012)	Li & Urmanbetova (2007)
Arkes (2010)	Lillo (2006)
Aromolaran (2006)	Lillo-Bañuls & Casado-Díaz (2010)
Aryal et al. (2022)	Maluccio (1998)
Asadullah (2006)	Mazrekaj et al. (2019)
Aslam (2007)	Mishra & Smyth (2012)
Ayyash et al. (2020)	Mishra & Smyth (2014)
Bakis et al. (2013)	Morgan & Morgan (1998)
Bartolj et al. (2013)	Mphuka & Simumba (2012)
Bergman & Schöön (2018)	Okuwa (2004)
Blundell et al. (2001)	Patrinos et al. (2021)
Botchorishvili (2007)	Paweenawat & Vechbanyongratana (2015)
Campaniello et al. (2016)	Peters et al. (2022)
Campos & Reis (2017)	Purnastuti (2013)
Casado-Díaz & Lillo-Bañuls (2005)	Purnastuti et al. (2015)
Chanis et al. (2021)	Qiu (2007)
De Brauw & Rozelle (2008)	Sackey (2008)
Depken et al. (2019)	Sakellariou & Fang (2016a)
Doan et al. (2020)	Sakellariou & Fang (2016b)
Dumauli (2015)	Salas-Velasco (2006)
Fang et al. (2012)	Salehi-Isfahani et al. (2009)
Fersterer et al. (2008)	Sinning (2014)
Frazer (2023)	Sinning (2017)
Gibson & Fatai (2006)	Sohn (2013)
Giles et al. (2019)	Umar et al. (2014)
Girma & Kedir (2005)	van der Hoeven (2013)
Glewwe (1996)	Van Praag et al. (2013)
Guifu & Hamori (2009)	Vasudeva Dutta (2006)
Harmon et al. (2002)	Vivatsurakit & Vechbanyongratana (2020)
Hawley (2004)	Walker & Zhu (2008)
Himaz & Aturupane (2016)	Wambugu (2003)
Joseph (2020)	Warunsiri & McNown (2010)
Kenayathulla (2013)	Webbink (2004)
Kolstad & Wiig (2015)	Wincenciak (2020)
Krafft (2018)	Zhong (2011)
Krafft et al. (2019)	Zhu (2012)

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Table 2: Studies used in the analysis - snowballing

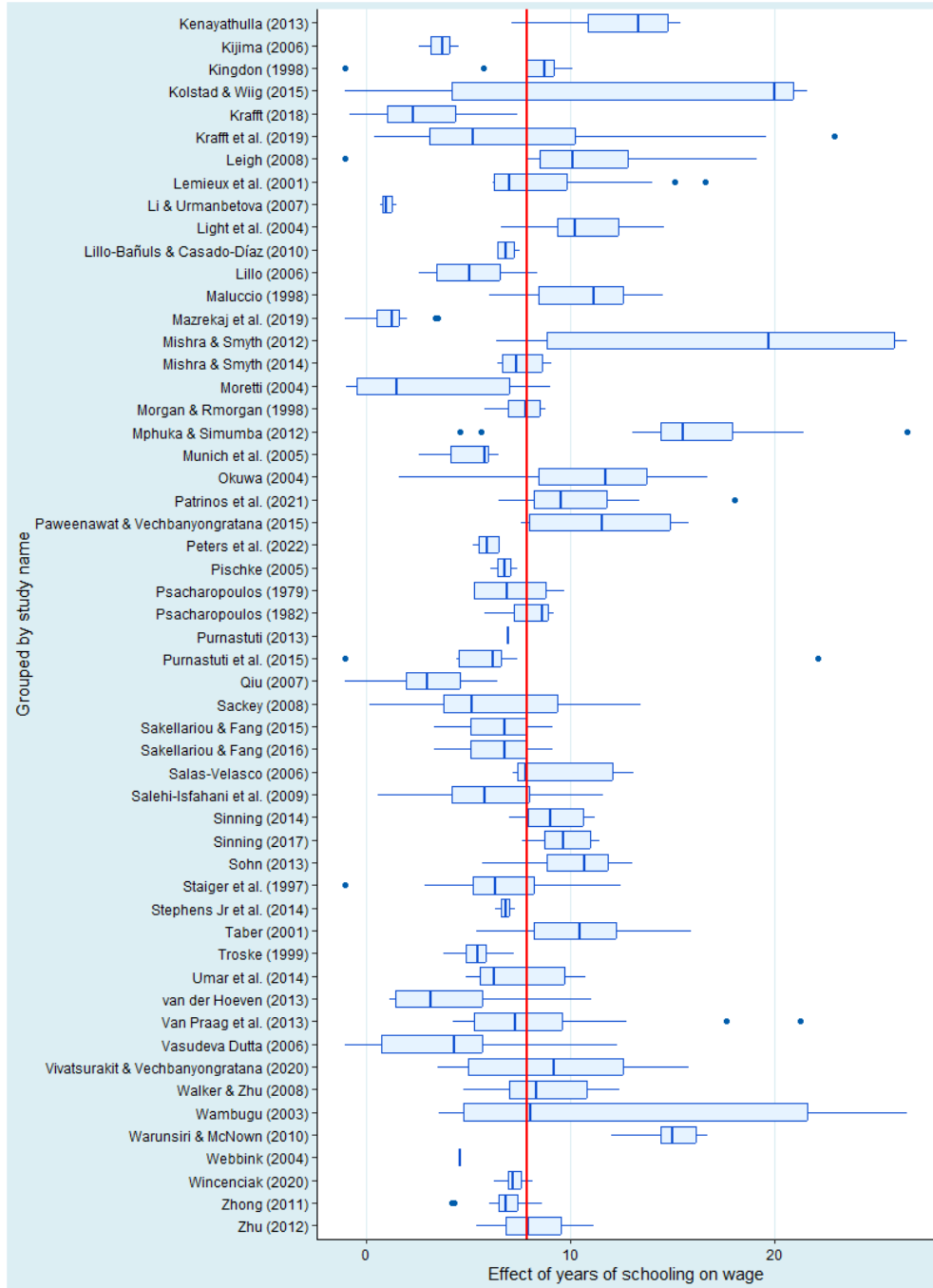
Aakvik et al. (2010)	Heckman et al. (2006)
Angrist (1995)	Hubbard (2011)
Angrist & Krueger (1991)	Ichino & Winter-Ebmer (1999)
Belzil & Hansen (2002)	Ichino & Winter-Ebmer (2004)
Brainerd (1998)	Jones (2001)
Breda (2014)	Kane & Rouse (1993)
Capatina (2014)	Kijima (2006)
Card (1995)	Kingdon (1998)
Carneiro et al. (2011)	Leigh & Ryan (2008)
Chase (1998)	Lemieux & Card (2001)
Devereux & Hart (2010)	Light & Strayer (2004)
Dougherty & Jimenez (1991)	Moretti (2004)
Duflo (2001)	Munich et al. (2005)
Duraisamy (2002)	Pischke & von Wachter (2005)
Fortin (2008)	Psacharopoulos (1982)
Gill & Leigh (2000)	Psacharopoulos & Layard (1979)
Gorodnichenko & Peter (2005)	Staiger & Stock (1997)
Grogger & Eide (1995)	Stephens Jr & Yang (2014)
Harmon & Walker (1995)	Taber (2001)
Harmon & Walker (1999)	Troske (1999)

