Globalization and Altruism
Towards the Poor in Developing Countries

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Extremely preliminary and incomplete

Abstract:

The link between globalization and attitudes towards the poor has never been established in an empirical test. Building upon Piketty (1995), we propose and test the hypothesis that in less developed countries (LDC), globalization in the form of foreign direct investment (FDI) can reduce altruism towards the poor. This causal link is partly driven by the perception in LDC that FDI provides the poor with a way out of poverty. Cross-country regressions using the World Values Survey reveal that FDI is indeed negatively correlated with support for redistribution and is positively correlated with perception of opportunities for the poor. The strength of these correlations increases with income. We follow the WVS results with a framed field experiment in India where high income givers can donate to low income recipients. We find that mentioning that the recipient lives near a foreign owned firm decreases donations and increases expectation of the recipient's income growth only if the foreign firm operates in a low-skill industry. Taken as a whole, our findings suggest that there is indeed a causal link between globalization and pro-poor redistribution that is mediated by beliefs about opportunities for the poor.

1. Introduction

A wide body of literature finds that inequality in less developed countries (LDCs) has

been increasing concomitant with market openness, particularly foreign direct investment. This

literature offers two possible explanations. The first is that openness fuels demand for higher

skilled workers while increasing global competition keeps low-skill wages low. [1] The second is

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[1] Three main factors that affect wage differential are: (1) trade increases price of skill-intensive goods, thus increase wages of high skilled workers (Acemoglu, 2003). See also Grossman and Helpman 1991, Helpman 2004, Thoenig and Verdier 2003, Acemoglu 2003, Andersen 2005, Feenstra and Hanson 1997, Robbins 1996, Robbins and Gindling 1999, Wood 1997, Berman and Machin 1998, Selin and Sener 2006, Ekholm and Midelfart. 2005. (2) higher wage premiums paid by exporting firms due to their high productivity (Melitz 2003, Alvarez et al. 2005. Country-specific evidence has been established in United States (Bernard and Jensen 1999), Indonesia (Amiti and Davis 2012), Colombia (Verhoogen 2008), Mexico (Verhoogen 2008) and larger sample of developing economies

what is usually referred to as the 'race to the bottom': competition between LDC governments to

reduce welfare-related spending in order to attract capital and increase exports.[2] However, it is

striking that the existing literature is relatively silent on government *political* rationale and

seeming immunity to the political consequences of rising inequality. Instead of looking at macro-

level explanations, we will take a different approach by exploring the micro-level determinants

for citizen's *support* for policies that would help ameliorate inequalities (i.e., pro-poor

redistribution). Specifically, we will investigate if market openness, particularly through the

prevalence of FDI, changes preferences among LDC citizens for redistributing to the poor. [3]

So far, no studies have explored how market openness affects citizens' support for the

poor in developing economies.[4] The vast number of studies on micro-level demand for

redistribution have focused on developed countries, and Scheve and Slaughter (2004) are the first

to contend (but not directly test) that FDI affects micro-level demands for redistribution-type

policies. [5] The reduction in government welfare assistance that accompanies market openness in

LDC's might suggest that the impact of openness on micro-level demand for redistribution in

LDC's may be very different from that of developed countries. It is important to fill this

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(Hoekman and Winters 2005; Goldberg and Pavcnik 2007), but debated by Schank et al. (2010) and Pavcnik et al. (2004)). and (3) liberalization of low-wage countries (e.g China) increase the competition to keep wages of unskilled labor low (see Woods 1997 on Latin America, Topalova 2005, 2010 on India and Kovak 2011 on Brazil).

[2] Unlike advanced industrialized economies, LDC governments are minimizing such expenditures in order to maintain low tax rates and improve competitiveness in a global economy (Mosley 2003; Kaufman and Segura 2001; Garrett 2001; Nooruddin and Simmons 2009; Rudra 2002, 2008; Segura-Ubiergo 2007; Wibbels 2006; Wibbels and Arce 2003). Although these studies do not directly contend that reducing government welfare assistance results in greater inequality, it is implicit in their analyses. These analyses view this type of spending on government-sponsored programs as having significant redistributive consequences. See Rudra (2004) for a more detailed discussion of the relationship between different types of LDC welfare spending, openness and inequality.

[3] We focus on FDI rather than trade because it is more visible to ordinary citizens. Put simply, the growing presence of multinationals may be perceived as a signal of a change in an LDC's economic policies towards openness.

[4] Note that Ventura (2006), Ehrlich (2010), Burgoon (2012) explore this question in developed countries.

[5] Scheve and Slaughter (2004) may be credited with turning scholarly attention towards the links between FDI and demands for redistribution. Using panel data from Great Britain collected from a 1991-1999 survey, Scheve and Slaughter (2004) show that FDI exacerbates worker insecurities because: (1) FDI increases labor demand elasticity since multinationals can substitute foreign workers with domestic labor; and (2) multinationals (MNCs) can substitute foreign factors of production in response to higher wages. Scheve and Slaughter (2004) speculate that since FDI is positively correlated with individual perceptions of economic insecurities, demand for (social insurance-type) redistribution will likely increase.

enormous lacuna in the literature because it may help explain why governments in LDC's feel that allowing large income differentials to persist and pursuing 'race to the bottom' policies are safe political strategies in the current era. In this paper we propose to fill this gap by combining insights from behavioral economics and political economy, and bringing multiple methods (theoretical, empirical, and experimental) to bear.

