What do developing country governments learn from aid? Evidence from survey experiments with 900 education policymakers in 36 countries

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There is a wide perception amongst global elites that coordination between international donors for education is a major constraint. In this paper we contribute to this debate with data on the views and preferences of officials from aid recipient governments. We survey over 900 senior government officials working on education in 36 low- and middle-income countries. We use a set of discrete choice and survey experiments to document the preferences and knowledge of senior government officials. We document a misalignment in priorities between national officials and prevailing global norms. Finally, we discuss potential explanations for this misalignment, and test whether an information treatment with new research can shift views on specific reforms.

1. Introduction

Many global education experts from rich countries are concerned about weaknesses of the global aid architecture contributing to a failure to tackle the global learning crisis. The 'global education architecture' is the global system that uses international resources to support national education systems to improve their performance. One framework through which to consider the effectiveness of this architecture is through the fulfilment of three broad functions. First, providing leadership, setting norms and standards, and targets. Second, providing resources, both financial and knowledge. Third, monitoring and mutual accountability around performance. The Sustainable Development Goals (SDGs) provide high-level global targets for education, but a proliferation of indicators and measurement approaches persists, with public disagreement between multilateral agencies around whether international data is becoming overly fragmented.

International targets do matter - governments respond strategically by shifting resources away from outcomes that are not subject to global goals (Bisbee et al., 2019).

The United Kingdom government conducted a review of multilateral aid agencies, finding UNESCO (the lead United Nations (UN) agency on education) to have the weakest organisational strengths and weakest contribution to international development objectives. Others have argued that "The international architecture for education is failing the world. There is little leadership; global priorities are obscure; the major debates are increasingly irrelevant and divorced from reality on the ground" (Burnett, 2019).

Failure to achieve global priorities is clear. On current progress only 77 percent of countries will achieve the goal of universal primary school completion by 2030. Just 45 percent of countries will achieve the goal for lower secondary school (Moyer and Hedden, 2020).

In this paper we report on a new survey of over 900 senior officials from developing country governments. We do three things. First, we assess the views of these aid recipients about the global aid architecture. Officials in recipient governments are in fact broadly content with the performance of the global aid architecture for education. Second, we use two discrete choice experiments to force officials into making trade-offs between different objectives and different tools. National policymakers prioritise the socialisation function of education over the human capital production function. When faced with hypothetical aid projects, policymakers have a strong preference for projects on technical and vocational education. Third, use a survey experiment to explore the kind of evidence that officials find most persuasive. We find that officials are more likely to change their mind based on evidence from another developing country than similar evidence from the United States. Being informed that a study is a randomized control trial does not raise the probability that a policymaker will change their mind.

We contribute to a literature on some of the problems associated with the aid system. Many global elite actors have worried about the problem of fragmentation of aid leading to high management costs for recipient governments, and uncoordinated efforts leading to poor allocation of resources. Recent cross-country evidence shows that having too few donors can be detrimental for outcomes (Gehring et al., 2017). Similarly case studies from nine countries suggest that some recipients welcome a diversity of donors (Prizzon et al., 2017). A recent review concludes that there is no simple deterministic relationship between the level of fragmentation and outcomes, which are mediated by both donor and recipient effort to improve coordination (McKee et al., 2020). We address this question directly, asking officials about potential negative consequences of fragmentation.

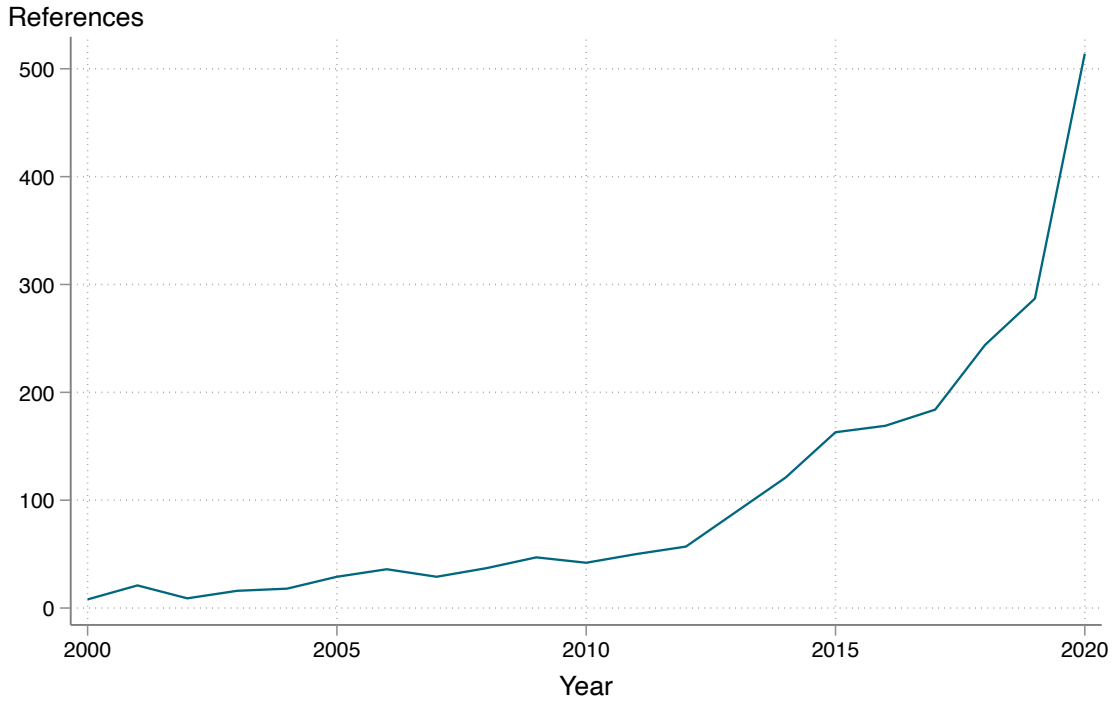
Concerns about excessive focus on school enrolment and too little attention to quality and learning have been expressed for some time - since at least 1983 (Behrman

and Birdsall, 1983). The focus on learning was given renewed attention in the last decade. The 2016 International Commission on Financing Global Education Opportunity focused on the Global Learning Crisis[1], as did the World Bank's 2018 World Development Report. This report defines a global learning crisis as severe shortfalls in learning. For example that less than half of children in Africa who make it to the last year primary school achieve basic minimum levels of functional literacy and numeracy. In the same year, the UK government's aid Ministry outlined a new education policy with the objective of "tackling the learning crisis at its root" (DFID, 2018), and a new USAID education policy repeated "There is a learning crisis" (USAID, 2018). This is also the focus of the Bill and Melinda Gates Foundation's global education program strategy (Bill and Melinda Gates Foundation, n.d.). There has been a concomitant rise in research. An annual search of Google Scholar for the phrase "learning crisis" reveals an average of 22 publications per year between 2000 and 2010, rising sharply to 514 publications in 2020 alone (Figure 1).

There has been little attention to how much developing country governments are focused on the learning crisis. Some efforts to survey recipient government attitudes to aid include the "Listening to Leaders" survey (Custer et al., 2018), which found a weak correlation between the favourability of different donors and the amount of aid they provide. A survey of 61 respondents from 40 low and middle-income countries found a strong preference from recipients for budget support and aid that is aligned with government priorities and systems (Davies and Pickering, 2015). As part of the Multilateral Organisation Performance Assessment Network (MOPAN) review of UNESCO, a survey of 122 respondents from government and NGOs in 12 low and middle income countries found that the majority had favourable views of UNESCO's staff, management, interventions, and performance (MOPAN 2019).

[1]The International Comission on Financing Global Education Opportunity, 2016

Figure 1: Academic publications per year mentioning 'Learning crisis'



Note: This figure shows the number of search results from Google Scholar per year for the term "Learning Crisis".

Ideas probably matter more than money in aid and development. Spending by national governments is substantially higher than international financing for education (Hares and Rossiter, 2019). Hence the role of international actors is not just about providing finance but about providing advice, information, and standards, that can help to improve the efficiency and effectiveness of domestic spending. For example evidence shows that the World Bank influences domestic policy more through analytical and advisory services than lending operations (Knack et al., 2020). However for external policy influence to be successful outsiders must understand the beliefs and motivations of national policymakers (Smets, 2019). So how do officials get ideas about policy-making, and what role do research, evidence, and data play? Several papers have assessed whether government officials are subject to cognitive biases in the decision-making. Vivalt and

Coville, 2020 find evidence for "variance neglect" (in which confidence intervals are ignored) and asymmetric updating on good news. Banuri et al., 2019 show that professionals at the World Bank and UK aid Ministry can draw incorrect conclusions due to framing effects and confirmation bias. Despite the presence of cognitive biases, experimental evidence does show that policymakers update their beliefs (Lee, 2020, Masset et al., 2013) and follow through on different policy actions in response to relevant evidence (Hjort et al., 2021). The design of our experiment differs to prior work (eg by Hjort et al., 2021) primarily by investigating the role of revealing study design.

On the political economy of education policy Paglayan, 2020, shows that in most countries the expansion of mass education predated the introduction of democracy, consistent with the idea that education was supplied for its role in nation-building rather than building human capital. In some countries the expansion of education can be explicitly linked to the threat of civil conflict (Paglayan, 2017).

Another view of education systems is as a "sorting role" or "filtration system" designed to select the most talented individuals for further education and eventual administrative jobs (Muralidharan and Singh, 2019). We explicitly test this hypothesis, by eliciting official beliefs about the shape of the human capital production function, following Attanasio et al., 2019. We also assess the 'growth mindset' of officials.

2. Survey design and sample

The sample frame for government responses is all relevant senior staff from Ministries of Education, other education-related government agencies, and Ministry of Finance donor-facing staff. We survey 924 officials from 36 low- and middle-income countries. In each country we recruited an in-country consultant with good networks and access who compiled a list of senior officials and conducted interviews, in-person where possible or by phone (many countries had mobility restrictions in place due to COVID-19). Surveys began on 5th March 2020 and continued through 9th September 2020.

2.1. Country Characteristics

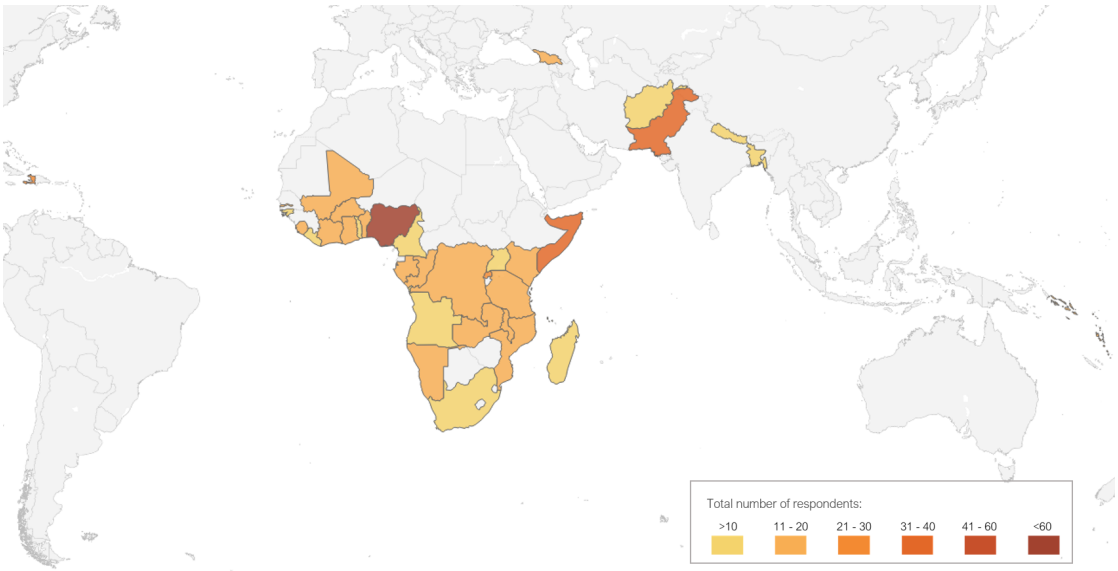
The countries we surveyed were selected from a long list of countries that have high levels of aid for education (based on OECD Creditor Reporting System data), that have low average learning adjusted-years of schooling, and where we were able to recruit local consultants to administer surveys (Table 1). Twenty-six of 36 countries are low or lower-middle income and in the bottom quartile globally for average learning-adjusted years of schooling (fewer than 5.8 average years of learning adjusted schooling) (Figure 2).