Figure 1: Box plot of estimates across individual studies - first part



*Note:* This figure shows the first part of a box plot, where the reported estimates are grouped at study level. The first 60 studies from the data set are displayed, in an alphabetically ascending order. Each box's length represents the interquartile range between the 25th and 75th percentiles. Median value is indicated by the dividing line within each box. The whiskers extend to the highest and lowest data points within 1.5 times the range between the upper and lower quartiles. Outliers are depicted as blue dots. The data is winsorized at 1% level.

Figure 2: Box plot of estimates across individual studies - second part



*Note:* This figure shows the second part of a box plot, where the reported estimates are grouped at study level. 55 remaining studies from the data set are displayed, in an alphabetically ascending order. Each box's length represents the interquartile range between the 25th and 75th percentiles. Median value is indicated by the dividing line within each box. The whiskers extend to the highest and lowest data points within 1.5 times the range between the upper and lower quartiles. Outliers are depicted as blue dots. The data is winsorized at 1% level.

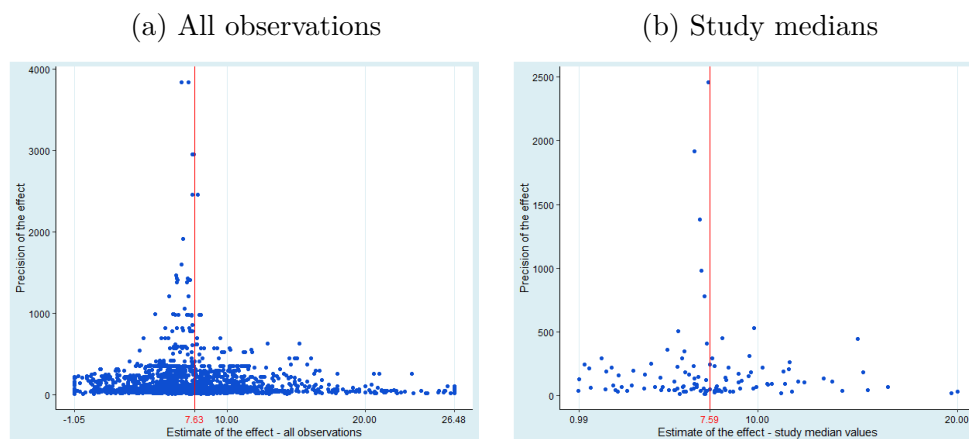
Table 3: Mean statistics across various subsets of data

	Unweighted			Weighted			N. obs
	Mean	95% conf. int.		Mean	95% conf. int.		
All Data	7.628	-1.782	17.038	7.842	-1.568	17.252	1754
<i>Estimate characteristics</i>							
Short Run	7.605	-1.771	16.981	8.074	-1.302	17.450	969
Long Run	7.657	-1.800	17.114	7.444	-2.013	16.901	785
Observations $\geq$ 6476	7.231	-0.487	14.949	7.244	-0.474	14.962	882
Observations $<$ 6476	8.031	-2.772	18.834	8.541	-2.262	19.344	872
<i>Data characteristics</i>							
Study Size $\geq$ 20	7.436	-2.342	17.214	7.862	-1.916	17.640	884
Study Size $<$ 20	7.823	-1.187	16.833	7.678	-1.332	16.688	870
Yrs. of Schooling $\geq$ 10.9	7.792	-0.940	16.524	8.026	-0.706	16.758	881
Yrs. of Schooling $<$ 10.9	7.463	-2.578	17.504	7.597	-2.444	17.638	873
Yrs. of Experience $\geq$ 19.5	7.884	-1.202	16.970	7.795	-1.291	16.881	901
Yrs. of Experience $<$ 19.5	7.359	-2.357	17.075	7.927	-1.789	17.643	853
Cross-sectional data	7.972	-2.273	18.217	8.476	-1.769	18.721	634
Panel data	7.434	-1.451	16.319	7.357	-1.528	16.242	1120
Data Year $\geq$ 1999	8.453	-1.821	18.727	8.935	-1.339	19.209	901
Data Year $<$ 1999	6.757	-1.304	14.818	6.084	-1.977	14.145	853
<i>Spatial/structural variation</i>							
Higher education $\geq$ 0.5	8.615	2.480	14.750	7.669	1.534	13.804	311
Higher education $<$ 0.5	7.416	-2.511	17.343	7.921	-2.006	17.848	1443
Wage Earners $\geq$ 0.5	7.616	-1.610	16.842	7.777	-1.449	17.003	1632
Self-employed $>$ 0.5	7.798	-3.836	19.432	8.969	-2.665	20.603	122
Private sector $\geq$ 0.5	7.731	-1.642	17.104	8.082	-1.291	17.455	1540
Public sector $>$ 0.5	6.889	-2.676	16.454	6.099	-3.466	15.664	214
Rural $\geq$ 0.5	8.129	-4.311	20.569	7.324	-5.116	19.764	176
Urban $>$ 0.5	7.572	-1.436	16.580	7.879	-1.129	16.887	1578
High income countries	6.951	-0.485	14.387	7.504	0.068	14.940	889
Middle income countries	8.304	-2.676	19.284	8.788	-2.192	19.768	761
Low income countries	8.476	-1.994	18.946	6.386	-4.084	16.856	104
Male $\geq$ 0.5	7.253	-1.751	16.257	7.253	-1.751	16.257	1298
Male $<$ 0.5	8.697	-1.505	18.899	9.054	-1.148	19.256	456
Age $\geq$ 37	7.598	-0.385	15.581	7.609	-0.374	15.592	900
Age $<$ 37	7.660	-3.055	18.375	8.292	-2.423	19.007	854
<i>Estimation method</i>							
Ability: Direct	6.236	-0.420	12.892	6.767	0.111	13.423	236
Ability: Proxied	8.749	-3.511	21.009	8.959	-3.301	21.219	357
Ability: Uncontrolled	8.096	-1.384	17.576	8.617	-0.863	18.097	745
Ability: Unmentioned	6.626	-0.195	13.447	6.147	-0.674	12.968	392
Control: Age	8.535	-1.614	18.684	8.229	-1.920	18.378	604
Control: Age <sup>2</sup>	9.345	-0.531	19.221	8.491	-1.385	18.367	482
Control: Experience	7.202	-1.873	16.277	7.540	-1.535	16.615	1064
Control: Experience <sup>2</sup>	7.411	-1.930	16.752	8.024	-1.317	17.365	898
<i>Publication characteristics</i>							
Impact Factor $\geq$ 0.191	7.025	-0.987	15.037	6.959	-1.053	14.971	877
Impact Factor $<$ 0.191	8.232	-2.266	18.730	8.741	-1.757	19.239	877
Citations $\geq$ 80	7.328	-1.515	16.171	7.270	-1.573	16.113	892
Citations $<$ 80	7.939	-1.990	17.868	8.184	-1.745	18.113	862
Study: Published	7.229	-0.797	15.255	7.029	-0.997	15.055	1340
Study: Unpublished	8.919	-3.674	21.512	9.772	-2.821	22.365	414