We hypothesize that as openness increases the presence of highly visible yardsticks of progress in LDC (such as international brands and companies introduced by FDI), ordinary citizens may perceive that the poor have better economic opportunities, which make redistribution a less pressing need. Our theoretical analysis builds upon insights from Piketty's (1995) seminal paper and posits that changes in beliefs take place when FDI enters LDC. While news of foreign investment in large manufacturing facilities may induce individuals from all income levels to initially believe that the poor now have more economic opportunities, the actual experience of successfully applying for jobs and working in these foreign facilities (or not) will only be felt by the poor. As a result, FDI may introduce an upward bias in the perception of middle and upper income individuals' about the prospects of upward mobility of the poor (POUMP) that remains uncorrected by the poor's actual experience with FDI. As a result, FDI may decrease support for pro-poor redistribution among middle and upper income individuals.

We test our hypothesis on the link between FDI and redistribution preferences in two stages: a cross country regression using World Values Survey (WVS) responses from LDCs and a field experiment in India. Our regressions based on WVS data reveal that there is a negative correlation between FDI and redistribution preferences, and a positive correlation between FDI and perceptions about opportunities for the poor. Importantly, we find support for our prediction that the strength of these correlations increases with an individual's income.

Next, we designed our field experiment in India to test whether there is indeed a causal link between FDI and redistribution preferences as we contend. We focus on middle/upper income donors for two reasons: 1) our theory predicts that the influence of FDI on pro-poor redistribution will be strongest for this group; and 2) this group has a larger impact on policy since wealthier citizens tend to dominate political institutions in developing economies.

The results from our experiment are striking. The glamour of foreign investment in LDC indeed shifts perceptions that more economic opportunities now exist for the poor, and simultaneously reduces donor support for redistribution. At the same time, however, donors do not perceive all types of FDI as the same; some are viewed as providing more opportunities for the poor than others. More specifically, donations differ in response to perceptions of the skill level associated with the foreign industry. Donors support lower levels of redistribution in response to FDI in low-skill industries (e.g., food and beverage) but *increase* their level of donation to the poor when confronted with high-skill FDI (e.g., information technology (IT)). Our findings are critical since previous research and our own data analysis indicate that FDI-regardless of the type of FDI-- is *not* increasing the poor's mobility in India, and developing economies more generally.[6]

2. Theoretical Model

A wealth of research focuses on explaining individual preferences for redistribution. These studies center on three broad categories of explanations: (1) demographic attributes such

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[6] FDI in LDCs is generally associated with greater economic opportunities for higher-skilled (and thus higher-income) labor groups (see, for examples, Ang 2009, Sani et al 2010, Carkovic and Levine 2002, Gorg et al 2007, Aitken, Harrison and Lipsey 1996, Feenstra and Hanson 1997, Gopinath and Chen 2003). For the particular case of India, Chakraborty and Basu 2002, Ray 2012, and Rudra 2012 have establish that FDI does not benefit the poor.

as gender, age, race, and religion (e.g. Luttmer 2001; Ponza et al 1988; Jaeger 2009, Scheve and Stasavage 2006, Svallfors 1997, Finseraas 2008) (2) ideological differences that may be driven by whether individuals believe people are poor because of their laziness (i.e., effort) or due to (external) circumstances outside of their control (i.e., luck) (e.g., Fong 2001, Krawczyk 2010, Ravallion and Lokshin 2000, Alesina and Angeletos 2005)[7]; and (3) economic self-interest, with support for redistribution increasing when individuals face income uncertainty in the future (Benabou and Ok 2001, Ravallion and Lokshin 2000, Moene and Wallerstein Alesina and LaFerrara 2005, Alesina and Guiliano 2009,Checchi and Filippin 2004, Beckman 2006, Neudstadt and Zweifel 2009).

This large body of research generally assumes that individual views on redistribution are relatively static. Yet as Margalit (2013) convincingly argues, individuals' support for redistribution can change, for instance, when they experience a reversal in their own economic fortune. Alternatively, Piketty (1995), in his seminal paper, discusses how an individual's learning process over time (i.e., generations) can drive her to adjust beliefs about the inherent inequality of opportunities. Piketty's (1995) model is unique in that it allows individuals to perceive different prospects of upward mobility for the poor and the rich. In other words, there may be a situation where a wealthy individual may perceive that her economic circumstances are more or less unchanged while the chances of the poor to escape poverty have improved.

Our theoretical foundations for how FDI affects individual demands for redistribution rests on the role of the rich's beliefs of economic opportunities as discussed by Piketty (1995).

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[7] When individuals perceive that poverty is a function of   factors beyond individual control, such as bad luck, random chance and/or the absence of opportunity, they are more likely to support redistribution (i.e., principle of inequality aversion).   On the other hand, when individuals perceive that poverty is a function of (the lack of) effort then they are less likely to support redistribution (i.e, fairness principle).Generally, voters on the left tend to believe that the poor are victims of circumstances beyond their control (luck) and therefore support higher levels of pro-poor redistribution.