Table 1: Country Sample (LAYS and income group)

	Bottom quartile (Below 5.8 LAYS)	Second quartile (5.8 - 8 LAYS)	Third quartile (8 - 10 LAYS)	Total
Low income	(17) Afghanistan, Benin, Burkina Faso, DRC, Gambia, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Rwanda, Sierra Leone, Somalia, Tanzania, Togo, Uganda	(2) Haiti, Nepal		19
Lower-middle income	(11) Angola, Cameroon, Comoros, Congo, Cote d'Ivoire, Ghana, Nigeria, Pakistan, Solomon Islands, Vanuatu, Zambia	(1) Bangladesh	(1) Kenya	13
Upper-middle income	(1) South Africa	(2) Gabon, Namibia	(1) Georgia	4
Total	29	5	2	36

Note: LAYS is Learning-Adjusted Years of Schooling a summary indicator for both access to school and the of schooling. Our focus in sampling countries was partly pragmatic in where we were able to collect data but artly driven by a focus on countries with weak educational outcomes. Data on LAYS does not exist for Guinea-Bissau and Somalia, but they both have fewer than 5.8 average years of education.

Figure 2: Country sample map



2.2. Official's Characteristics

We collect data on whether they are a current or former official (the survey includes responses from former officials up to two years after they left their post), the agency that they work for, their job title, and how long they have worked at the agency. Most officials are middle-aged men. 72 percent were male, with a median of 11 years of experience. 42 percent were Directors or Director Generals, and 22 percent Deputy or Assistant Directors. The sample included 29 current, former, deputy, and sub-national Ministers of Education. 57 percent of officials work for a Ministry of Education, nine percent in an independent technical and vocational (TVET) or skills agency, eight percent in an independent higher education agency, and three percent in the centre of government (Ministry of Finance, President's Office, or Planning Commission). 41 percent of officials are from Anglophone African countries, 17 percent from Asia, and 28 percent from Francophone Africa (Table 2).

Table 2: Characteristics of officials

	Full Sample	Asia	Anglophone Africa	Francophone Africa	Others
Agency (% of respondents)					
Ministry of Education	66.77	69.57	66.23	61.45	76.00
TVET/Skills Ministry/Agency	8.28	3.11	8.90	14.50	0.00
Higher Education Ministry/Agency	6.34	1.86	8.12	7.25	4.80
Centre of Government	6.34	15.53	4.45	3.82	5.60
University	4.19	3.11	2.09	6.87	6.40
Local Government	2.47	0.62	5.76	0.00	0.00
Others	2.04	1.24	3.14	1.91	0.00
Missing	3.55	4.97	1.31	4.20	7.20
Total	100.00	100.00	100.00	100.00	100.00
Job Title (% of respondents)					
Minister	2.47	6.21	1.31	0.00	6.40
Advisor	3.66	0.00	0.52	6.49	12.00
Permanent Secretary/Director General	9.03	13.04	7.07	12.21	3.20
Director	32.04	24.84	32.98	32.06	38.40
Assistant/Deputy Director	23.44	22.98	31.41	17.18	12.80
Officer	17.20	24.84	15.45	18.70	9.60
Academic	4.19	3.11	2.09	6.87	6.40
Missing	7.96	4.97	9.16	6.49	11.20
Total	100.00	100.00	100.00	100.00	100.00
Gender (% of respondents)					
Female	26.34	29.81	31.68	19.08	20.80
Male	71.08	64.60	67.54	78.24	75.20
Missing	2.58	5.59	0.79	2.67	4.00
Total	100.00	100.00	100.00	100.00	100.00
Region (% of officials)					
Asia - Pacific	17.31				
Anglophone Africa	41.08				
Francophone Africa	28.17				
Others*	13.44				
Total	100.00				
Observations	930	161	382	262	125

Note: * Others includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia.
Centre of Government includes officials based at the President or Prime Minister's Office, or Ministry of Finance, Planning, or Public Service.

3. Views on the global aid architecture

Government officials are broadly satisfied with the global aid architecture. The majority of officials state that they are happy with the advice that they receive from development partners on exams, curriculum, textbooks, and teachers. The only area in which a substantial minority reporting being unhappy with the advice that they receive is on private schools (Figure A2). Satisfaction with advice on private schools is not driven by the prevalence of private schools in a country.

A common concern of donors is fragmentation. The majority of officials agree that coordination is a problem. However when we probe into the reasons why it is a problem we see less discontent. The majority disagree that reporting to partners is a burden, and agree that partner resources are well directed (Figure A3).

Similarly, another concern is that coordination with too many development partners may take up too much scarce time of senior government officials. When asked about specific named, donors, very few officials stated that they spent too much time with a donor (Figure A4).

Are some officials more dissatisfied with donors than others? We regress the satisfaction indicators from Figure 2 - Figure 5 on official's characteristics. First, we see that officials from technical and vocational education (TVET) or skills agencies are significantly less satisfied with the advice that they receive from development partners, and with the coordination of partners (Table 3).

Which are the most important donors working on education? By aid volume the largest bilateral donors are Germany, United States, France, and UK. The largest multilateral donors are the World Bank International Development Association (IDA), and the European Union. Is this reflected in recipient attitudes? We asked officials

Table 3: Correlates of satisfaction with donors

	Advice	Satisfaction	Too much time
Male	-0.028	0.018	0.057**
	(0.079)	(0.075)	(0.025)
Under 10 years experience	0.055	0.080	0.007
	(0.071)	(0.068)	(0.022)
TVET/Skills Ministry/Agency	0.040	0.218	0.009
	(0.143)	(0.137)	(0.045)
Minister	-0.170	-0.222	0.005
	(0.228)	(0.218)	(0.072)
Anglophone Africa	0.381***	1.035***	0.045
	(0.113)	(0.108)	(0.036)
Asia/Pacific	0.256*	0.790***	0.072*
	(0.132)	(0.126)	(0.041)
Francophone Africa	0.196	0.681***	0.117***
	(0.123)	(0.118)	(0.039)
Sub-National	0.007	0.269***	0.017
	(0.094)	(0.090)	(0.030)
Outcome Mean			
Obs.	795	795	795
R^2	0.019	0.130	0.022

The dependent variable for advice is an index of binary items for whether the official is satisfied with the advice that they receive in five policy areas; exams, curriculum, textbooks, teachers, and private schools. The dependent variable for satisfaction is an index of satisfaction across five items on overall support from partners, including whether reporting is a burden, coordination is a problem, diversity is good, and financial and non-financial resources are well-directed. The dependent variable for "too much time" is a binary variable for whether the official reported spending too much time with any one individual donor agency.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are shown in parentheses.

who the three most important development partners are in education in their country. We left "important" deliberately ambiguous and left to the respondent to decide how they determined importance. The most common responses were the World Bank and UNICEF, followed by UNESCO (Figure **??**). The prominence of UNICEF is likely driven by their large in-country staff numbers and presence. Across 25 countries, we found that UNICEF is the most common chair of in-country development partner coordination groups.

We begin by asking officials for their belief about the global learning crisis and whether there is a national learning crisis in their country. Our hypothesis was that officials would not think that there was a learning crisis in their country, but this was incorrect. The overwhelming majority agreed that there is a learning crisis. 80 percent agree that there is a global learning crisis, and 87 percent that there is a national learning crisis (Figure 9).

However, when we dig deeper we see that officials underestimate the scale of the learning crisis. We ask officials to estimate the share of students that can read at age 10, and compare this to estimates of the actual shares of students (drawing on the World Bank Learning Poverty indicator). Officials systematically and in some cases quite dramatically over-estimate the share of pupils who can read at an appropriate level by age 10. This over-estimation may partially explain the low priority given by national officials to foundational learning. On average, officials in our sample estimate that 63 percent of children can read by age 10. This compares to World Bank estimates based on actual national learning assessments for the countries in our sample of just 25 percent (Figure A7). By contrast, we see no systematic difference between official's estimates and actual data when it comes to the average years of schooling attained or government spending per pupil.

4. What do recipients value in foreign aid for education?

Our hypothesis is that there is a disconnect between the priorities of donors and national policymakers, driven partly by different objectives and partly by different information. Donors often focus on the role of foundational learning as a long-term investment in human capital, particularly for disadvantaged groups. National policymakers on the contrary often prioritise education's role in nation-building, and in addressing short-term unemployment pressures.

Unemployed youth can lead to political instability and even violence (Blattman and Miguel, 2010), so governments have good reason to focus on investments that promise to address this issue, such as technical and vocational education. Similarly, education plays an important role in nation-building can reduce instability.

We test these theories with two discrete choice experiments, forcing national policymakers to make trade-offs between different interventions and different objectives.

4.1. Discrete Choice Experiment A: Project Choice

We begin by asking officials directly to prioritise indicators from the Sustainable Development Goals. The top three ranked indicators are all focused on skills and employment, with foundational learning and gender disparities coming fifth and fourth, respectively (Figure A8). We also ask officials to choose a topic for a hypothetical aid project, with the most common response being technical and vocational education (54 percent of respondents).

Donors spend large sums of money on advice and technical assistance for partner governments. For example the World Bank alone spends on the order of $200 million per year on providing advice to developing countries (Knack et al., 2020). Total techni-

cal assistance from DAC donors is 6 percent of all bilateral aid, or around $4 billion per year (OECD, 2017). Given wide-ranging uncertainties in the policy-making process, it is very hard to quantitatively assess the value provided by technical assistance. Advice might be high quality but fail to be of use due to unforeseen political or administrative constraints, which may or may not be the fault of the advisor.

Moving to the experimental framework, we ask officials to choose between two concrete hypothetical aid projects. Aid is not an open marketplace - recipients are unlikely to reject a project or push back too strongly on resource decisions made by donors. By allowing and forcing respondents to make an explicit choice between two options, we can draw out and estimate underlying preferences. Each respondent makes six binary choices. Each project has three attributes that are randomly generated for each choice – the focus of the project (information technology, school construction, foundational literacy, assessment, or technical and vocational education), the total budget of the project, and whether the project comes with none, one or two full-time technical advisors (Table 4.1 & Figure A6). The analysis of choices allows us to compare and quantify in dollar value official's preferences across type of project and for technical assistance.

Table 4: Discrete Choice Experiment - Example of project attributes

	Project A	Project B
Project type	School Construction	Foundational Literacy
Technical Assistance	1 Full-time Advisor	None
Budget	$32 million	$40 million

Note: The values shown here are illustrative examples. Each official faces six randomly generated choices. In each case, the project can be either a) School construction, b) Foundational literacy, c) Learning Assessment, d) Computers / Technology, or e) Technical and Vocational Education. The Technical Assistance can consist of a) None, b) 1 Full-time Technical Advisor, or c) 2 Full-time Technical Advisors. The Budget can consist of $30 million, $32 million, $35 million, $37 million, or $40 million.

We assume a random utility framework (McFadden et al., 1973), in which the

respondent chooses the bundle of attributes that gives them the most utility. The utility of a hypothetical project can be characterized by the following function;

$$U_{ci} = a + \sum_{k=1}^{K} \beta_k X_{ck} + \sum_{m=1}^{M} \gamma_m Z_{mi} + \sum_{k=1}^{K} \sum_{m=1}^{M} \delta_{k_m} X_{ck} Z_{mi} + \epsilon_{ci} \quad (1)$$

Where hypothetical project c= $\{A,B\}$ and i=$1 \ldots N$ refers to individuals. X is a vector of K project characteristics and Z is a vector of M official's characteristics. Therefore, β_k refers to the utility associated to project's characteristics (in our case, type of project, budget or number of technical assistants). The parameter δ_{km} measures how this utility varies with official's characteristics. Finally, ϵ_{ci} represents unobserved characteristics that effects an individual's project choice.