*Note:* This table presents basic summary statistics of the returns to additional year of schooling coefficient calculated on various subsets of the data. Unweighted = Original data set is used. Weighted = Estimates are weighted by the inverse number of estimates reported by each study. OLS = Ordinary Least Squares. For cutoff points, medians are used except for dummy variables where the cutoffs are 0.5.

# Publication bias

Figure 3: The funnel plot shows no immediately suspicious patterns



*Note:* This figure displays two funnel plots as per Egger et al. (1997), where the percentage returns to an additional year of schooling are plotted on the x-axis against precision on the y-axis, measured as  $\sqrt{DoF}$  (Degrees of Freedom). Plot (a) shows the funnel plot for all observations within the data (1754 data points), while plot (b) shows only the medians of each study (115 data points). Mean of these data points is marked by the red line. In case of no publication bias, these funnel plots should be symmetrically centered around the true mean.

Table 4: Linear tests for publication bias

	OLS	FE	BE	Study	Precision
Publication bias ( <i>Standard error</i> )	0.933*** (0.107)	0.859*** (0.253)	0.812*** (0.061)	1.353*** (0.140)	0.366*** (0.112)
Effect beyond bias ( <i>Constant</i> )	6.445*** (0.128)	6.697*** (0.432)	6.719*** (0.311)	6.322*** (0.162)	6.948*** (0.092)
Observations	1,754	1,754	1,754	1,754	1,754

*Note:* The table displays the results obtained from estimating equation XXX. OLS = Ordinary Least Squares. FE = Fixed Effects. BE = Between Effects. Precision = Estimates are weighted by the inverse of their standard error. Study = Estimates are weighted by the inverse of the number of observations reported per study. Standard errors, clustered at the study level, are included in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1

Table 5: Nonlinear tests for publication bias

	<b>WAAP</b>	<b>Top10</b>	<b>Stem</b>	<b>Hier</b>	<b>AK</b>	<b>Kink</b>
Publication bias				0.572*** (0.190)	4.197*** (0.145)	1.730*** (0.527)
Effect beyond bias	6.968*** (0.098)	7.288*** (0.202)	7.200*** (1.647)	6.792*** (0.285)	6.607*** (0.123)	5.925*** (0.072)
Observations	1,754	1,754	1,754	1,754	1,754	1,754

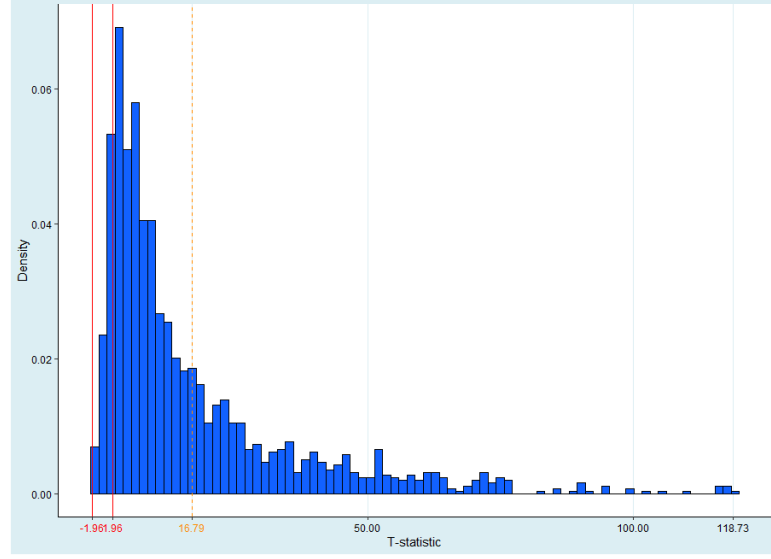
*Note:* The table reports estimates of the effect beyond bias using six non-linear methods and estimates of the publication bias obtained using two of these methods. WAAP = Weighted Average of the Adequately Powered (Ioannidis et al. 2017). Top10 = Top10 method by Stanley et al. (2010). Stem = the stem-based method by Furukawa (2019). Hier = Hierarchical Bayes model (Allenby & Rossi 2006). AK = Andrews & Kasy (2019)'s selection model. Kink = Endogenous kink model by Bom & Rachinger (2019). Standard errors, clustered at the study level, are included in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1