Piketty (1995) models social mobility as a function of three unobserved parameters: the likelihood of the poor to escape poverty ($\pi 0 \in [0,1]$), the likelihood of the rich to remain out of poverty ($\pi 1 \in [0,1]$), and the relative role of effort (θ). All agents share the same principles of distributive justice: unequal opportunities that are beyond one's control should be corrected by government redistribution policies in the interest of the needy. He shows that this means that if the true parameters of social mobility ($\pi 0, \pi 1, \theta$) are common knowledge, everyone in generation t will vote for the same optimal tax rate ($T \in [0,1)$ to implement in generation t+1:

$$T_{t+1} = H_{t+1} (\pi_1 - \pi_0) / \alpha(y_1 - y_0) \theta^2$$

Where H_{t+1} is the fraction of the population that is rich at time t+1, y_1 is the income of the rich and y_0 is the income of the poor, and α is a constant. What is important is that this function is increasing in the inequality of opportunities ($\pi_1 - \pi_0$) and decreasing in the relative role of effort θ.

However, in actuality, the true parameters of social mobility ($\pi 0, \pi 1, \theta$) are unknown. Agent i in generation t inherits beliefs about these parameters from their parents ($\mu_{it} = (\pi 0_{it}, \pi 1_{it}, \theta_{it})$) and then chooses effort (e_{it}) to maximize her own income (y_{it}) based upon those beliefs. After observing the outcome of her own effort in generation t, the agent updates her beliefs about underlying parameters of social mobility to μ_{it+1} using standard Bayesian updating and then votes on redistribution. Piketty thus shows that if agents initially have different beliefs about society's structural parameters, this learning process will result in a situation where:

(1) Beliefs about underlying parameters of social mobility ($\pi 0_{it}, \pi 1_{it}, \theta_{it}$) do not ultimately converge to the truth ($\pi 0, \pi 1, \theta$).

(2) Over generations, class origins (μ_{i0} and y_{i0}) determine beliefs about social mobility and preferred tax rate. The steady state beliefs of social classes can be ranked as follows: among

the high income individuals, the upwardly mobile (UM) individuals (the "newly rich") will have beliefs that are more sympathetic to the poor than the "stable rich" (SR) and hence prefer a higher tax rate than the latter group. Among low-income individuals, the "stable poor" (SP) will prefer more redistribution than the downwardly mobile (DM, the poor with high income parents).

These findings provide the foundation for our hypothesis, which we sketch loosely in this first draft. In this paper, we think about FDI investment as an economic event that changes underlying social mobility parameters to $(\pi'_0, \pi'_1, \theta')$. These parameters are, as before, invisible to individuals. However, because the presence of multinationals in LDC is heavily advertised as a solution to poverty, individuals' beliefs move from μ_{it} to μ'_{it} to $(\pi 0_{it}+\alpha > \pi'0, \pi 1_{it}, \theta_{it})$ where $\alpha>0$. After this initial shock, the low income choose efforts to maximize their income in the next period and learn from their personal experiences that the true social mobility parameter must be less than $\pi_{0it}+\alpha$. On the other hand, when the rich individual chooses her effort to maximize her next period income, the outcome does not induce her to correct $\pi_{0it}+\alpha$. As a result, belief shocks from FDI cause the high income to have more optimistic views about the poor's new social mobility than the low income.

How will these biases among the high income translate to redistribution preferences? Since the stable rich already hold the most extreme beliefs that the poor have similar opportunities to the rich and, as a result, are redistributing the least, there is little room for redistribution to move down further. On the other hand, these biases may translate to real reduction in redistribution for the upwardly mobile since they had been supporting redistribution on the basis of their previously moderate beliefs.

Is it reasonable to assume that beliefs and altruism can change with symbols of economic progress? The tendency to associate FDI with increased economic prospects for the poor, regardless of the reality, may be particularly acute in LDC since the citizens of developing economies have been facing high levels of social indoctrination about the benefits of FDI in the post-dependency era.[8] In addition, research in behavioral economics has shown that individuals not only change their attitudes towards redistribution when presented with information that can be construed as reasons behind poverty but are also quick to latch upon excuses to justify self-interested behavior. [9]

One possible caveat might be if the rich differentiate between different types of FDI and their expected impacts on the poor.   Recent studies highlight the importance of disaggregating FDI, particularly in terms of the kinds of benefits certain types of FDI might bring to a nation (O'keef and Li 2011).   For instance, FDI may not shock beliefs about the poor's mobility if they are in notoriously high-skill (e.g., information technology) or corrupt (e.g., oil) sectors. Whether the rich consider all foreign companies to be superior potential economic opportunities for the poor than their domestic counterparts is an empirical question.

In summary, applying Piketty's model to the question of FDI's impact on redistribution preferences in LDC results in the following hypotheses that we will test empirically in this paper:

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[8] These type of indoctrination can lead to over-optimism about social mobility and low demand for redistribution, even if this optimism does not correspond to actual mobility rates (Alesina and Glaeser, 2004) . In contrast to the dependency era, FDI has been widely marketed as a symbol of progress and the road to poverty reduction by policymakers, Washington pundits, media officials, and international financial institutions. Take for instance recent statements by Zambia's foreign minister, during public discussions with the opposition party. According to a local newspaper, the Zambian minister stated that " the Zambian economy would not grow to expected levels that could reduce poverty if FDI was not attracted in the country. *There is no country that has fought poverty without attracting FDI*, …so let us not resist and discourage FDI since it is good for us as capital for job creation and technology transfer." (emphasis ours, *The Post* (Zambia), August 9, 2009, " Zambian minister urges opposition parties not to resist foreign investment.")