The framework assumes that the individual will choose the project that generate a higher utility to them. The utility gain of hypothetical project B over hypothetical project A for a respondent i can be written as:

$$U_{Bi} - U_{Ai} = \sum_{k=1}^{K} \beta_k (X_{Bk} - X_{Ak}) + \sum_{k=1}^{K} \sum_{m=1}^{M} \delta_{km} (X_{Bk} - X_{Ak}) Z_{mi} + (\epsilon_{Bi} - \epsilon_{Ai}) \quad (2)$$

Therefore, formally project B is chosen over project A if $U_{Bi} > U_{Ai}$. The probability that this will occur is;

$$P[U_{Bi} - U_{Ai} > 0] = P\left[\sum_{k=1}^{K} \beta_k(X_{Bk} - X_{Ak}) + \sum_{k=1}^{K}\sum_{m=1}^{M} \delta_{km}(X_{Bk} - X_{Ak})Z_{mi} + (\epsilon_{Bi} - \epsilon_{Ai}) > 0\right] =$$
$$P\left[(\epsilon_{Ai} - \epsilon_{Bi}) < \sum_{k=1}^{K} \beta_k(X_{Bk} - X_{Ak}) + \sum_{k=1}^{K}\sum_{m=1}^{M} \delta_{km}(X_{Bk} - X_{Ak})Z_{mi}\right] \tag{3}$$

If we assume that the distribution of the specific hypothetical project error ϵ_{ci} is iid, the probability in (3) can be expressed in terms of a logistic cumulative distribution;

$$P[U_{Bi} - U_{Ai} > 0] = F\left[\sum_{k=1}^{K} \beta_k(X_{Bk} - X_{Ak}) + \sum_{k=1}^{K}\sum_{m=1}^{M} \delta_{km}(X_{Bk} - X_{Ak})Z_{mi}\right] \tag{4}$$

where $F(x) = exp(x)/(1 + exp(x))$. Our results show no significant difference between Logistic and Linear Probability modelling, hence we present the results from the marginal effects of the former in the appendix and discuss results of the latter.

Turning to the results presented in (Table 7), each $1 million increase in the budget of a bundle choice increases the probability of that project bundle being chosen by 1.2 percent. Each technical advisor causes an increase in a project bundle being chosen of 3.3 percent. Hence, we can infer the value of each additional technical advisor at $3 million. Being offered a TVET project rather than an IT project increases the chance of a project being chosen by 11 percent. None of the other project types are statistically significantly different from the IT project. These effects are robust to controls for official's characteristics. When we split the sample into those who work in TVET agencies and others, we see a stronger preference for TVET projects (27 percent more likely to be chosen), but we still see a positive choice for TVET of 9 percent amongst officials from

other Ministries and agencies as well.

Table 5: Discrete Choice Experiment A: Linear Probability Model Results

	Full Sample	Full Sample	TVET Ministry/ Agency	Other Ministries & agencies
Budget (USD million)	1.146***	1.189***	1.817***	1.147***
	(0.162)	(0.167)	(0.602)	(0.174)
Technical Advisors	3.490***	3.623***	10.66***	3.104***
	(0.750)	(0.767)	(2.877)	(0.790)
TVET	11.40***	10.90***	15.60*	10.68***
	(1.848)	(1.896)	(8.353)	(1.945)
Assessment	2.122	1.845	-5.796	2.369
	(1.892)	(1.953)	(8.184)	(2.011)
Foundational Literacy	-0.223	-0.759	-9.542	-0.127
	(1.961)	(2.035)	(7.709)	(2.114)
School Construction	2.195	1.769	-9.905	2.644
	(1.842)	(1.911)	(8.120)	(1.966)
Controls		Yes	Yes	Yes
Obs. (Responses)	9,060	8,508	588	7,920
Obs. (Respondents)	755	709	49	660
R^2	0.014	0.042	0.064	0.043

Note: The omitted category for projects is compared to an IT project. Controls include years of experience, gender, job title, agency and country fixed effect.* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are shown in parentheses.

4.2. Discrete Choice Experiment B: Education Objectives

We next deploy another discrete choice experiment, this time designed to measure preferences about the purpose of education. Is it to provide universal basic skills? To get children through school? Or primarily to socialise children? We present each official with four binary choices between two hypothetical states of the world. Each state has three education outcome attributes that are randomly varied for each choice - the share of the population with foundational literacy, the share completing secondary school, and

the share that are dutiful citizens (Table 4.2 & Figure A6). We ask respondents which state of the world they would prefer between the two hypothetical scenarios.

Table 6: Discrete Choice Experiment B - Example of project attributes

	Ed. System A	Ed. System B
Gain Foundational Literacy (%)	80	60
Complete secondary school (%)	60	40
Dutiful citizens (%)	70	90

Note: The values shown here are illustrative examples. Each official faces four randomly generated choices. In each case, foundational literacy can take the value 40, 60, 80, or 100. Complete secondary can take the value 40, 60, 80, or 100. Dutiful citizens can take the value 70, 80, 90, 100.

We estimate equation (3) presented in section 4.3 using the education outcomes presented above as the attributes. The results from this experiment show that officials value all three outcomes of an education system, but that they value having more dutiful citizens the most. Specifically, an education system that generates ten percentage points more dutiful citizens makes an official nine percent more likely to choose it, whereas a system that generates ten percentage points more children who have attained foundational literacy makes an official only six percent more likely to choose it (Table 7). In other words, dutiful citizens are worth 50 percent more to officials than children learning how to read.

Table 7: Discrete Choice Experiment B: Linear Probability Model Results

	Full Sample	Full Sample	TVET Ministry/ Agency	Other Ministries & agencies
% with Foundational Literacy	0.618***	0.623***	0.691***	0.619***
	(0.0405)	(0.0420)	(0.159)	(0.0438)
% Completing Secondary School	0.716***	0.733***	0.924***	0.720***
	(0.0413)	(0.0432)	(0.160)	(0.0449)
% Dutiful Citizens	0.910***	0.913***	0.681**	0.930***
	(0.0588)	(0.0614)	(0.259)	(0.0633)
Controls		Yes	Yes	Yes
Obs. (Responses)	6,698	6,302	434	5,868
Obs. (Respondents)	849	798	55	743
R^2	0.135	0.138	0.167	0.136
P-value on tests of equality:				
Literacy = Secondary School	0.1148	0.0890	0.3275	0.1341
Citizen = Secondary School	0.0114	0.0256	0.4436	0.0122
Citizen = Literacy	0.0001	0.002	0.9727	0.0001

Note: Controls include years of experience, gender, job title, agency and country fixed effect.At the foot of each column we report p-values on the null that one attribute is as equally valued as another.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are shown in parentheses.

5. What kind of evidence do officials believe?

Given that an important role of the global institutions is disseminating research and knowledge on what works, how does research influence national policymakers? Over half of policymakers in our sample report at least reading reports by UNESCO, World Bank, and UNICEF.

A major theme of comparative education is the politics and economics of policy borrowing (Steiner-Khamsi, 2004). One important channel through which policy ideas are diffused is through the education of elites. For example, countries with leaders who were educated in democratic countries are more likely to become democratic (Spilimbergo, 2009; Mercier, 2016). We ask which countries they look at to learn about

education, to which the most common responses were the US, UK, and Finland (Figure A11). When the OECD Programme for International Student Assessment was first published in 2001, Finland was the surprise best-performing country in the world in reading, and has since become a destination for "PISA tourism" from officials in other countries. The US and UK have much more average performing school systems, but they do have the English language, many of the most highly-related universities in the world, and substantial aid programmes focused on basic education in developing countries. Officials who studied in the US or UK are more likely to cite them as a country they look to as an example. Officials in Anglophone Africa are more likely to cite the UK and US as role models, as well as cite DFID and USAID as their most important development partners while officials in Francophone Africa are more likely to cite France as a role model (Table 5).

Table 8: Correlates of Following UK, US and France

	UK Role Model	Mention DFID	US Role Model	Mention USAID	France Role Model	Mention France
Studied in the UK	0.182***	0.057	-0.062	-0.045	-0.043	-0.017
	(0.055)	(0.046)	(0.058)	(0.053)	(0.037)	(0.035)
Studied in the USA	-0.036	0.030	0.163***	0.012	-0.002	-0.030
	(0.059)	(0.050)	(0.062)	(0.057)	(0.040)	(0.038)
Studied in France	-0.049	-0.024	-0.026	-0.012	0.128***	0.133***
	(0.051)	(0.043)	(0.053)	(0.049)	(0.035)	(0.033)
Male	0.056*	-0.003	-0.004	-0.062**	-0.007	0.010
	(0.032)	(0.027)	(0.034)	(0.031)	(0.022)	(0.021)
Under 10 years experience	-0.015	0.030	0.042	-0.072***	-0.000	-0.042**
	(0.028)	(0.024)	(0.030)	(0.027)	(0.020)	(0.019)
TVET/Skills Ministry/Agency	-0.022	-0.085*	0.052	-0.164***	0.026	-0.015
	(0.058)	(0.049)	(0.061)	(0.056)	(0.040)	(0.038)
Minister	0.088	0.002	-0.026	0.144	-0.032	0.009
	(0.093)	(0.079)	(0.098)	(0.090)	(0.064)	(0.060)
Asia/Pacific	-0.180***	-0.109***	-0.156***	-0.180***	0.002	0.006
	(0.041)	(0.035)	(0.044)	(0.040)	(0.028)	(0.027)
Francophone Africa	-0.224***	-0.205***	-0.082**	-0.227***	0.278***	0.255***
	(0.039)	(0.033)	(0.041)	(0.038)	(0.027)	(0.025)
Other	-0.283***	-0.283***	-0.151***	-0.175***	0.040	0.020
	(0.045)	(0.038)	(0.048)	(0.044)	(0.031)	(0.030)
Sub-National	0.193***	0.147***	0.148***	-0.005	0.005	-0.003
	(0.038)	(0.032)	(0.040)	(0.036)	(0.026)	(0.025)
Obs.	874	874	874	874	874	874
R^2	0.148	0.143	0.057	0.083	0.204	0.212

Note: The outcome variable in each model is a dummy variable taking the value 1 if the official mentioned the country or aid agency and 0 if not. Omitted region is Anglophone Africa. Standard errors in parentheses * p<0.1, ** p<0.05, *** p<0.01

We conduct an experiment to test how officials change their mind based on receiving a new research finding. In this experiment we seek to understand how and whether research findings influence policy views. We first elicit official's priors on the effect of scripted lesson plans on student performance. We use three studies evaluating interventions providing detailed lesson guides for teachers, all using randomized control

trials. Scripted lessons are one of six "good buy" interventions recommended by an expert panel convened by the World Bank and UK FCDO to improve learning in low- and middle-income countries (Global Education Evidence Advisory Panel, 2020).

These are a study of 50 schools in South Africa (Cilliers et al., 2016), 170 schools in the United States (Jackson and Makarin, 2018), and 800 schools in Kenya (Piper et al., 2018). We use an identical vignette describing a study set up, but randomly vary the study details that are revealed – specifically the country that the study was conducted in, the number of schools involved in the study, and whether the study is described as a randomized control trial or not. Officials are first asked for their prior on the effect size of the study. We score a response no effect as 0, small effect as 1, medium effect as 2, large effect as 3, and very large effect as 4. We then provide evidence on the actual effect of class size. We translate effect sizes using the benchmarks reported by Kraft, 2020. We consider the effects of 0.12 standard deviations in South Africa and 0.06-0.09 standard deviations in the United States to be medium effect sizes. We consider the effect sizes of 0.38 to 1.29 standard deviations in Kenya as being very large. After revealing what the effect size actually was, we estimate posterior beliefs by asking the official what they think the effect size would be if the project was replicated in their country. We then calculate the amount that officials update their beliefs towards the true value. 64 percent of officials do not change their belief at all. 15 percent update their belief positively (reduce the gap between their estimate and the true value). 22 percent update their belief negatively (increase the gap between their estimate and the true value). We then estimate the following equation:

$$Updating = \beta_1 RCT + \beta_2 Country + \sum_{j=1}^{J} \delta_j Z_j + \epsilon \tag{5}$$

Where Z_j are official's characteristics. We find that being assigned the South

Africa study or the Kenya study increased the chance of the official updating their beliefs towards the effect found in the study, by 0.2 and 0.6 standard deviations, respectively (Table 9). This is consistent with our expectation that evidence from a low or middle-income country context is considered more relevant than evidence from a high-income country. We find that being assigned to be told that the study was an RCT has no effect on the probability of updating your beliefs towards the effect found in the study. The coefficient is negative, and we are able to rule out positive effects of larger than 0.045 standard deviations. Thus we can conclude that these results support the notion that evidence from a relevant context is more likely to change minds than evidence from a randomized control trial in a less relevant context.