Table 6: Relaxing the exogeneity assumption

	<b>IV</b>	<b>p-uniform*</b>
Publication bias	1.161*** (0.212)	L = 0.313 (p = 0.575)
Effect beyond bias	6.155*** (0.254)	0.0120 (0.033)
Observations	1,754	1,754

*Note:* IV = Instrumental Variable Regression; logarithm of the number of studies is used as an instrument for the standard error. Standard errors, reported in the parentheses, are also clustered at the study level. p-uniform\* = method proposed by van Aert & van Assen (2021); L represents the publication bias test t-statistic, corresponding p-value can be found in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1

Figure 4: The distribution of t-statistics is heavily skewed



*Note:* The figure depicts the distribution of t-statistics associated with estimates within the data set. The two red lines mark the critical significance values -1.96 and 1.96 (from left to right) at the 95% confidence level. The dotted orange line represents the mean t-statistic within the data. Outliers are hidden for clarity of presentation, but we included them in the calculations.

Table 7: Caliper tests at values 1.645, 1.96 and 2.58

	Threshold 1.645	Threshold 1.96	Threshold 2.58
Caliper width 0.05	0.504*	0.142	0.178
	(0.098)	(0.072)	(0.061)
$n_1/n_2$	5 / 1	3 / 7	5 / 6
Caliper width 0.1	0.457	0.165	0.205
	(0.075)	(0.061)	(0.04)
$n_1/n_2$	9 / 3	5 / 10	12 / 11
Caliper width 0.2	0.425*	0.25	0.176
	(0.045)	(0.037)	(0.026)
$n_1/n_2$	22 / 10	20 / 22	22 / 29

*Note:* The table shows the results of three sets of Caliper tests by Gerber et al. (2008) These sets are carried out around t-statistic thresholds of 1.645, 1.96 and 2.58, which correspond to the 1%, 5% and 10% t-statistic significance levels. Caliper width denotes the width of the interval around the t-statistic, e.g. caliper width 0.05 for threshold 1.96 means  $t \in < 1.91; 2.01 >$ . A test statistic of 0.142 means that roughly 64% of estimates appear above the threshold and roughly 36% below it.  $n_1/n_2$  = number of observations above/below the threshold. Standard errors, clustered at study level, are included in parentheses. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1



Table 8: P-hacking tests

<i>Panel A: P-hacking tests by Elliott et al. (2022)</i>		
	<b>Test for non-increasingness</b>	<b>Test for monotonicity and bounds</b>
p-value	0.961	0.900
Observations ( $p \leq 0.1$ )	1,612	1,612
Total observations	1,754	1,754
<i>Panel B: MAIVE estimator (Irsova et al. 2023)</i>		
	<b>MAIVE coefficient</b>	<b>F-test</b>
Coefficient	5.795***	12.396
Standard Error	(0.460)	

*Note:* Panel A shows the results of p-hacking tests by Elliott et al. (2022), namely the histogram-based test for non-increasingness and the histogram-based test for monotonicity and bounds. Panel B reports the results of the spurious precision robust approach using MAIVE estimator by Irsova et al. (2023). F-test = Test statistic of the IV first step F-test. Cluster-robust standard errors are used in the MAIVE estimation. These are reported in the parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

# Heterogeneity

Table 9: Definition and summary statistics of regression variables

Variable	Description	Mean	SD
Main Effect	The effect of an additional year of schooling on logarithmic wage.	7.628	4.801
Standard Error	The standard error of the main effect.	1.268	1.723
<i>Estimate characteristics</i>			
Short Run	=1 if the data span a period shorter than a year.	0.552	0.497
Long Run	=1 if the data span a period longer than a year (reference category).	0.448	0.497
Estimate: City	=1 if the estimates within the study can be aggregated on a city level.	0.119	0.323
Estimate: Sub-region	=1 if the estimates within the study can be aggregated on a subregional level.	0.099	0.299
Estimate: Region	=1 if the estimates within the study can be aggregated on a regional level.	0.309	0.462
Estimate: Country	=1 if the estimates within the study can be aggregated on a country level.	0.395	0.489
Estimate: Continent	=1 if the estimates within the study can not be aggregated on a country level or smaller (reference category).	0.079	0.269
<i>Data characteristics</i>			
Study Size	The logarithm of the number of estimates collected from the study.	2.942	0.637
Yrs. of Schooling	The average number of years of schooling attained by the subjects.	11.115	3.461
Yrs. of Experience	The average number of years of experience attained by the subjects.	18.351	7.450
Education: Years	=1 if authors report schooling in years.	0.634	0.482
Education: Levels	=1 if the authors report schooling in levels (e.g., attained college degree) (reference category).	0.366	0.482
Wage: Log Hourly	=1 if the dependent variable in the regression is log hourly wage.	0.531	0.499
Wage: Log Daily	=1 if the dependent variable in the regression is log daily or weekly wage.	0.095	0.293
Wage: Log Monthly	=1 if the dependent variable in the regression is log monthly wage.	0.211	0.408
Wage: Annual Earnings	=1 if the dependent variable in the regression is log of mean annual earnings (reference category).	0.162	0.369
Micro Data	=1 if the study uses micro data.	0.177	0.382
Survey Data	=1 if the study uses data from a survey.	0.534	0.499
National Register Data	=1 if the study uses data from a national register (reference category).	0.289	0.453
Cross-sectional Data	=1 if the study uses cross-sectional data.	0.361	0.481
Panel Data	=1 if the study uses panel data (reference category).	0.639	0.481
Data Year	The logarithm of the average year of the study's time span	7.599	0.006
No Education	The percentage of subjects that attained no education (reference category).	0.126	0.148

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Table 9: Definition and summary statistics of regression variables  
(continued)