[9] See Fong and Oberholzer-Gee 2011, Esarey, Salmon and Barrilleaux 2011, Linardi and McConnell, 2011.

H1: The presence of FDI in developing economies reduces citizen support for redistribution.

H2: The presence of FDI in developing economies changes perception about the poor's upward mobility.

H3: The perception that FDI improves mobility prospects for the poor and are less deserving of pro-poor redistribution increases with income.

H4: Certain types (e.g., low-skill) of FDI in developing economies changes perceptions about the poor's upward mobility.

3. *Empirical Tests: FDI, redistribution and perceptions in World Values Survey*

Data and Methods

Starting from the 1970s, the World Value Survey has interviewed individuals across the world, asking questions about a wide range of issues, including support for redistribution. We use all data available from 1990 to 2004.   For a measure of redistribution preferences (H1) we recode all the response scale so that positive coefficients indicate support for pro-poor redistribution while negative ones indicate lack of support. To measure perception about the poor (H2), we recoded responses so that positive coefficients indicate beliefs that social mobility of the poor has improved.

We selected three questions from WVS that best measure redistribution preferences (H1). [10] The first question measures the extent to which respondents agree with the statement

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[10] For question 1, the original survey question in WVS is *"What is the importance of eliminating big income inequalities*?" with responses ranging from 1-5 where 1 indicates importance and high (5) indicates unimportance.

"*Eliminating big income inequality is very important*". Responses are coded in a scale of 1-5, with 5 being full agreement and 1 being complete disagreement. The second question measures respondents' agreement with the statement *"Government is doing too little against poverty"*. Responses of 3 indicate agreement and 1 indicate disagreement. For the last question, survey takers select numbers between from 1 (strongly disagree) to 10 (strongly agree) in response to the statement: "*The government should take more responsibility to ensure that everyone is provided for.*" This last question is the only one that was asked in more than one wave.

To measure perception of social mobility (H2), we searched the WVS for questions that measure beliefs about the likelihood of the poor to escape poverty (π_0), the likelihood of the rich to remain rich (π_1), and the role of effort in poverty (θ).[11] For π_0 we use the question "*In your opinion, do most poor people in this country have a chance of escaping from poverty, or is there very little chance of escaping?*" The response is coded as 1 if the survey taker agrees with the former statement and 0 otherwise. Unfortunately there was not a similar question for the opportunities of the rich (π_1). However, we were able to find a proxy for opinions about the role of effort in poverty (θ) with the question: *"Why are people in need?"* where we code it as 1 when the answer is "Poverty is caused by laziness" and 0 otherwise

The number of countries varies between a minimum of 14 to a maximum of 54 by wave and question. Summary statistics on our key independent and dependent variables are listed in Table 1 below. Our main coefficient of interest is FDI and Income. On average FDI makes up

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The second question appears in WVS as The original second question is "How much is the government doing against poverty?" Responses range from for 1 for Too Much to 3 for Too Little.

[11] Tying this back to the model and our original puzzle of why pro-poor policies appear to be less important in LDC as globalization progresses, let's explore the few ways FDI can lower preferences for redistribution. FDI can lower demand for redistribution in several ways : 1) by increasing beliefs about the likelihood of the poor to escape poverty (π_0). 2) by decreasing beliefs about the likelihood of the rich to remain out of poverty (π_1). 3) by increasing beliefs about the relative role of effort (θ). Even though we hypothesize that FDI will change perception in a way that is consistent with lowered redistribution, we have no strong priors on which of these three variables will function as the primary channel.

3.3% of GDP in the 56 LDC in our sample. Respondents are almost split evenly between males and females with an average age of 40 and an average number of children of 2. On average, respondents place themselves on the middle range of the income scale.

Table 1: Summary Statistics

Variable	Mean	Std Dev	Min	Median	Max	Obs	Countries
WVS Survey Questions							
Preferences for Redistribution							
Eliminate inequality important	2.06	1.17	1	2	5	17612	15
Gov do too little	2.73	0.52	1	3	3	54842	41
Gov should provide for all	6.22	2.87	1	6	10	156835	57
Perception about the Poor							
Poverty caused by laziness	0.32	0.46	0	0	1	43285	37
Have chance to escape	0.35	0.48	0	0	1	39725	42
Control Variables:							
Individual Level							
Age	39.84	15.52	15	37	101	168832	59
Full Employment	0.37	0.48	0	0	1	162863	58
Male	0.48	0.50	0	0	1	168963	59
Num. Children	1.99	1.77	0	2	15	156495	59
Scale of Income	4.39	2.34	1	4	10	150913	59
Country Level							
FDI (% GDP)	3.31	4.06	-2.05	2.46	20.42	154860	56
Trade (% GDP)	77.52	52.67	15.36	64.21	357.67	164968	56
Log GDP/cap	7.48	1.09	5.54	7.52	10.02	168301	57
Growth GDP/cap	2.70	3.81	-4.12	2.29	22.17	160298	57
Polity	3.10	5.90	-10	6	10	151098	54
Employment to Pop Ratio	53.56	9.71	34.05	53.51	82.35	132182	56

Note: For the variable Polity, -10 indicates full autocracy and +10 indicates full democracy. Full employment is 1 if the respondent is employed full time, 0 otherwise.