Table 9: Effect of study characteristics on Belief Updating

	(1)	(2)	(3)
The study was an RCT carried out in ...	-0.100	-0.092	-0.092
	(0.067)	(0.068)	(0.069)
... South Africa with 50 schools	0.219***	0.207***	0.198**
	(0.075)	(0.077)	(0.078)
... Kenya with over 800 schools	0.619***	0.580***	0.546***
	(0.086)	(0.088)	(0.089)
Anglophone Africa		0.120	0.114
		(0.107)	(0.108)
Asia/Pacific		0.206*	0.196
		(0.124)	(0.125)
Francophone Africa		0.179	0.167
		(0.115)	(0.119)
Country FE		Yes	Yes
Outcome Mean (SD)	0.0000	0.0000	0.0009
Obs.	879	829	791
R^2	0.06	0.07	0.07

Omitted region is "Other regions" which includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia. Column (3) excludes respondents from Guinea-Bissau and Rwanda.
Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01

6. Conclusion

Despite concerns from donors, the majority of national policymakers in our sample are not over concerned with the state of the global aid architecture. We do though find experimental evidence to support our hypothesis that national officials have different priorities for investment to global elites. This difference in priorities can in part be attributed to a gap in the understanding of officials about the scale of the challenge in foundational literacy. Finally, we show that presenting contextually relevant research evidence to officials can change their beliefs about the effectiveness of an intervention.

Donors could draw two quite different lessons from our findings. First, that existing efforts to convey messages about the learning crisis have not yet been fully successful, and so efforts should be redoubled. Alternatively, that developing country governments have a clear preference for projects focused on technical and vocational education, and so more efforts should be put here.

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A. Appendix: Additional Figures