Variable	Description	Mean	SD
<i>Spatial/structural variation</i>			
Primary Education	The percentage of subjects that attained only primary education.	0.181	0.160
Secondary Education	The percentage of subjects that attained only secondary education.	0.389	0.197
Higher Education	The percentage of subjects that attained any form of higher education.	0.309	0.247
Wage Earners	The ratio of wage earners to self-employed subjects in the study ( = 1 if wage earner, = 0 if self-employed).	1.495	5.113
Self-Employed	The ratio of self-employed to wage earners subjects in the study ( = 1 if self-employed, = 0 if wage earner) (reference category).	0.592	3.375
Gender: Male	The ratio of male to female subjects in the study ( = 1 if male, = 0 if female).	0.650	0.350
Gender: Female	The ratio of female to male subjects in the study ( = 1 if female, = 0 if male) (reference category).	0.350	0.350
Sector: Private	The ratio of private to public sector workers ( = 1 if private sector worker, = 0 if public).	4.667	9.064
Sector: Public	The ratio of public to private sector workers ( = 1 if public sector worker, = 0 if private) (reference category).	3.588	7.088
Ethnicity: Caucasian	The ratio of Caucasian to non-Caucasian subjects in the study ( = 1 if Caucasian, = 0 if not).	0.227	0.419
Ethnicity: Other	The ratio of non-Caucasian to Caucasian subjects in the study ( = 1 if non-Caucasian, = 0 if Caucasian) (reference category).	0.773	0.419
Sector: Rural	The ratio of rural to urban workers ( = 1 if rural worker, = 0 if urban).	0.297	0.191
Sector: Urban	The ratio of urban to rural workers ( = 1 if urban worker, = 0 if rural) (reference category).	0.703	0.191
Reg: Advanced Econ.	=1 if the study was conducted in a country with advanced economy. (reference group)	0.498	0.500
Reg: E. Asia and Pacific	=1 if the study was conducted in the East Asia and Pacific region.	0.213	0.409
Reg: Europe and C. Asia	=1 if the study was conducted in the Europe and Central Asia region.	0.115	0.319
Reg: Lat. Am. and Car.	=1 if the study was conducted in the Latin America and Caribbean region.	0.004	0.063
Reg: M. East and N. Af.	=1 if the study was conducted in the Middle East and North Africa region.	0.043	0.202
Reg: South Africa	=1 if the study was conducted in the South African region.	0.088	0.283
Reg: Sub Sah. Africa	=1 if the study was conducted in the region of Sub Saharan Africa.	0.106	0.308
Income: High	=1 if the study was conducted in a high income country (reference category)	0.507	0.500
Income: Middle	=1 if the study was conducted in a middle income country	0.434	0.496
Income: Low	=1 if the study was conducted in a low income country	0.059	0.236
Median Expenditure	The logarithm of the median expenditure in the country in a given year.	8.584	1.420
Minimum Wage	The logarithm of the minimum wage in the country in a given year.	5.853	1.536
Academic Freedom Index	The academic freedom index reported for the country in a given year.	0.712	0.266
Mean Age	The logarithm of the average age of the subjects.	3.575	0.200
<i>Estimation method</i>			
Method: OLS	=1 if the authors use Ordinary least squares.	0.664	0.473
Method: Cohort	=1 if the authors use Cohort-type estimation.	0.032	0.177
Method: FE	=1 if the authors use Fixed-effects estimation.	0.026	0.158
Method: 2SLS	=1 if the authors use Two-Stage least squares estimation.	0.095	0.294
Method: Heckman	=1 if the authors use Two-step estimation (Heckman and Polachek, 1974).	0.062	0.240
Method: Probit	=1 if the authors use Probit estimation.	0.022	0.147

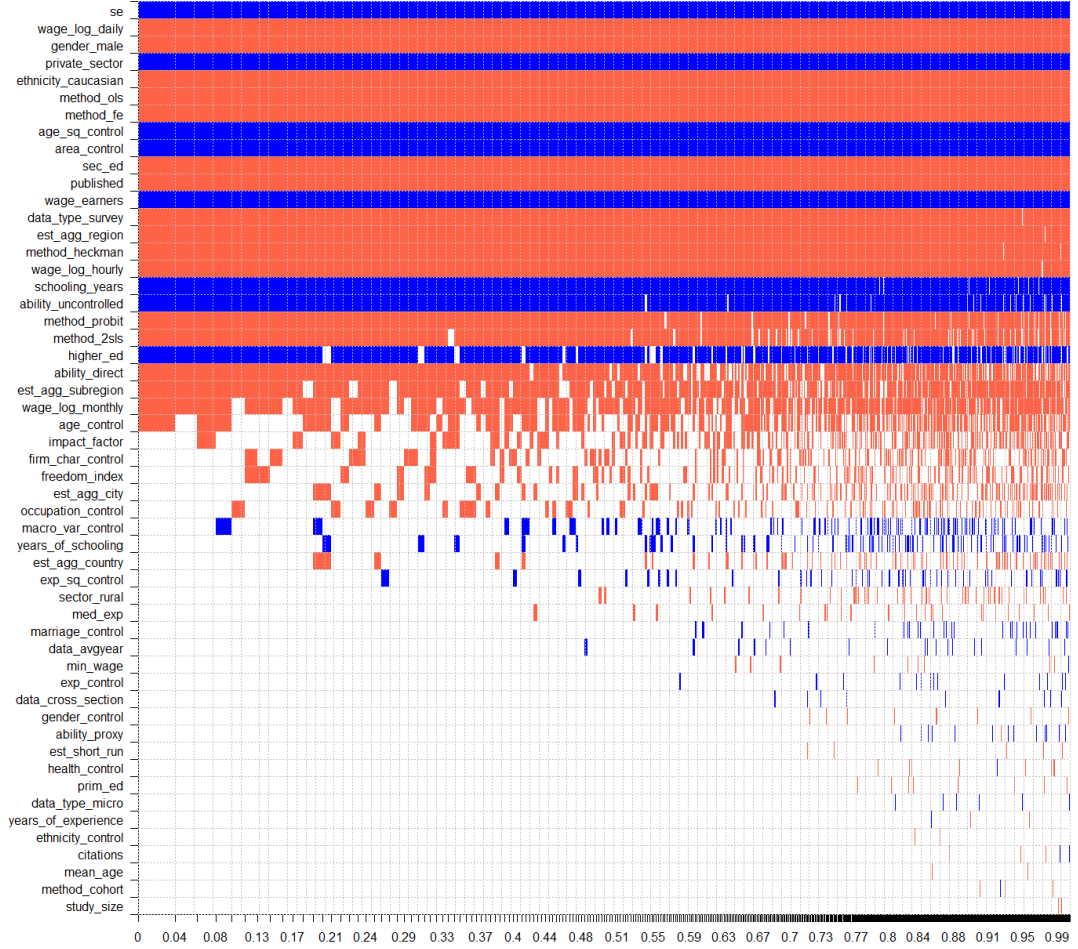
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Table 9: Definition and summary statistics of regression variables  
(continued)