We now test our three main hypotheses. In all models, we follow Alesina and Guilano (2009) and use fixed effects model to control for country specific differences. We include the controls variables listed in Table 1 in all our WVS regressions.[12] Errors are clustered at the country level.

H1: FDI reduces support for redistribution

Table 2: Support for pro-poor goverment spending

	Cross section		Cross section		Time series	
					(3) OLS with time and country fixed effects	
	(1) Ordered Logit Eliminating large inequality important		(2) Ordered Logit Gov do too little against poverty (1-5)		Gov provide for everyone (1-10)	
	(A)	(B)	(A)	(B)	(A)	(B)
FDI (% GDP)	**-0.144*****	**-0.107*****	**-0.0454*****	**-0.0437*****	**-0.216****	**-0.211*****
	(0.0242)	**(0.025)**	**-0.0154**	**-0.0163**	**-0.0918**	**(0.0142)**
Income	-0.126***	-0.0908***	-0.00372	-0.00232	-0.0635***	-0.0606***
	(0.0213)	(0.0294)	-0.019	-0.022	-0.0149	(0.00537)
FDI x Income		**-0.00808****		**-0.000457**		**-0.000630**
		(0.00366)		**-0.00282**		**(0.00111)**
Lincom/nlcom	**Sig**		**Sig**		**Sig**	
Pseudo R2	0.0413	0.0417	0.0355	0.0355	0.018	0.018
Observations	15,249	15,249	40,608	40,608	95,930	95,930
Number of Countries	14	14	32	32	50	50

Table 2 analyzes whether FDI is correlated with the extent of respondents' agreement with the following statements: "*Eliminating large inequality is important* "(Model 1), "*Government does too little against poverty*" (Model 2) and "*Government should provide for everyone*" (Model 3). We use an ordered logistic regression for Model 1 and 2, where responses

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[12] We have also investigated the effect of controlling for high oil rents, since developing countries that are highly dependent on oil (and thereby oil-related FDI) tend to have high level of corruption and less confidence that the government (or FDI) will provide economic opportunities (see Ross 2012). Including this control had no impact on the results; however the sample size reduced by almost 25% in some cases because of missing data. Results available upon request.

take on 5 or less ordinal values, and an OLS for Model 3 where responses vary from 1 to 10.

Since all statements indicate support for pro-poor redistribution, our first hypothesis (H1)

predicts that the coefficients for FDI in all columns of Table 2 Model A will be negative and

significant.[13] We report only the coefficients of interest in this table – the full model and all

control variables can be seen in Appendix A.

Regression results for all three questions confirm our theoretical intuition. Translating

Model 2 into predicted probabilities, we find that as FDI (% GDP) inflows increase from the 25th

to 75th percentile, the probability that a respondent reports that the government is doing too little

to fight poverty decreases from 2.7% to 2.3% (12%). Similarly, the probability that a respondent

agrees that eliminating large income inequalities is unimportant increases by 27%.

Country level and individual level controls result in a very consistent picture, with

expected signs and significance for growth, males, age, and individual income (Appendix A).

Most interesting for our analysis, is the weak and inconsistent impact of trade on redistribution

preferences. This supports our intuition that FDI is more understandable to ordinary citizens as a

sign of globalization in comparison to trade.

**H2:   The presence of FDI in developing economies changes perception about the poor's
upward mobility.**

We next assess the mechanism (H2) through which FDI changes support for

redistribution. In particular we examine whether FDI improves perceptions of the poor's future

income mobility. Since all statements indicate improved perception of the poor's opportunity,

our second hypothesis (H2) predicts that the coefficients for FDI in all columns of Table 3 will

be positive and significant.

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[13] We will discuss Model B in H3.

First, in Table 3 Model (1A), we test whether FDI is correlated with the role of effort in poverty (θ) by regressing the likelihood that respondents in LDC agree with the statement "*Poverty is caused by laziness*". In Table 3 Model (2A), we test whether FDI is correlated with the likelihood of the poor to escape poverty (π_0) using the likelihood that respondents agree with the statement *"Poor people in this country have a chance to escape poverty"*. We use the same control variable and country fixed effects as we do in Table 2 and display only the main coefficients of interest (FDI and Income) here. Interestingly, we find that the coefficient on FDI is not significant for the role of luck in poverty but is positive and significant for the poor's opportunity.