Figure A1: Aid is a low share of all public spending on education

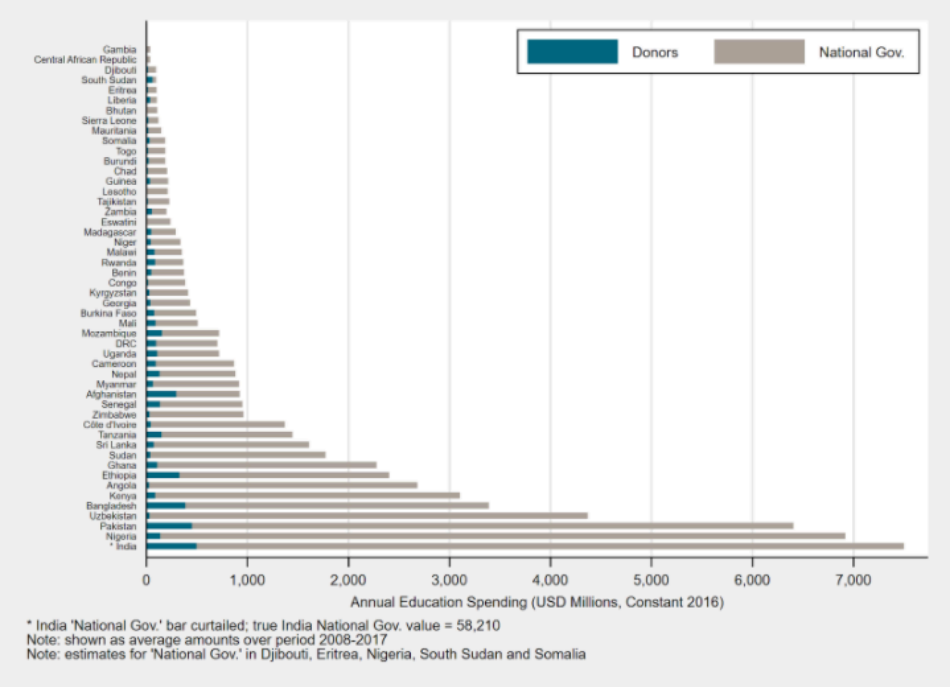


Figure A2: Satisfaction with advice received from development partners

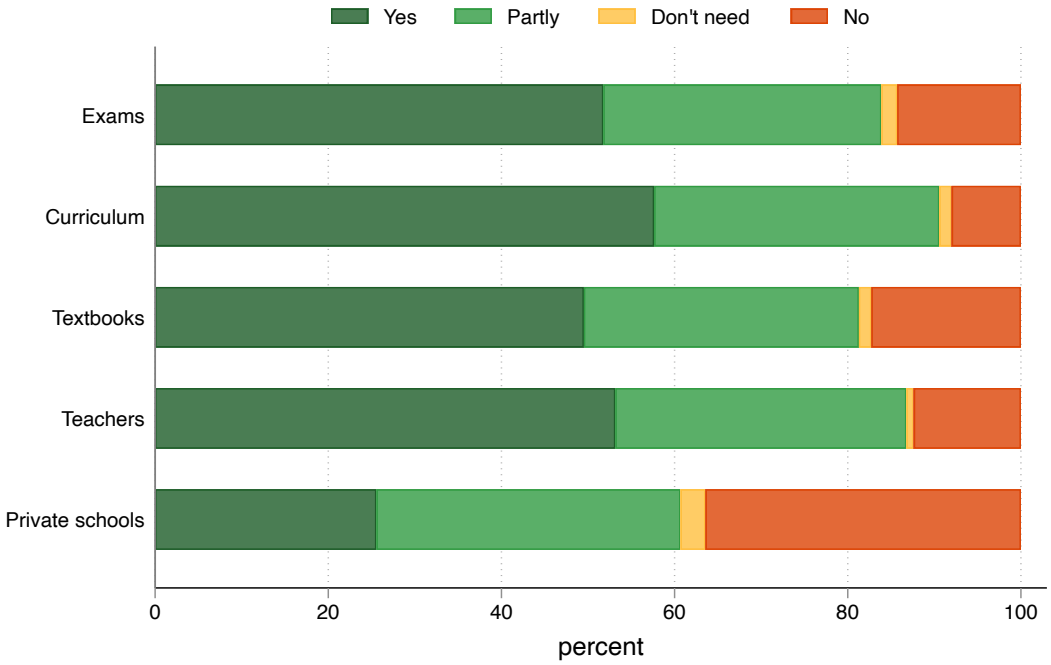


Figure A3: Satisfaction with overall support from partners

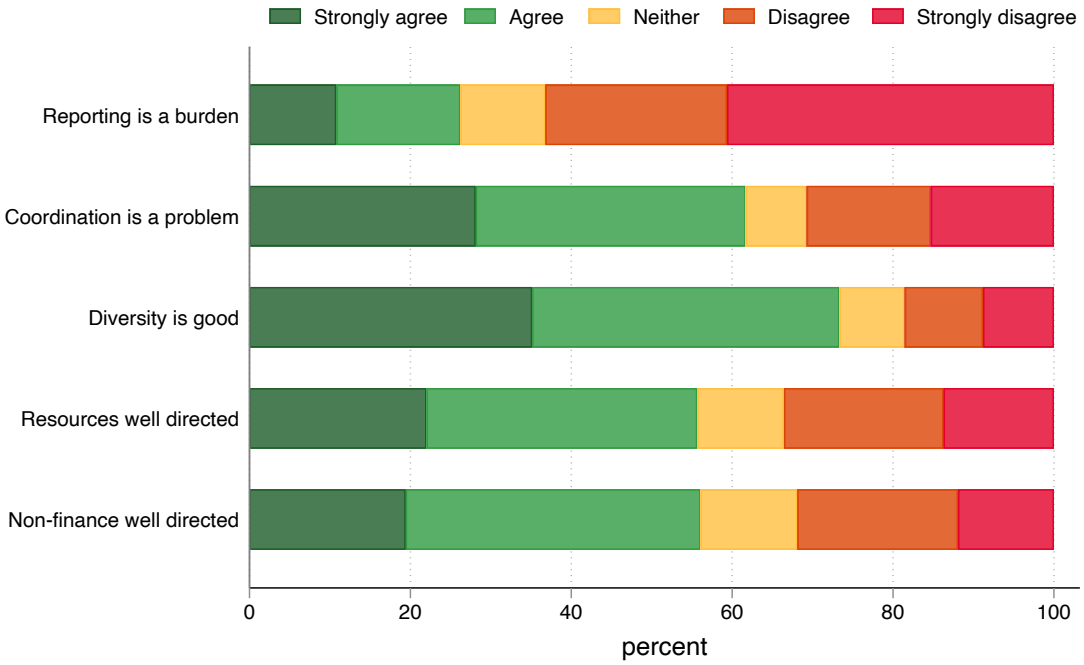


Figure A4: Satisfaction with time spent with key partners

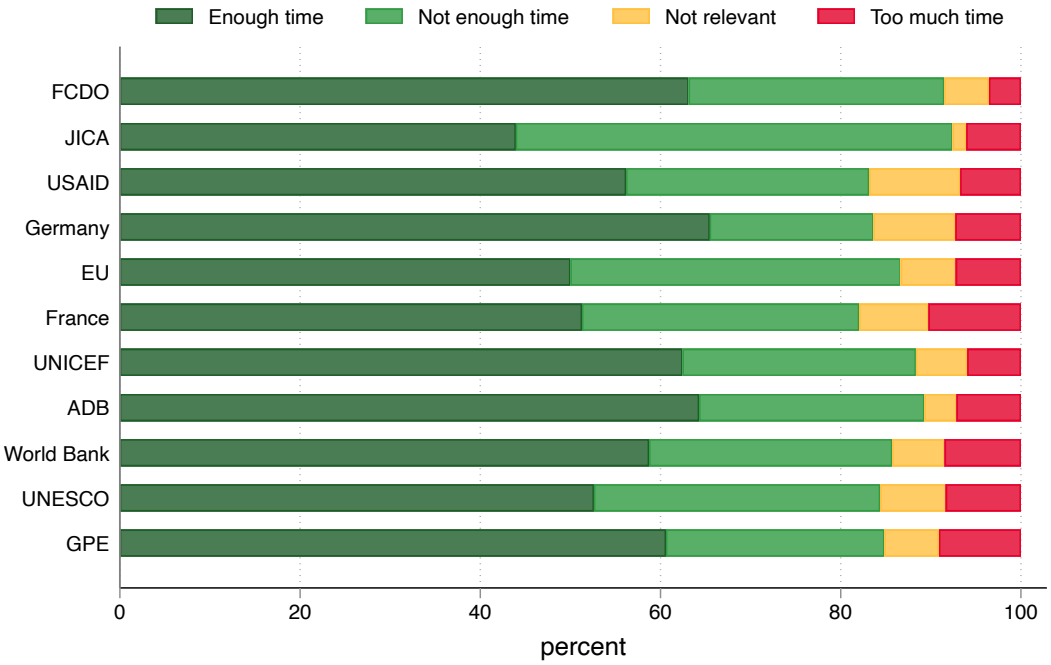


Figure A5: Most important development partner

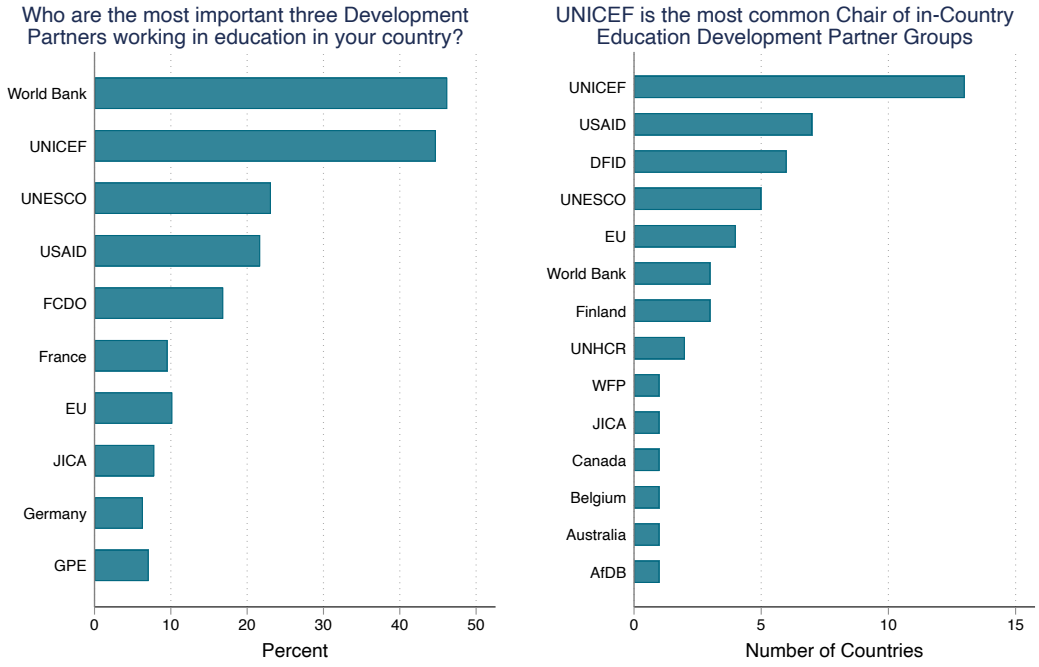


Figure A6: Discrete choice experiment - example screen

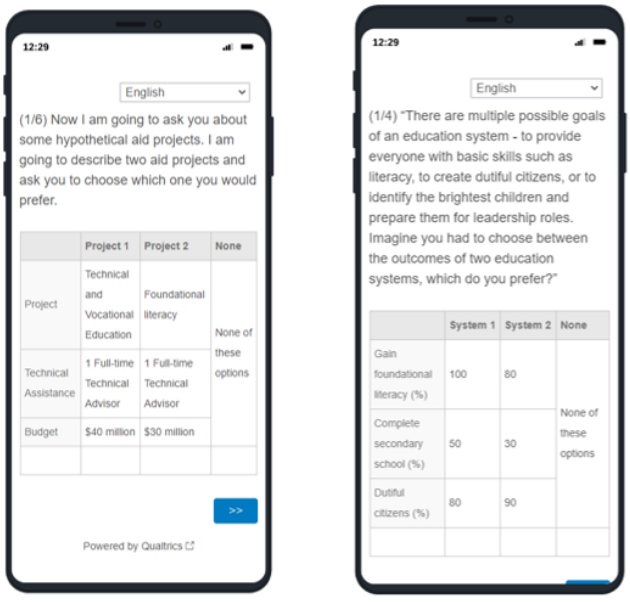
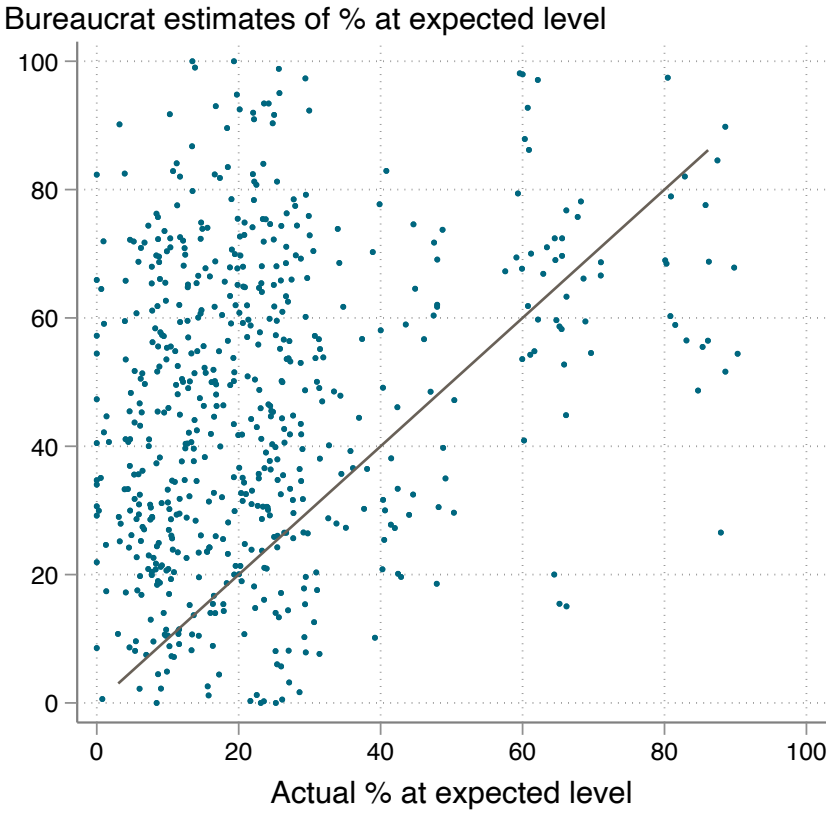


Figure A7: Officials agree that there is a learning crisis, but underestimate the scale



Note: Actual % at expected level is the inverse of the World Bank 'Learning Poverty' measure. Learning poverty estimates are available for Benin, Burkina Faso, Georgia, South Africa, and Togo in our sample. For the other countries in our sample we estimate their learning poverty rate based on their Harmonized Learning Outcome (HLO) score. For the 113 countries for which learning poverty data is available, the correlation with HLO score is 0.9134.

Figure A8: Which are the three most important Sustainable Development Goals?

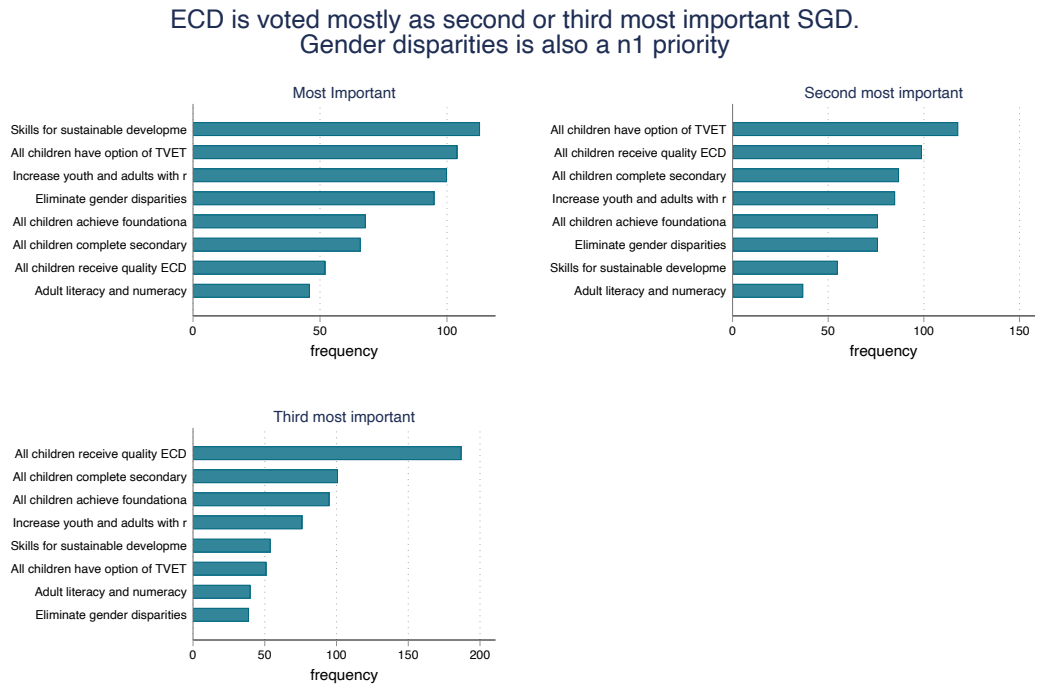


Figure A9: Reforms officials view as most important

Figure A10: Where do officials get ideas on education policies?

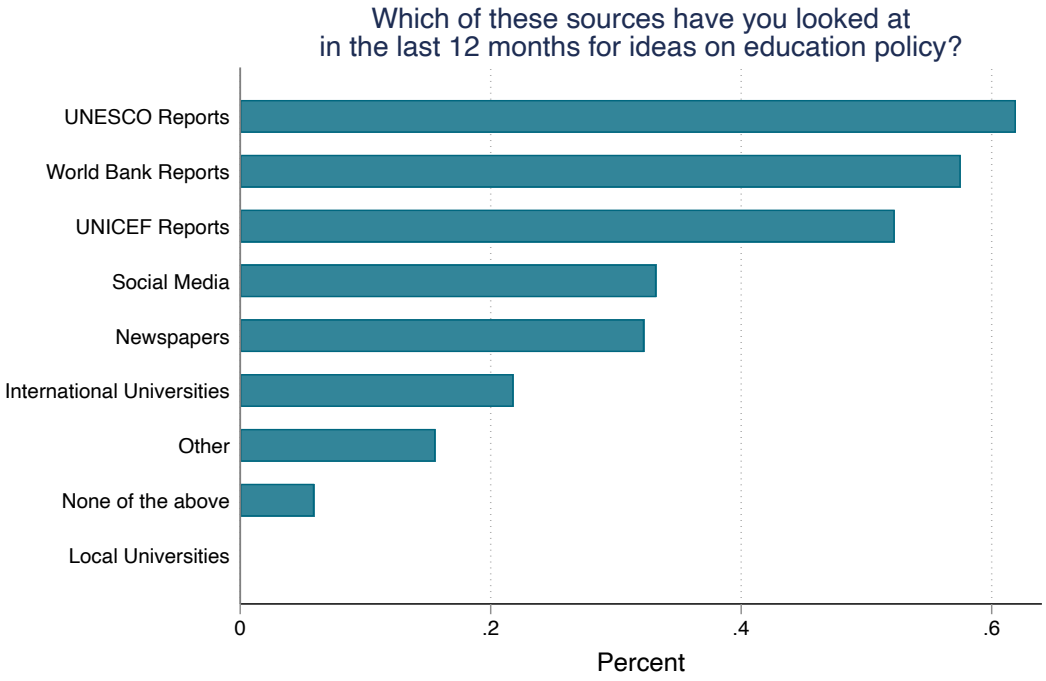
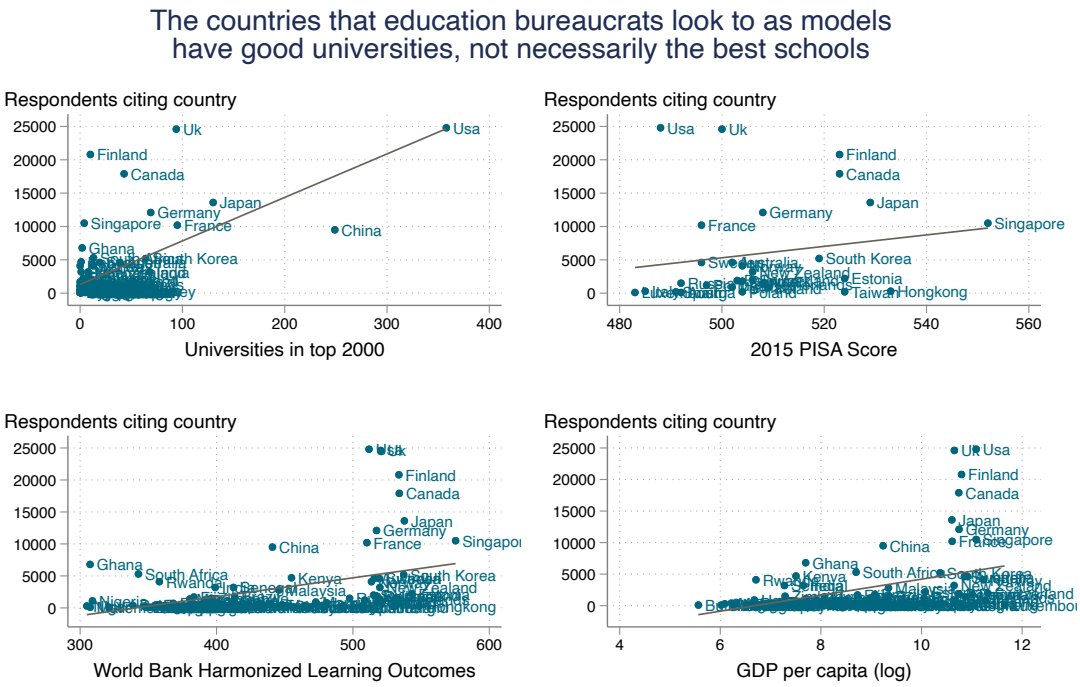