Variable	Description	Mean	SD
Method: IV	=1 if the authors use Instrumental variables estimation (reference category).	0.111	0.314
Ability: Direct	=1 if the authors include a direct measure of ability in their study.	0.135	0.341
Ability: Proxied	=1 if the authors use a proxy for ability in their study.	0.204	0.403
Ability: Uncontrolled	=1 if the authors acknowledge, but do not control for ability in any way in their study.	0.425	0.494
Ability: Unmentioned	=1 if the authors do not mention ability anywhere in their study (reference category).	0.223	0.417
Control: Age	=1 if the authors control for age in the regression.	0.344	0.475
Control: Age <sup>2</sup>	=1 if the authors control for age in quadratic form in the regression.	0.275	0.447
Control: Experience	=1 if the authors control for experience in the regression.	0.607	0.489
Control: Experience <sup>2</sup>	=1 if the authors control for experience in quadratic form in the regression.	0.512	0.500
Control: Ethnicity	=1 if the authors control for ethnicity in the regression.	0.251	0.434
Control: Health	=1 if the authors control for health in the regression.	0.135	0.342
Control: Gender	=1 if the authors control for gender in the regression.	0.367	0.482
Control: Marriage	=1 if the authors control for marriage in the regression.	0.361	0.480
Control: Occupation	=1 if the authors control for occupation of the subjects in the regression.	0.142	0.349
Control: Firm Char.	=1 if the authors control for firm characteristics in the regression.	0.149	0.357
Control: Area	=1 if the authors control for area type in the regression (e.g., urban, rural).	0.418	0.493
Control: Macro Var.	=1 if the authors control for macroeconomic variables in the regression.	0.347	0.476
<i>Publication characteristics</i>			
Impact Factor	The logarithm of the Journal Citations Report impact factor of the study (as of January 2023; = 0 in case of no publication).	-0.906	1.533
Citations	The logarithm of the mean number of Google Scholar citations received per year since the appearance of the study in Google Scholar (as of January 2023).	4.029	2.177
Study: Published	=1 if the study was published in a journal.	0.764	0.425
Study: Unpublished	=1 if the study was not published in a journal (reference category).	0.236	0.425

*Note:* This table presents the summary statistics and descriptions for each of the various study characteristics. SD = standard deviation, FE = Fixed Effects, 2SLS = 2 Stage Least Squares.

Figure 5: Bayesian model averaging results



*Note:* This figure shows the results of Bayesian model averaging using the uniform g-prior and dilution prior. The response variable, percentage returns to a year of schooling, is measured on the horizontal axis in terms of cumulative posterior model probabilities. The explanatory variables are ranked according to their posterior inclusion probability in descending order on the vertical axis. Blue color (dark in grayscale): the variable is included in the model and has a positive sign. Red color (light in grayscale): the variable is included in the model and has a negative sign. Numerical results of the estimation can be found in table 10. For a detailed explanation of the variables, see table 9.

Table 10: Model averaging results

Response variable:	Bayesian model averaging			Frequentist model averaging		
	Post. mean	Post. SD	PIP	Coef.	SE	p-value
Returns to Year of Schooling						
Constant	6.489	NaN	<b>1.000</b>	8.849	285.930	0.975
Standard Error	0.442	0.069	<b>1.000</b>	0.620	0.230	0.007
<i>Estimate characteristics</i>						
Short Run	-0.002	0.040	0.007	0.000	1.092	0.000
Estimate: City	-0.269	0.618	0.194	0.000	1.919	0.000
Estimate: Sub-region	-1.137	0.701	<b>0.845</b>	0.000	2.548	0.000
Estimate: Region	-1.464	0.499	<b>0.999</b>	-0.295	2.457	0.904
Estimate: Country	-0.130	0.410	0.105	0.000	1.174	0.000
<i>Data characteristics</i>						
Study Size	0.000	0.013	0.001	0.000	0.414	0.000
Yrs. of Schooling	0.014	0.041	0.123	0.000	0.109	0.000
Yrs. of Experience	0.000	0.001	0.003	0.000	0.016	0.000
Education: Years	0.947	0.252	<b>0.994</b>	0.352	0.518	0.497
Wage: Log Hourly	-1.373	0.365	<b>0.998</b>	-0.270	0.990	0.785
Wage: Log Daily	-2.579	0.506	<b>1.000</b>	-0.975	1.624	0.548
Wage: Log Monthly	-0.926	0.546	<b>0.814</b>	0.000	1.289	0.000
Micro Data	0.002	0.039	0.005	0.000	0.569	0.000
Survey Data	-0.987	0.230	<b>0.999</b>	-0.353	0.654	0.589
Cross-sectional Data	0.005	0.059	0.009	0.000	0.998	0.000
Data Year	0.758	5.918	0.021	0.000	38.542	0.000
<i>Spatial/structural variation</i>						
Primary Education	-0.006	0.124	0.005	0.000	0.423	0.000
Secondary Education	-3.273	0.812	<b>1.000</b>	-2.293	2.629	0.383
Higher Education	2.144	0.968	<b>0.887</b>	0.704	1.104	0.524
Wage Earners	0.084	0.020	<b>1.000</b>	0.027	0.057	0.632
Gender: Male	-1.378	0.290	<b>1.000</b>	-0.979	0.712	0.169
Sector: Private	0.070	0.013	<b>1.000</b>	0.054	0.038	0.149
Ethnicity: Caucasian	-1.940	0.305	<b>1.000</b>	-0.936	0.995	0.347
Sector: Rural	-0.054	0.270	0.050	0.000	0.754	0.000
Median Expenditure	-0.007	0.043	0.029	0.000	0.008	0.000
Minimum Wage	-0.001	0.015	0.012	0.000	0.073	0.000
Academic Freedom Index	-0.261	0.536	0.225	0.000	1.276	0.000
Mean Age	0.000	0.029	0.002	0.000	0.286	0.000
<i>Estimation method</i>						
Method: OLS	-2.430	0.317	<b>1.000</b>	-1.105	1.407	0.432
Method: Cohort	0.000	0.030	0.002	0.000	0.180	0.000
Method: FE	-4.120	0.735	<b>1.000</b>	-2.096	2.437	0.390
Method: 2SLS	-1.569	0.627	<b>0.930</b>	-0.557	1.206	0.644
Method: Heckman	-2.113	0.497	<b>0.999</b>	-0.610	1.744	0.727
Method: Probit	-2.971	0.931	<b>0.974</b>	-0.920	2.294	0.688
Ability: Direct	-1.040	0.520	<b>0.875</b>	0.000	0.745	0.000
Ability: Proxied	0.005	0.063	0.008	0.000	0.250	0.000
Ability: Uncontrolled	0.885	0.274	<b>0.981</b>	0.335	0.750	0.656
Control: Age	-0.758	0.798	<b>0.536</b>	0.000	1.183	0.000
Control: Age <sup>2</sup>	2.476	0.778	<b>1.000</b>	1.217	1.133	0.283
Control: Experience	0.004	0.051	0.011	0.000	0.518	0.000
Control: Experience <sup>2</sup>	0.036	0.153	0.066	0.000	0.564	0.000
Control: Ethnicity	-0.001	0.019	0.002	0.000	0.155	0.000
Control: Health	-0.002	0.037	0.006	0.000	0.188	0.000
Control: Gender	-0.002	0.028	0.009	0.000	0.211	0.000
Control: Marriage	0.009	0.068	0.025	0.000	0.490	0.000
Control: Occupation	-0.137	0.329	0.172	0.000	0.604	0.000
Control: Firm Char.	-0.189	0.370	0.239	0.000	0.569	0.000
Control: Area	1.355	0.256	<b>1.000</b>	0.504	1.112	0.651
Control: Macro Var.	0.085	0.221	0.156	0.000	0.486	0.000
<i>Publication characteristics</i>						