Table 3: Perception of economic opportunities of the poor

	(1) Cross section		(2) Cross section	
	Logistic regression People are poor because of laziness		Logistic regression Have a chance to escape poverty	
	(A)	(B)	(A)	(B)
FDI (% GDP)	**0.0173**	**0.0114**	**0.0450****	**0.032**
	(0.0198)	**(0.0263)**	**(0.0179)**	**(0.0195)**
Income	0.0397**	0.0345*	0.0282	0.0165
	(0.0186)	(0.0193)	(0.0209)	(0.023)
FDI x Income		**0.00158**		**0.0035***
		(0.00250)		**0.0020**
Using Nlcom: (conditional effect of FDI and income)		**Not Sig**		**Sig**
Pseudo R2	0.0377	0.0338	0.0351	0.0353
Observations	22,577	22,577	25,258	25,258
Number of Countries	33	33	33	33

Is this view justified by reality? Does FDI indeed improve the poor's mobility prospects? This question is beyond the scope of this paper. However, when we regress objective measures of the poor's future mobility (economic growth, GDP per capita, infant mortality, life expectancy) on FDI (Appendix B), the lack of significance is consistent with the broader findings of the existing literature that has established that FDI is uncorrelated with any of these

measures (e.g., Ang 2009, Sani et al 2010, Carkovic and Levine 2002). Our results thus suggest that the change in perception about the poor is more a result of an uncorrected bias than informed opinion. Whether this bias is more pronounced for those whose daily experiences are removed from the poor (H3) is explored in the following section where we introduce an interaction between FDI and Individual Income.

H3: The effect of FDI on redistribution attitudes and perception of the poor is more pronounced among the rich.

Consistent with the literature and Piketty's model, the positive coefficient for Income in Table 3 suggests that the rich in general think that there are greater opportunities for the poor. In addition, the negative coefficient for Income in Table 2 supports the theoretical prediction that the rich are less supportive of redistribution. However, we do not know whether these attitudes change with FDI.

Model B in Table 2 and Table 3 tests our hypothesis that higher income respondents are more biased towards the perception that the poor are better off with FDI and hence redistribution is no longer necessary. We report the coefficient of the interaction term FDI x Income and denote whether the conditional coefficients are significant immediately below it.[14] If our hypothesis is correct, the interaction between FDI and income level should be positive and significant for all regressions in Table 3 and negative for all regressions in Table 2.

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[14] Tests for significance are performed using the lincom command in Stata.

Conditional coefficients: Effects of FDI on: Little Chance to Escape Poverty, at different Income Levels
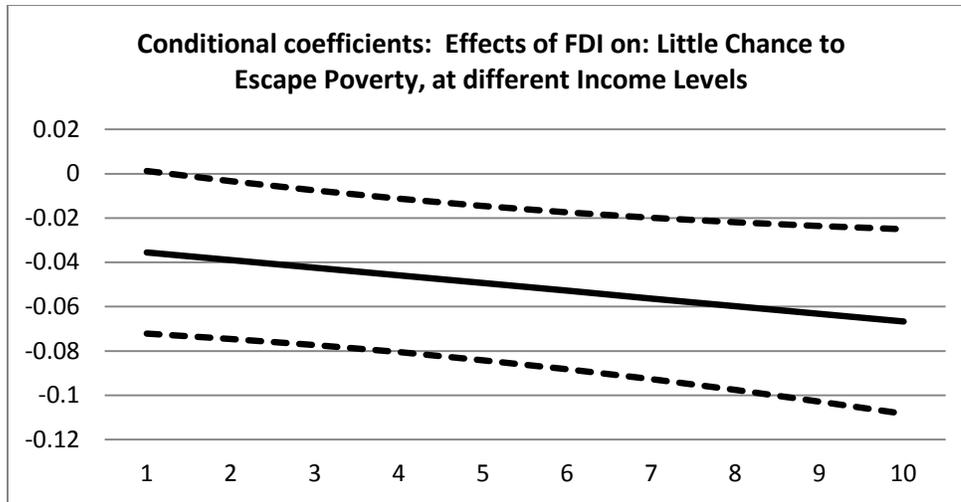
Figure 1: Effect of FDI at different Income Levels on stating that "the poor has little chance to escape poverty".

Our regression results indicate that the sign of the coefficient is consistent with our hypothesis and conditional coefficients are significant for all survey questions with the exception of *"People are poor because of laziness"*. Figure 1 plots the conditional coefficient of FDI on agreeing with the statement *"The poor has **little chance** to escape poverty"* against income scale. This indicates that those with higher income are more influenced by FDI in their belief that market exposure benefits all, including the poor. Interestingly, the rich are not more likely than the poor to think that poverty is the function of luck. Rather, FDI seems to reduce support for poverty-reduction policies for higher income individuals, perhaps because they view that 'effort' will pay off in the future in a global economy regardless of the cause of poverty.

As a whole, our WVS results in Tables 2 and 3 not only show a negative correlation between FDI and attitudes about the poor in developing countries but also provide some hints about the mechanism through which this is happening. First, in support of H1, we see a negative correlation between FDI and ordinary citizen's support for pro-poor redistribution. At the same

time, FDI also appears to be correlated with more optimistic views about the social mobility of the poor in support of H2. This appears to not be coming from changes in the relative role of effort, but from an increased likelihood that the poor will be able to escape poverty.[15] Finally, in support of H3 the significant interactions between income and FDI that can be seen in 4 out of the 5 survey questions suggest that the changes in attitudes are occurring more among the high income than the low income. Given that the theoretical prediction that the influence of pro-poor redistribution will be stronger for the upper middle class citizens is supported by the WVS, we will focus the rest of this paper on this segment of the population. In particular, we will investigate whether a causal link exist between FDI and changes in attitudes among the upper middle class. We will do so in a way that allows us to also test H4 since comparable cross-national data on FDI disaggregated by sectors does not exist.