Figure A11: Which countries do officials look at as education role models



B. Appendix: Additional Tables

Table B1: How strongly would you agree or disagree with the following statements: (% of respondents)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	There is a global learning crisis								
Strongly Disagree	3.66	1.24	4.45	3.44	4.80	4.24	4.19	5.03	4.38
	(0.62)	(0.88)	(1.06)	(1.13)	(1.92)	(0.78)	(0.80)	(1.27)	(1.62)
Somewhat Disagree	7.31	5.59	11.52	3.44	4.80	6.35	7.09	7.38	5.63
	(0.85)	(1.82)	(1.64)	(1.13)	(1.92)	(0.95)	(1.03)	(1.52)	(1.83)
Neither	7.42	5.59	6.28	9.54	8.80	7.11	6.12	8.39	4.38
	(0.86)	(1.82)	(1.24)	(1.82)	(2.54)	(1.00)	(0.96)	(1.61)	(1.62)
Somewhat Agree	35.59	52.17	30.63	29.01	43.20	35.10	37.36	33.56	45.63
	(1.57)	(3.95)	(2.36)	(2.81)	(4.45)	(1.86)	(1.94)	(2.74)	(3.95)
Strongly Agree	41.08	31.06	41.88	52.29	28.00	42.21	41.55	40.27	36.25
	(1.61)	(3.66)	(2.53)	(3.09)	(4.03)	(1.92)	(1.98)	(2.85)	(3.81)
Missing	4.95	4.35	5.24	2.29	10.40	4.99	3.70	5.37	3.75
	(0.71)	(1.61)	(1.14)	(0.93)	(2.74)	(0.85)	(0.76)	(1.31)	(1.51)
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	There is a national learning crisis								
Strongly Disagree	3.55	1.86	4.71	3.05	3.20	3.78	3.54	4.36	4.38
	(0.61)	(1.07)	(1.09)	(1.06)	(1.58)	(0.74)	(0.74)	(1.19)	(1.62)
Somewhat Disagree	5.38	7.45	7.33	3.44	0.80	4.69	5.31	4.03	6.25
	(0.74)	(2.08)	(1.34)	(1.13)	(0.80)	(0.82)	(0.90)	(1.14)	(1.92)
Neither	3.55	1.86	4.19	3.82	3.20	3.78	3.70	4.03	3.75
	(0.61)	(1.07)	(1.03)	(1.19)	(1.58)	(0.74)	(0.76)	(1.14)	(1.51)
Somewhat Agree	26.24	40.37	26.18	19.47	22.40	24.51	26.25	22.48	33.13
	(1.44)	(3.88)	(2.25)	(2.45)	(3.74)	(1.67)	(1.77)	(2.42)	(3.73)
Strongly Agree	54.62	40.37	51.31	64.12	63.20	56.28	55.88	58.72	46.88
	(1.63)	(3.88)	(2.56)	(2.97)	(4.33)	(1.93)	(1.99)	(2.86)	(3.96)
Missing	6.67	8.07	6.28	6.11	7.20	6.96	5.31	6.38	5.63
	(0.82)	(2.15)	(1.24)	(1.48)	(2.32)	(0.99)	(0.90)	(1.42)	(1.83)
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Observations	930	161	382	262	125	661	621	298	160

* includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia.
Standard errors in parenthesis

Table B2: Discrete Choice Experiment B: Logit Model

	Full Sample	Full Sample	TVET Ministry/ Agency	Other Ministries & agencies
% with Foundational Literacy	0.0279***	0.0281***	0.0326***	0.0279***
	(0.00190)	(0.00197)	(0.00791)	(0.00205)
% Completing Secondary School	0.0321***	0.0330***	0.0423***	0.0324***
	(0.00196)	(0.00206)	(0.00808)	(0.00213)
% Dutiful Citizens	0.0414***	0.0416***	0.0324***	0.0423***
	(0.00278)	(0.00290)	(0.0123)	(0.00298)
Controls		Yes	Yes	Yes
Obs. (Responses)	6,698	6,302	434	5,868
Obs. (Respondents)	849	798	55	743
Pseudo R^2				

Note:* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors are shown in parentheses.

Table B3: Discrete Choice Experiment B: Marginal Effects of Logit Model

	Full Sample	Full Sample	TVET Ministry/ Agency	Other Ministries & agencies
% with Foundational Literacy	0.0060***	0.0061***	0.0068***	0.0060***
	(0.0004)	(0.0004)	(0.0015)	(0.0004)
% Completing Secondary School	0.0069***	0.0071***	0.0088***	0.0070***
	(0.0004)	(0.0004)	(0.0014)	(0.0004)
% Dutiful Citizens	0.0090***	0.0090***	0.0067***	0.0091***
	(0.0006)	(0.0006)	(0.0024)	(0.0006)
Obs. (Responses)	6,698	6,302	434	5,868

Note:* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors are shown in parentheses.

Table B4: There are several targets associated with the United Nations Sustainable Development Goal on Education (SDG 4). Which 3 are most important for your country? (% of respondents selected as one of top 3)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
All children receive quality ECD and pre-primary	36.02	49.07	35.86	25.95	40.80	35.25	38.65	32.89	40.63
	(1.58)	(3.95)	(2.46)	(2.71)	(4.41)	(1.86)	(1.96)	(2.73)	(3.89)
All children have option of TVET	29.35	24.84	26.44	33.97	34.40	29.65	29.15	26.85	40.00
	(1.49)	(3.42)	(2.26)	(2.93)	(4.27)	(1.78)	(1.83)	(2.57)	(3.89)
Increase youth and adults with relevant employment skills	28.39	37.27	23.30	33.59	21.60	29.95	28.34	31.54	27.50
	(1.48)	(3.82)	(2.17)	(2.92)	(3.70)	(1.78)	(1.81)	(2.70)	(3.54)
All children complete secondary school	27.31	45.34	24.35	22.52	23.20	26.48	28.66	25.17	29.38
	(1.46)	(3.94)	(2.20)	(2.59)	(3.79)	(1.72)	(1.82)	(2.52)	(3.61)
Eliminate gender disparities	22.69	16.15	19.11	31.68	23.20	21.94	23.19	23.83	20.63
	(1.37)	(2.91)	(2.01)	(2.88)	(3.79)	(1.61)	(1.69)	(2.47)	(3.21)
Adult literacy and numeracy	13.33	14.91	10.21	10.31	27.20	12.71	12.88	13.09	10.00
	(1.12)	(2.82)	(1.55)	(1.88)	(4.00)	(1.30)	(1.35)	(1.96)	(2.38)
Skills for sustainable development	24.30	28.57	28.53	20.23	14.40	23.90	24.32	24.83	25.00
	(1.41)	(3.57)	(2.31)	(2.49)	(3.15)	(1.66)	(1.72)	(2.51)	(3.43)
All children achieve foundational skills by age 10	25.27	27.33	22.25	29.39	23.20	25.11	28.02	23.15	26.88
	(1.43)	(3.52)	(2.13)	(2.82)	(3.79)	(1.69)	(1.80)	(2.45)	(3.52)
Observations	930	161	382	262	125	661	621	298	160

* includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia. Standard errors in parenthesis.

Table B5: Of all of the countries in the world, which do you look at to learn about how to improve education? (% of respondents mention country)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
USA	26.67	18.01	36.39	20.99	20.00	26.48	24.80	28.19	21.25
	(1.45)	(3.04)	(2.46)	(2.52)	(3.59)	(1.72)	(1.73)	(2.61)	(3.24)
UK	26.56	21.74	42.93	12.60	12.00	27.99	26.25	24.83	18.13
	(1.45)	(3.26)	(2.54)	(2.05)	(2.92)	(1.75)	(1.77)	(2.51)	(3.06)
Finland	22.04	24.84	24.61	5.73	44.80	22.69	23.99	24.50	15.63
	(1.36)	(3.42)	(2.21)	(1.44)	(4.47)	(1.63)	(1.72)	(2.50)	(2.88)
Singapore	11.18	21.12	11.52	2.67	15.20	11.80	11.59	12.42	10.00
	(1.03)	(3.23)	(1.64)	(1.00)	(3.22)	(1.26)	(1.29)	(1.91)	(2.38)
Japan	14.84	19.25	14.40	11.83	16.80	13.77	16.26	15.10	16.25
	(1.17)	(3.12)	(1.80)	(2.00)	(3.36)	(1.34)	(1.48)	(2.08)	(2.93)
Canada	19.14	5.59	7.59	41.60	24.80	19.06	19.32	21.48	21.25
	(1.29)	(1.82)	(1.36)	(3.05)	(3.88)	(1.53)	(1.59)	(2.38)	(3.24)
France	10.97	1.86	1.57	32.44	6.40	11.95	11.76	13.42	10.00
	(1.03)	(1.07)	(0.64)	(2.90)	(2.20)	(1.26)	(1.29)	(1.98)	(2.38)
Observations	930	161	382	262	125	661	621	298	160

* includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia. Standard errors in parenthesis.

Table B6: Can you name and then rate the development partners working in education in your country by importance (% of respondents mention development partner)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
World Bank	46.24	40.37	50.00	49.24	36.00	46.44	50.08	44.30	51.88
	(1.64)	(3.88)	(2.56)	(3.09)	(4.31)	(1.94)	(2.01)	(2.88)	(3.96)
UNICEF	44.73	32.92	52.62	38.17	49.60	43.27	51.05	47.99	46.25
	(1.63)	(3.72)	(2.56)	(3.01)	(4.49)	(1.93)	(2.01)	(2.90)	(3.95)
UNESCO	23.12	5.59	24.87	35.50	14.40	22.09	20.93	26.51	21.25
	(1.38)	(1.82)	(2.21)	(2.96)	(3.15)	(1.61)	(1.63)	(2.56)	(3.24)
USAID	21.72	18.01	32.98	10.31	16.00	19.67	21.74	20.47	15.63
	(1.35)	(3.04)	(2.41)	(1.88)	(3.29)	(1.55)	(1.66)	(2.34)	(2.88)
DFID	16.88	18.63	30.63	3.05	1.60	16.04	14.33	13.42	13.13
	(1.23)	(3.08)	(2.36)	(1.06)	(1.13)	(1.43)	(1.41)	(1.98)	(2.68)
EU	10.22	11.80	9.95	9.54	10.40	11.35	10.14	11.07	5.00
	(0.99)	(2.55)	(1.53)	(1.82)	(2.74)	(1.23)	(1.21)	(1.82)	(1.73)
France	9.57	1.86	1.05	29.39	4.00	10.74	8.86	9.40	13.75
	(0.97)	(1.07)	(0.52)	(2.82)	(1.76)	(1.21)	(1.14)	(1.69)	(2.73)
JICA	7.85	14.29	8.90	5.73	0.80	9.08	8.37	7.38	8.13
	(0.88)	(2.77)	(1.46)	(1.44)	(0.80)	(1.12)	(1.11)	(1.52)	(2.17)
GPE	7.10	1.86	3.14	13.74	12.00	9.23	8.86	6.38	8.13
	(0.84)	(1.07)	(0.89)	(2.13)	(2.92)	(1.13)	(1.14)	(1.42)	(2.17)
ADB	3.55	20.50	0.00	0.00	0.00	4.24	4.03	4.70	2.50
	(0.61)	(3.19)	(.)	(.)	(.)	(0.78)	(0.79)	(1.23)	(1.24)
Observations	930	161	382	262	125	661	621	298	160

* includes Lusophone Africa (Angola, Mozambique & Guinea-Bissau), Haiti and Somalia. Standard errors in parenthesis.