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Table 10: Model averaging results (continued)

Response variable:	Bayesian model averaging			Frequentist model averaging		
	Post. mean	Post. SD	PIP	Coef.	SE	p-value
Returns to Year of Schooling						
Impact Factor	-0.060	0.097	0.320	0.000	0.195	0.000
Citations	0.000	0.003	0.002	0.000	0.026	0.000
Study: Published	-1.381	0.288	<b>1.000</b>	-0.357	1.056	0.735

*Note:* This table presents the results of the Bayesian and Frequentist model averaging. Post. mean = Posterior Mean, Post. SD = Posterior Standard Deviation, PIP = Posterior Inclusion Probability, Coef. = Coefficient, SE = Standard Error, OLS = Ordinary Least Squares, FE = Fixed Effects, 2SLS = 2 Stage Least Squares. The variables with PIP > 0.5 are highlighted. For a detailed explanation of the variables, see table 9.

# Best-practice Estimate

Table 11: Comparing best-practice estimates across literature

Study	Estimate	95% Confidence Interval
Author's subjective estimate	6.849	(6.098; 7.6)
<i>Panel A: Studies identified by query (subset)</i>		
Leigh (2008)	8.347	(6.838; 9.856)
Bartolj et al. (2013)	8.117	(7.472; 8.762)
Salas-Velasco (2006)	6.381	(5.209; 7.553)
Lillo-Banuls & Casado-Diaz (2010)	7.000	(5.751; 8.249)
Wincenciak (2020)	4.062	(2.839; 5.285)
Okuwa (2004)	6.713	(5.19; 8.236)
Webbink (2004)	10.158	(8.218; 12.098)
Kenayathulla (2013)	9.194	(7.501; 10.887)
Asadullah (2006)	5.781	(4.284; 7.278)
Maluccio (1998)	9.221	(8.041; 10.401)
Depken et al. (2019)	12.190	(10.581; 13.799)
Purnastuti et al. (2015)	10.625	(8.594; 12.656)
Umar et al. (2014)	8.514	(7.095; 9.933)
Sinning (2014)	11.477	(10.43; 12.524)
Agrawal (2012)	7.156	(5.729; 8.583)
Sackey (2008)	6.196	(5.273; 7.119)
Patrinos et al. (2021)	7.593	(6.301; 8.885)
Giles et al. (2019)	6.597	(5.78; 7.414)
van der Hoeven (2013)	7.747	(5.74; 9.754)
Acemoglu & Angrist (1999)	6.546	(5.425; 7.667)
Vivatsurakit & Vechbanyongratana (2020)	10.587	(9.337; 11.837)
Qiu (2007)	5.846	(4.792; 6.9)
Mphuka & Simumba (2012)	12.434	(10.558; 14.31)
Aslam (2007)	10.169	(8.521; 11.817)
Himaz & Aturupane (2016)	8.043	(6.336; 9.75)
Warunsiri & McNown (2010)	9.298	(7.583; 11.013)
Aromolaran (2006)	6.633	(5.622; 7.644)
Salehi-Isfahani et al. (2009)	5.032	(4.03; 6.034)
Botchorishvili (2007)	6.285	(5.013; 7.557)
Girma & Kedir (2005)	6.822	(4.727; 8.917)
De Brauw & Rozelle (2008)	7.791	(6.394; 9.188)
Chanis et al. (2021)	8.575	(7.132; 10.018)
Paweenawat & Vechbanyongratana (2015)	10.628	(9.274; 11.982)
Vasudeva Dutta (2006)	3.614	(2.144; 5.084)
Gibson & Fatai (2006)	6.318	(5.166; 7.47)
Hawley (2004)	6.405	(5.074; 7.736)
Sohn (2013)	9.375	(7.932; 10.818)
Harmon et al. (2002)	10.018	(9.024; 11.012)
Lillo (2006)	5.093	(4.137; 6.049)
Zhong (2011)	8.776	(7.135; 10.417)
Krafft (2018)	7.518	(5.57; 9.466)
Walker & Zhu (2008)	9.720	(8.722; 10.718)
Wambugu (2003)	9.906	(7.789; 12.023)