4. **Experimental Design**

In this section we investigate if 1) FDI decreases willingness to give to the poor ; 2) FDI increases perception of the poor's social mobility; and 3) if the type of FDI matters. The first two objectives are challenging because many exogenous factors, such as changes in political ideology or economic crises, can affect both FDI and redistribution preferences. Though it may be possible to establish a causal link through a careful selection of instrumental variables, it may be difficult to find an instrument that is able to do so for both dependent variables (redistribution preferences AND attitudes).

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[15] Tying this discussion to Piketty's model, there appear to be no increase in θ and an increase in π_0. The WVS do not provide a good measure of the social mobility of the rich (π_1) – but we will be able to elicit this parameter directly through our field experiment.

In an effort to address this concern, we conduct a present-day field experiment in a less developed country. Our design is as follows: middle and upper-income LDC citizens will be recruited to complete surveys and then given the opportunity to donate the compensation for their time to the poor. All participants are told the same information about the poor, which includes local industries near the poor, but a random selection will be informed that these industries are foreign owned. Participants then state their projection of their recipients' income now and five years from now, and decide how much to donate. Our method of asking individuals to actually donate has an advantage over survey methods. Since it is costless for an individual to profess their support for redistribution on hypothetical questions, and not doing so may expose the individual to scorn or being label uncharitable, it is likely that altruism measured by survey methods may be biased upwards.

We choose to conduct our experiment in India because it is a good representation of a developing country that has attracted a large amount of FDI in recent times but has not experienced changes in actual mobility rates for the poor. [16] This makes it a good country to test whether FDI induces optimism bias about the poor. FDI in India also shares some interesting characteristics with FDI in other developing countries: substantial FDI is focused on low skill industries such as food and garment manufacturing as well as by high skill industries such as IT. This allows us to assess H4, which is whether the effect of FDI perception about the opportunity of the poor differs depending on the skill level needed to enter the industry. While the idea of FDI in manufacturing might conjure images of large factories employing an army of manual workers, the image of FDI in the information technology (IT) sector is often connected with jobs for highly educated engineers.

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[16] Our own state-level Indian data analysis of FDI (as well as FDI disaggregated by sector) supports this conjecture (see Appendix C).

We conducted our experiments during the month of July 2013 in university classrooms, workplaces, and public locations (e.g. mall, restaurants) in three different cities/states covering both North and South India (Karnataka, Tamil Nadu, Maharashtra). Subjects were recruited through classrooms, community meetings, office functions, or were approached randomly as they were passing by. The activity was explained as a fifteen minute survey about how individuals make decisions about money. Participants were informed that after completing the survey, they would enter a drawing where one out of five will receive Rs.1000 (US $16.50) as compensation for their time. This amount was the equivalent to 10 times the minimum daily wage in India, which is Rs.100. Table 4 lists the location of our sessions and the number of subjects in each session. In total we had 160 participants in 7 experimental sessions.

Table 4: Location and Subjects for Experimental Sessions

Session	Location	Number of Subjects
1	Saint Joseph's College (Bangalore)	25
2	Garuda Mall (Bangalore)	25
3	Merlinhawk Aeropsapce PVT LTD (Bangalore)	30
4	Indian Institute of Management- Bangalore	30
5	Nalandar (Women's Group) (Bangalore)	15
6	Hosur Airworks Engineering (Hosur)	28
7	United Business Media (Mumbai)	25

At the start of the experiment, we informed participants of the opportunity to donate part of the Rs.1000 that they might receive as compensation to a low income individual if they choose to do so. Participants were aware that they would be making donation decisions in three scenarios and payment would be determined based on a randomly selected scenario.[17] They were also told that every person whose name was drawn to receive compensation would be matched

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[17] This eliminates concerns about endowment effect.

with a single individual who had been identified and verified by local Indian nongovernment organizations (NGOs) as making around the minimum daily wage (Rs.100) last year. The photo and information of each of these individuals were enclosed in folders that were available for all participants to inspect after the session. The folders were placed in plain view during the experiment in order to remind the participants that they were giving to real people but remained closed until the end to prevent any bias in giving with regards to color, ethnicity, age, gender, or religion.

Participants were aware that their decisions will remain completely anonymous. At the beginning of the session, each participant received an envelope containing the survey sheets and an ID 'receipt' that they kept. After the completed surveys were submitted in the sealed envelopes, the experimenter conducted the lottery for the compensation, ended the experiment, and left the location. The individuals whose numeric ID corresponded to drawn lottery numbers were instructed to go to a different room to receive their payment of Rs 1000 minus the amount that they donated from a staff member that was unaware of the nature or content of the experiment.