Table B7: Thinking about all of the development partners as a group, do they give you useful information about good practice and innovations in the following areas? (% of respondents)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	Textbooks								
Yes	43.55	34.78	48.43	48.09	30.40	44.02	46.86	45.97	48.13
	(1.63)	(3.77)	(2.56)	(3.09)	(4.13)	(1.93)	(2.00)	(2.89)	(3.96)
Partly	28.60	35.40	25.39	25.19	36.80	26.93	29.15	27.85	30.63
	(1.48)	(3.78)	(2.23)	(2.69)	(4.33)	(1.73)	(1.83)	(2.60)	(3.66)
No	15.16	13.04	16.23	13.36	18.40	16.04	13.37	14.77	14.38
	(1.18)	(2.66)	(1.89)	(2.11)	(3.48)	(1.43)	(1.37)	(2.06)	(2.78)
Don't need	1.29	1.86	1.05	1.15	1.60	1.51	0.97	1.34	0.63
	(0.37)	(1.07)	(0.52)	(0.66)	(1.13)	(0.48)	(0.39)	(0.67)	(0.63)
Missing	11.40	14.91	8.90	12.21	12.80	11.50	9.66	10.07	6.25
	(1.04)	(2.82)	(1.46)	(2.03)	(3.00)	(1.24)	(1.19)	(1.75)	(1.92)
	Curriculum								
Yes	51.51	50.31	55.24	51.91	40.80	50.53	53.46	51.01	55.63
	(1.64)	(3.95)	(2.55)	(3.09)	(4.41)	(1.95)	(2.00)	(2.90)	(3.94)
Partly	29.78	29.81	29.06	29.77	32.00	30.26	30.11	30.87	31.88
	(1.50)	(3.62)	(2.33)	(2.83)	(4.19)	(1.79)	(1.84)	(2.68)	(3.70)
No	7.20	7.45	6.81	4.96	12.80	7.72	6.12	7.38	5.63
	(0.85)	(2.08)	(1.29)	(1.34)	(3.00)	(1.04)	(0.96)	(1.52)	(1.83)
Don't need	1.40	1.24	1.05	1.53	2.40	1.36	1.29	1.34	0.00
	(0.39)	(0.88)	(0.52)	(0.76)	(1.37)	(0.45)	(0.45)	(0.67)	(.)
Missing	10.11	11.18	7.85	11.83	12.00	10.14	9.02	9.40	6.88
	(0.99)	(2.49)	(1.38)	(2.00)	(2.92)	(1.17)	(1.15)	(1.69)	(2.01)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	Assessment and examinations								
Yes	45.16	46.58	54.71	38.55	28.00	44.63	47.02	42.62	50.00
	(1.63)	(3.94)	(2.55)	(3.01)	(4.03)	(1.93)	(2.00)	(2.87)	(3.97)
Partly	28.82	34.78	27.49	25.19	32.80	29.05	30.11	28.19	35.63
	(1.49)	(3.77)	(2.29)	(2.69)	(4.22)	(1.77)	(1.84)	(2.61)	(3.80)
No	12.15	7.45	8.90	17.56	16.80	12.25	10.14	15.77	6.88
	(1.07)	(2.08)	(1.46)	(2.35)	(3.36)	(1.28)	(1.21)	(2.11)	(2.01)
Don't need	1.61	0.00	0.52	3.82	2.40	1.82	1.29	2.01	0.63
	(0.41)	(.)	(0.37)	(1.19)	(1.37)	(0.52)	(0.45)	(0.82)	(0.63)
Missing	12.26	11.18	8.38	14.89	20.00	12.25	11.43	11.41	6.88
	(1.08)	(2.49)	(1.42)	(2.20)	(3.59)	(1.28)	(1.28)	(1.84)	(2.01)
	Teacher management								
Yes	46.67	43.48	54.45	40.46	40.00	46.75	48.47	45.97	49.38
	(1.64)	(3.92)	(2.55)	(3.04)	(4.40)	(1.94)	(2.01)	(2.89)	(3.96)
Partly	30.11	30.43	28.01	30.53	35.20	29.05	32.21	30.20	32.50
	(1.51)	(3.64)	(2.30)	(2.85)	(4.29)	(1.77)	(1.88)	(2.66)	(3.71)
No	10.75	11.80	8.64	14.12	8.80	11.20	9.02	12.42	9.38
	(1.02)	(2.55)	(1.44)	(2.16)	(2.54)	(1.23)	(1.15)	(1.91)	(2.31)
Don't need	0.75	0.00	0.26	2.29	0.00	0.76	0.32	0.00	1.25
	(0.28)	(.)	(0.26)	(0.93)	(.)	(0.34)	(0.23)	(.)	(0.88)
Missing	11.72	14.29	8.64	12.60	16.00	12.25	9.98	11.41	7.50
	(1.06)	(2.77)	(1.44)	(2.05)	(3.29)	(1.28)	(1.20)	(1.84)	(2.09)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	Engaging private schools								
Yes	20.54	15.53	23.82	19.85	18.40	20.12	19.65	17.45	23.75
	(1.33)	(2.86)	(2.18)	(2.47)	(3.48)	(1.56)	(1.60)	(2.20)	(3.37)
Partly	29.46	39.13	29.32	26.72	23.20	29.20	30.92	28.86	35.63
	(1.50)	(3.86)	(2.33)	(2.74)	(3.79)	(1.77)	(1.86)	(2.63)	(3.80)
No	29.57	23.60	28.80	33.59	31.20	29.50	30.76	34.56	27.50
	(1.50)	(3.36)	(2.32)	(2.92)	(4.16)	(1.78)	(1.85)	(2.76)	(3.54)
Don't need	2.37	3.11	2.62	1.53	2.40	2.72	2.09	1.68	1.25
	(0.50)	(1.37)	(0.82)	(0.76)	(1.37)	(0.63)	(0.57)	(0.75)	(0.88)
Missing	18.06	18.63	15.45	18.32	24.80	18.46	16.59	17.45	11.88
	(1.26)	(3.08)	(1.85)	(2.39)	(3.88)	(1.51)	(1.49)	(2.20)	(2.57)
Observations	930	161	382	262	125	661	621	298	160

Table B8: How strongly do you agree or disagree with the following statements? (% of respondents)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	Its a burden reporting to DPs								
Strongly Disagree	38.49	16.77	40.31	54.58	27.20	38.58	39.29	43.29	34.38
	(1.60)	(2.95)	(2.51)	(3.08)	(4.00)	(1.89)	(1.96)	(2.88)	(3.77)
Somewhat Disagree	21.29	29.19	22.77	17.94	13.60	20.73	22.87	17.45	29.38
	(1.34)	(3.59)	(2.15)	(2.37)	(3.08)	(1.58)	(1.69)	(2.20)	(3.61)
Neither	9.89	9.94	10.73	8.02	11.20	9.53	9.34	10.40	11.88
	(0.98)	(2.37)	(1.59)	(1.68)	(2.83)	(1.14)	(1.17)	(1.77)	(2.57)
Somewhat Agree	14.30	26.09	13.09	8.40	15.20	14.83	14.49	13.09	15.00
	(1.15)	(3.47)	(1.73)	(1.72)	(3.22)	(1.38)	(1.41)	(1.96)	(2.83)
Strongly Agree	10.11	8.07	10.73	3.82	24.00	10.14	9.66	10.40	6.88
	(0.99)	(2.15)	(1.59)	(1.19)	(3.84)	(1.17)	(1.19)	(1.77)	(2.01)
Missing	5.91	9.94	2.36	7.25	8.80	6.20	4.35	5.37	2.50
	(0.77)	(2.37)	(0.78)	(1.61)	(2.54)	(0.94)	(0.82)	(1.31)	(1.24)
	The diversity of development partners helps fund different projects								
Strongly Disagree	8.39	8.70	6.28	4.20	23.20	6.96	7.89	7.38	8.75
	(0.91)	(2.23)	(1.24)	(1.24)	(3.79)	(0.99)	(1.08)	(1.52)	(2.24)
Somewhat Disagree	9.14	8.07	6.02	8.02	22.40	9.98	9.98	8.39	9.38
	(0.95)	(2.15)	(1.22)	(1.68)	(3.74)	(1.17)	(1.20)	(1.61)	(2.31)
Neither	7.85	6.83	9.16	8.02	4.80	8.17	7.41	9.06	2.50
	(0.88)	(1.99)	(1.48)	(1.68)	(1.92)	(1.07)	(1.05)	(1.67)	(1.24)
Somewhat Agree	36.13	42.24	32.98	43.51	22.40	35.70	36.55	33.22	41.88
	(1.58)	(3.90)	(2.41)	(3.07)	(3.74)	(1.86)	(1.93)	(2.73)	(3.91)
Strongly Agree	33.01	22.98	43.19	30.15	20.80	33.59	34.30	36.91	35.00
	(1.54)	(3.33)	(2.54)	(2.84)	(3.64)	(1.84)	(1.91)	(2.80)	(3.78)
Missing	5.48	11.18	2.36	6.11	6.40	5.60	3.86	5.03	2.50
	(0.75)	(2.49)	(0.78)	(1.48)	(2.20)	(0.89)	(0.77)	(1.27)	(1.24)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	The lack of coordination amongst development partners is a serious issue								
Strongly Disagree	14.52	8.07	18.06	11.45	18.40	14.07	14.81	18.12	11.88
	(1.16)	(2.15)	(1.97)	(1.97)	(3.48)	(1.35)	(1.43)	(2.24)	(2.57)
Somewhat Disagree	14.30	25.47	14.92	8.02	11.20	13.31	14.98	10.74	15.63
	(1.15)	(3.44)	(1.83)	(1.68)	(2.83)	(1.32)	(1.43)	(1.80)	(2.88)
Neither	7.31	8.07	8.90	6.11	4.00	6.51	6.12	9.06	4.38
	(0.85)	(2.15)	(1.46)	(1.48)	(1.76)	(0.96)	(0.96)	(1.67)	(1.62)
Somewhat Agree	31.72	34.16	31.68	36.64	18.40	32.68	32.53	28.19	45.63
	(1.53)	(3.75)	(2.38)	(2.98)	(3.48)	(1.83)	(1.88)	(2.61)	(3.95)
Strongly Agree	26.24	13.04	24.08	30.92	40.00	27.38	27.21	28.52	20.63
	(1.44)	(2.66)	(2.19)	(2.86)	(4.40)	(1.74)	(1.79)	(2.62)	(3.21)
Missing	5.91	11.18	2.36	6.87	8.00	6.05	4.35	5.37	1.88
	(0.77)	(2.49)	(0.78)	(1.57)	(2.44)	(0.93)	(0.82)	(1.31)	(1.08)
	Development partner resources (financial only) are directed where they are needed most in my country's education sector								
Strongly Disagree	12.80	6.83	9.69	14.50	26.40	12.56	13.37	13.09	11.88
	(1.10)	(1.99)	(1.52)	(2.18)	(3.96)	(1.29)	(1.37)	(1.96)	(2.57)
Somewhat Disagree	18.17	14.91	12.04	23.28	30.40	19.06	18.68	20.47	16.25
	(1.27)	(2.82)	(1.67)	(2.62)	(4.13)	(1.53)	(1.57)	(2.34)	(2.93)
Neither	10.43	8.70	10.99	12.60	6.40	10.74	8.70	6.04	12.50
	(1.00)	(2.23)	(1.60)	(2.05)	(2.20)	(1.21)	(1.13)	(1.38)	(2.62)
Somewhat Agree	31.83	46.58	32.20	28.63	18.40	30.56	34.94	34.56	38.13
	(1.53)	(3.94)	(2.39)	(2.80)	(3.48)	(1.79)	(1.91)	(2.76)	(3.85)
Strongly Agree	20.86	11.80	32.72	14.12	10.40	20.88	20.29	19.80	19.38
	(1.33)	(2.55)	(2.40)	(2.16)	(2.74)	(1.58)	(1.62)	(2.31)	(3.13)
Missing	5.91	11.18	2.36	6.87	8.00	6.20	4.03	6.04	1.88
	(0.77)	(2.49)	(0.78)	(1.57)	(2.44)	(0.94)	(0.79)	(1.38)	(1.08)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
	Non-financial development partner resources (e.g. human resources, technical assistance) are directed to where they are needed most in my country's education sector								
Strongly Disagree	11.29	5.59	10.73	11.83	19.20	10.89	11.27	8.05	15.63
	(1.04)	(1.82)	(1.59)	(2.00)	(3.54)	(1.21)	(1.27)	(1.58)	(2.88)
Somewhat Disagree	18.71	19.88	7.85	26.72	33.60	18.76	20.13	22.48	16.88
	(1.28)	(3.15)	(1.38)	(2.74)	(4.24)	(1.52)	(1.61)	(2.42)	(2.97)
Neither	11.08	9.94	8.90	16.79	7.20	11.95	9.82	9.40	9.38
	(1.03)	(2.37)	(1.46)	(2.31)	(2.32)	(1.26)	(1.20)	(1.69)	(2.31)
Somewhat Agree	34.41	43.48	39.01	27.10	24.00	34.19	35.91	34.56	45.63
	(1.56)	(3.92)	(2.50)	(2.75)	(3.84)	(1.85)	(1.93)	(2.76)	(3.95)
Strongly Agree	18.49	9.94	30.37	11.07	8.80	18.00	18.68	19.46	10.63
	(1.27)	(2.37)	(2.36)	(1.94)	(2.54)	(1.50)	(1.57)	(2.30)	(2.44)
Missing	6.02	11.18	3.14	6.49	7.20	6.20	4.19	6.04	1.88
	(0.78)	(2.49)	(0.89)	(1.52)	(2.32)	(0.94)	(0.80)	(1.38)	(1.08)
Observations	930	161	382	262	125	661	621	298	160