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Table 11: Best-practice across literature (continued)

Study	Estimate	95% Confidence Interval
Aryal et al. (2022)	6.996	(5.593; 8.399)
Bakis et al. (2013)	6.087	(5.336; 6.838)
Campaniello et al. (2016)	4.931	(3.604; 6.258)
Joseph (2020)	9.501	(7.706; 11.296)
Dumauli (2015)	10.443	(8.997; 11.889)
Fersterer et al. (2008)	5.062	(3.28; 6.844)
Sinning (2017)	11.524	(10.372; 12.676)
Purnastuti (2013)	4.965	(3.366; 6.564)
Arkes (2010)	7.378	(6.151; 8.605)
Glewwe (1996)	7.346	(5.298; 9.394)
Blundell et al. (2001)	6.033	(4.636; 7.43)
Ayyash et al. (2020)	8.716	(7.138; 10.294)
<i>Panel B: Studies identified by snowballing</i>		
Aakvik et al. (2010)	5.961	(4.683; 7.239)
Angrist (1995)	7.419	(6.417; 8.421)
Angrist et al. (1991)	8.807	(7.625; 9.989)
Belzil et al. (2002)	5.943	(4.828; 7.058)
Brainerd (1998)	2.465	(1.136; 3.794)
Breda (2014)	0.884	(-0.494; 2.262)
Capatina (2014)	6.357	(5.759; 6.955)
Card (1995)	6.127	(5.031; 7.223)
Carneiro et al. (2011)	6.852	(5.251; 8.453)
Chase (1998)	3.115	(2.11; 4.12)
Devereux et al. (2010)	6.210	(4.485; 7.935)
Dougherty et al. (1991)	6.067	(4.677; 7.457)
Duflo (2001)	7.471	(6.215; 8.727)
Duraisamy (2002)	6.473	(5.785; 7.161)
Fortin (2008)	4.105	(3.537; 4.673)
Gill et al. (2000)	7.270	(6.486; 8.054)
Gorodnichenko (2005)	4.944	(4.029; 5.859)
Grogger et al. (1995)	3.367	(2.567; 4.167)
Harmon et al. (1995)	10.136	(8.619; 11.653)
Harmon et al. (1999)	9.261	(7.664; 10.858)
Harmon et al. (2003)	7.878	(6.688; 9.068)
Heckman et al. (2006)	8.440	(7.372; 9.508)
Hubbard (2011)	7.005	(6.174; 7.836)
Ichino (1999)	7.507	(6.123; 8.891)
Ichino et al. (2004)	10.498	(8.981; 12.015)
Jones (2001)	6.154	(4.512; 7.796)
Kane et al. (1993)	6.584	(5.739; 7.429)
Kijima (2006)	2.899	(2.039; 3.759)
Kingdon (1998)	7.976	(6.553; 9.399)
Leigh (2008)1	8.277	(7.132; 9.422)
Lemieux et al. (2001)	6.230	(5.321; 7.139)
Light et al. (2004)	8.067	(7.001; 9.133)
Moretti (2004)	6.581	(5.074; 8.088)
Munich et al. (2005)	5.043	(3.653; 6.433)
Pischke (2005)	6.801	(5.282; 8.32)
Psacharopoulos (1982)	3.714	(2.318; 5.11)
Psacharopoulos (1979)	7.461	(6.058; 8.864)
Staiger et al. (1997)	7.507	(6.298; 8.716)
Stephens Jr et al. (2014)	6.126	(4.95; 7.302)
Taber (2001)	6.277	(5.119; 7.435)
Troske (1999)	3.728	(2.574; 4.882)

*Note:* The table reports estimates of the best-practice estimate according most studies form the data set, as well as the author's subjective best-practice. 95% confidence interval bounds are constructed as an approximate using OLS with study level clustered standard errors.

Table 12: Significance of key variables

	One SD change		Maximum change	
	Effect on Returns	% of BP	Effect on Returns	% of BP
Standard Error	0.761	10.99%	4.186	60.45%
Estimate: Sub-region	-0.340	-4.91%	-1.137	-16.42%
Estimate: Region	-0.677	-9.77%	-1.464	-21.14%
Education: Years	0.456	6.59%	0.947	13.67%
Wage: Log Hourly	-0.685	-9.89%	-1.373	-19.82%
Wage: Log Daily	-0.755	-10.9%	-2.579	-37.24%
Wage: Log Monthly	-0.378	-5.46%	-0.926	-13.37%
Survey Data	-0.492	-7.11%	-0.987	-14.25%
Secondary Education	-0.646	-9.32%	-3.273	-47.27%
Higher Education	0.531	7.66%	2.144	30.96%
Wage Earners	0.430	6.21%	5.085	73.44%
Gender: Male	-0.482	-6.96%	-1.378	-19.89%
Sector: Private	0.637	9.2%	3.941	56.92%
Ethnicity: Caucasian	-0.814	-11.75%	-1.940	-28.02%
Method: OLS	-1.149	-16.59%	-2.430	-35.1%
Method: FE	-0.652	-9.41%	-4.120	-59.49%
Method: 2SLS	-0.460	-6.65%	-1.569	-22.65%
Method: Heckman	-0.508	-7.34%	-2.113	-30.51%
Method: Probit	-0.438	-6.33%	-2.971	-42.9%
Ability: Direct	-0.355	-5.13%	-1.040	-15.02%
Ability: Uncontrolled	0.437	6.32%	0.885	12.78%
Control: Age	-0.360	-5.2%	-0.758	-10.95%
Control: Age <sup>2</sup>	1.106	15.97%	2.476	35.76%
Control: Area	0.668	9.65%	1.355	19.56%
Study: Published	-0.587	-8.47%	-1.381	-19.95%

*Note:* This table presents ceteris paribus effect of several key variables on the partial correlation coefficient. Only those variables with *PIP* over 0.5 in the *BMA* model are included. *One SD change* implies how the effect changes when we increase a specific variable by one standard deviation. *Maximum change* represents the change in the effect when the variable is increased from its minimum to its maximum. The reference best-practice value is 6.845. SD = Standard Deviation, BP = Best-Practice. For a detailed explanation of the variables, see table 9.

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