Table B9: What would your priorities be for any new additional aid spending? (% respondents selected)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
TVET	52.04	57.14	49.21	52.29	53.60	53.10	53.62	53.69	60.63
	(1.64)	(3.91)	(2.56)	(3.09)	(4.48)	(1.94)	(2.00)	(2.89)	(3.87)
Computers / Technology	41.40	47.83	45.29	38.17	28.00	39.18	40.42	43.96	38.75
	(1.62)	(3.95)	(2.55)	(3.01)	(4.03)	(1.90)	(1.97)	(2.88)	(3.86)
School Construction	40.11	37.27	41.10	43.51	33.60	39.18	42.03	38.93	46.25
	(1.61)	(3.82)	(2.52)	(3.07)	(4.24)	(1.90)	(1.98)	(2.83)	(3.95)
Foundational Literacy	40.75	47.83	40.58	32.82	48.80	39.79	44.77	39.60	39.38
	(1.61)	(3.95)	(2.52)	(2.91)	(4.49)	(1.91)	(2.00)	(2.84)	(3.87)
Public-private partnership	20.86	27.33	16.75	23.66	19.20	22.09	19.16	20.81	18.13
	(1.33)	(3.52)	(1.91)	(2.63)	(3.54)	(1.61)	(1.58)	(2.36)	(3.06)
Observations	930	161	382	262	125	661	621	298	160

Table B10: How strongly do you agree or disagree with the following statements? (% of respondents)

		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglophone Africa	Francophone Africa	Others*	Male	MoE	Director	Officer
	People have a certain amount of intelligence, and can't really do much to change it								
Strongly Disagree	27.53	18.63	23.82	38.55	27.20	26.17	25.60	27.52	25.63
	(1.47)	(3.08)	(2.18)	(3.01)	(4.00)	(1.71)	(1.75)	(2.59)	(3.46)
Somewhat Disagree	15.05	27.95	13.35	9.54	15.20	15.43	18.04	15.10	19.38
	(1.17)	(3.55)	(1.74)	(1.82)	(3.22)	(1.41)	(1.54)	(2.08)	(3.13)
Neither	9.57	6.83	5.24	13.36	18.40	9.68	9.50	10.74	9.38
	(0.97)	(1.99)	(1.14)	(2.11)	(3.48)	(1.15)	(1.18)	(1.80)	(2.31)
Somewhat Agree	24.52	25.47	32.46	16.03	16.80	24.81	25.44	23.83	30.63
	(1.41)	(3.44)	(2.40)	(2.27)	(3.36)	(1.68)	(1.75)	(2.47)	(3.66)
Strongly Agree	16.99	13.04	22.51	12.60	14.40	17.10	16.26	17.45	11.88
	(1.23)	(2.66)	(2.14)	(2.05)	(3.15)	(1.47)	(1.48)	(2.20)	(2.57)
Missing	6.34	8.07	2.62	9.92	8.00	6.81	5.15	5.37	3.13
	(0.80)	(2.15)	(0.82)	(1.85)	(2.44)	(0.98)	(0.89)	(1.31)	(1.38)
	People's intelligence is something that you can't change very much								
Strongly Disagree	26.02	18.01	21.47	37.02	27.20	24.66	25.12	24.83	21.25
	(1.44)	(3.04)	(2.10)	(2.99)	(4.00)	(1.68)	(1.74)	(2.51)	(3.24)
Somewhat Disagree	20.43	36.02	19.90	13.74	16.00	21.03	21.90	17.11	32.50
	(1.32)	(3.80)	(2.05)	(2.13)	(3.29)	(1.59)	(1.66)	(2.19)	(3.71)
Neither	10.32	5.59	7.33	12.60	20.80	10.74	10.31	13.09	8.13
	(1.00)	(1.82)	(1.34)	(2.05)	(3.64)	(1.21)	(1.22)	(1.96)	(2.17)
Somewhat Agree	23.33	23.60	29.32	17.94	16.00	23.90	24.48	26.17	21.88
	(1.39)	(3.36)	(2.33)	(2.37)	(3.29)	(1.66)	(1.73)	(2.55)	(3.28)
Strongly Agree	13.33	6.83	19.63	8.78	12.00	13.01	13.37	13.42	13.75
	(1.12)	(1.99)	(2.04)	(1.75)	(2.92)	(1.31)	(1.37)	(1.98)	(2.73)
Missing	6.56	9.94	2.36	9.92	8.00	6.66	4.83	5.37	2.50
	(0.81)	(2.37)	(0.78)	(1.85)	(2.44)	(0.97)	(0.86)	(1.31)	(1.24)

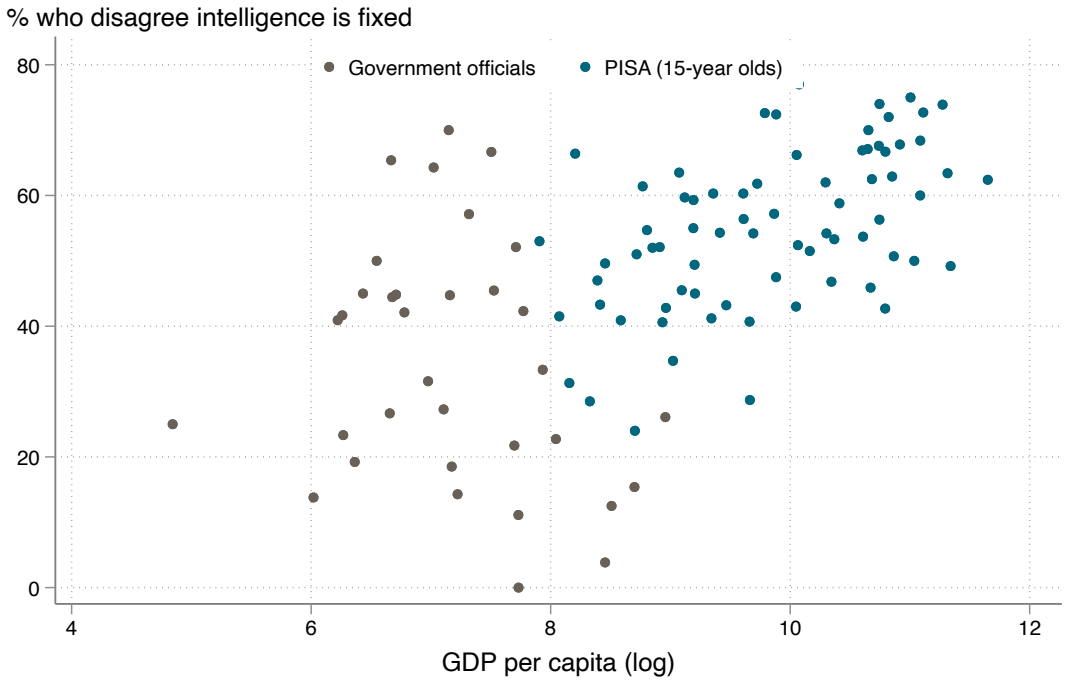
		Regions				Characteristics			
	Full Sample	Asia-Pacific	Anglo-phone Africa	Franco-phone Africa	Others*	Male	MoE	Director	Officer
People can learn new things, but you can't really change basic intelligence									
Strongly Disagree	18.92	9.94	12.04	34.73	18.40	17.40	17.55	19.80	19.38
	(1.29)	(2.37)	(1.67)	(2.95)	(3.48)	(1.48)	(1.53)	(2.31)	(3.13)
Somewhat Disagree	17.31	26.09	13.61	17.94	16.00	17.55	19.16	17.79	24.38
	(1.24)	(3.47)	(1.76)	(2.37)	(3.29)	(1.48)	(1.58)	(2.22)	(3.40)
Neither	8.60	4.97	6.81	11.07	13.60	9.23	7.57	8.72	6.88
	(0.92)	(1.72)	(1.29)	(1.94)	(3.08)	(1.13)	(1.06)	(1.64)	(2.01)
Somewhat Agree	26.99	33.54	34.55	12.60	25.60	27.69	29.15	28.86	28.75
	(1.46)	(3.73)	(2.44)	(2.05)	(3.92)	(1.74)	(1.83)	(2.63)	(3.59)
Strongly Agree	21.94	15.53	29.84	14.89	20.80	21.79	21.90	20.13	18.13
	(1.36)	(2.86)	(2.34)	(2.20)	(3.64)	(1.61)	(1.66)	(2.33)	(3.06)
Missing	6.24	9.94	3.14	8.78	5.60	6.35	4.67	4.70	2.50
	(0.79)	(2.37)	(0.89)	(1.75)	(2.06)	(0.95)	(0.85)	(1.23)	(1.24)
Observations	930	161	382	262	125	661	621	298	160

C. Appendix: Sorting vs Human Capital

As discussed in the introduction, a common view is that many education systems are in effect designed as filtration or sorting systems rather than education systems designed to uniformly improve human capital. There may be a view amongst some educators that some children are able to learn whereas others are not. We test this directly using the growth mindset scale (Dweck, 2000). We administer the three item growth mindset scale (Dweck, 2000). Each official is asked the extent to which they agree or disagree that a) "You have a certain amount of intelligence, and you can't really do much to change it", b) "People's intelligence is something that you can't change very much", and c) "People can learn new things, but you can't really change basic intelligence".

One of these questions was also asked to 15-year olds in 77 countries and economies as part of the 2018 Programme for International Student Assessment (PISA). Across high-income OECD countries, 63 percent of students disagreed with the statement that intelligence is something you can't change very much. In our sample just 36 percent of respondents disagreed with the same statement (Figure C12).

Figure C12: Growth Mindset is Lower in Poorer Countries



Note: This chart shows the average share per country of respondents who disagree or strongly disagree with the statement "Intelligence is something about you that you can't change very much."

We also adapt a method used by Attanasio et al., 2019 to elicit beliefs about the production function for human capital. For each respondent we estimate their beliefs about the labour market returns to completing secondary school for different children. We assess whether this estimate varies when considering a hypothetical child of each sex, from a rich or poor family, with low or high intelligence. Our hypothesis was that officials would consider education to be more beneficial for high intelligence boys from high income families.

Concretely, we ask respondents what they expect the average earnings to be for a hypothetical child when they are age 30. Each respondent is asked for two data points from four hypothetical children. The children comprise a 2x2 matrix of the rich/poor and

high/low intelligence. For each child we ask for expected earnings if they only completed primary school, and if they also completed secondary school. This tells us about how the expected returns to secondary school depend on the intelligence and family income of the child. Half of respondents answer the questions about a hypothetical boy, and half about a hypothetical girl.

We first calculate the expected returns for each hypothetical child, as the percentage growth in earnings from completing secondary school. This is the difference between expected earnings with secondary and expected earnings with primary, as a percentage of expected earnings with primary. We then regress this measure of expected returns on the characteristics of the hypothetical child, and characteristics of the official responding. As there are four observations per respondent, we cluster standard errors by individual respondent.

$$Returns = \sum_{k=1}^{3} \beta_k X_k + \sum_{j=1}^{3} \delta_j Z_j + \epsilon \tag{6}$$

WhereX_k are characteristics of the hypothetical child, such as being a girl or a boy, poor or rich and have a high or low IQ. We also include respondent characteristics for controls, represented by Z_j which includes gender, years of experience and their office role.

Contrary to our hypothesis, officials see no statistically significant difference between returns to education for girls and boys, or for low or high intelligence children. They expect returns to be 15 percentage points higher for children from poor families than from rich families. Female officials have higher expectations than male officials, particularly for girls (

Table C11: Correlates of beliefs about returns to education

	(1)	(2)	(3)
Child: Girl (vs Boy)	0.049	0.062	-0.075
	(0.098)	(0.092)	(0.088)
Child: Poor Family (vs Rich Family)	0.156***	0.156***	0.155***
	(0.043)	(0.043)	(0.043)
Child: High IQ (vs Low IQ)	0.016	0.017	0.018
	(0.042)	(0.042)	(0.042)
Official: Female		0.242**	0.109
		(0.098)	(0.098)
Official: Female X Child: Girl			0.423*
			(0.252)
Controls	No	Yes	Yes
Outcome Mean	0.979	0.979	0.979
N (Responses)	1,998	1,998	1,998
N (Respondents)	525	525	525
R^2	0.005	0.038	0.043

Note: The outcome is the official's belief about the % labour market return to secondary school over primary school. Controls include official's experience, job category, agency, government level (national or sub-national), and world region.* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors are shown in parentheses.