Individuals in each session were first randomized into two groups. Participants in the Low Skill group were matched with recipients residing near a large US-based food and beverage firm. Participants in the High Skill group were matched with recipients residing near a large US-based telecommunications firm. The food and beverage firm was located in the city of Gurgaon while the telecommunications firm was in Hyderabad. To ensure that the selection of the city has no effect on altruism, our first scenario below presented donors with just the city of residence and the income level of the recipient. Participants are always asked to state both their donation

and their take home pay in every giving decision to confirm that they understood the decision problem. The first scenario states:

> You have Rs. 1000. The person in the picture (Person A) resides in Gurgaon and made only Rs. 100/day last year.   How much do you want to give to Person A?
>
> **Your answer:**
>
> (1) *I would like to donate Rs. _____ to Person A.*
>
> (2) *Your take home compensation:*
>
> *Rs.1000 – your donation to Person A. = Rs_____*

For the second scenario, participants in both the High Skill group and the Low Skill group were further randomized into a Baseline and FDI group. As a whole, our design utilized a 2x2 design: the treatments were Low Skill Baseline, Low Skill FDI, High Skill Baseline, High Skill FDI. The Low Skill Baseline group received the following question:

> You have Rs. 1000. The person in the picture (Person A) resides in Gurgaon and made only Rs. 100/day last year.   There is a food and beverage industry close to Person A's neighborhood. The firm employs more than 100 workers and has low skilled workers. Based on this information, how much do you want to give to Person A?

The Low Skill FDI group received identical information, except for the second sentence, which was modified to the following:

> There is a food and beverage industry owned and operated by a US company close to Person A's neighborhood.

The phrase "*owned and operated by a US company*" constituted our entire experimental

treatment. Participants assigned to the high-skill industry treatment received identical

information except for the name of the city, which states *Hyderabad* instead of *Gurgaon*, and the

industry, which is *telecommunications* instead of *food and beverage*. .

After making their second donation decisions, we ask participants to answer the questions

about the poor daily income in 2013 and in 2018. We also ask participant to state their own

income in 2013 and 2018, as well as what they think the poor's income will be in those years.[18].

We take the difference in income between 2018 and 2013 as the individual's projection of the

poor's mobility as well as their own future economic prospects.

1. *Based on the information so far, how much do you think Person A will earn per day this year (2013)?*
   State an amount in Rs. / day. _____

2. *How much do you think Person A will earn per day **five years from now (2018)**?*
   State an amount in Rs. / day. _____

3. *On a scale of 1-10 with 1 being the lowest income and 10 being the highest income (in India),*

   A. *where would you place your current (2013) income? (If you are a student, think of your family's income) _____*
   B. *what do you predict your income will be in five years (2018)? (If you are a student, think of your family's income) _____*

Together with the third scenario, where we ask donors about what they will give if recipients did

not apply for the job,[19] our experimental design generates the following variables:

- baseline giving (Donation 1) in Scenario 1, giving conditional on whether FDI was mentioned (Donation 2 and 3)

- middle/upper income donor's expectation of lower income recipient's earning in 2013 and 2018 conditional on whether FDI was mentioned

- middle/upper income donor's expectation of own earning in 2013 and 2018 conditional on whether FDI was mentioned

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[18] In order to overcome reluctance to reveal this sensitive information about income, we ask participants to state their income in terms of income scale

[19] The final scenario is presented as follows: "You have Rs. 1000. The person in the picture (Person A) resides in Gurgaon and made only Rs. 100/day last year.   There is a food and beverage industry   close to Person A's neighborhood. The firm employs more than 100 workers and has low skilled workers. Person A did not apply for the job. Based on this information, how much do you want to give to Person A?"

Our hypothesis from Section 2 can be restated as follows:

- **H1: Donation 2 (Baseline) > Donation 2 (FDI)**

  The presence of FDI in developing economies reduces citizen support for redistribution.

- **H2: Poor 2018- 2013 (Baseline) < Poor 2018- 2013 (FDI)**

  The presence of FDI in developing economies changes perception about the poor's

  upward mobility.

- **H3:** We do not test the differential effect of FDI on income level here since we focus

  only on giving among the upper middle class.

- **H4:** FDI in low skills industries causes more upward bias in perceived opportunities for

  the poor than FDI in high skills industries.

  Poor 2018- 2013 (Baseline_HighSkill) - Poor 2018- 2013 (FDI_High) > Poor 2018-

  2013 (Baseline_LowSkill)- Poor 2018- 2013 (FDI_LowSkill)

  Donation 2 (Baseline_HighSkill)- Donation 2 (FDI_High) < Donation 2

  (Baseline_LowSkill)- Donation 2 (FDI_LowSkill)

5. **Experimental Results**

Table 5 below presents the summary statistics of demographics, initial attitudes and

initial altruism towards the poor as measured by Donation 1 before the FDI treatment.[20]

Randomization into the four treatments appears to work: there is no statistically significant

difference between the Control and FDI group before the FDI treatment in Scenario 2. In

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[20] For the ideology question we ask "Why do you think the person in the picture (Person A) was making only Rs.100 a day?" Participants choose between: "Person A does not like to work hard" and "Person A is unlucky and born to a poor family".

addition, even though participants appear to be giving recipients in Hyderabad more than recipients in Gurgaon, these differences are not significant. We therefore conclude that the selection of the cities has no effect on initial altruism.[21]

Table 5: Participant characteristics across treatment groups

Variables	Hyderabad (High Skill)		Gurgaon (Low Skill)	
	Baseline	*FDI*	*Baseline*	*FDI*
Donation (Rp)	487 (77.98)	539 (88.6)	441 (71.5)	353 (58.8)
Age	32.3 (4.9)	33 (5.3)	34.2 (5.55)	35.3 (5.65)
Female	0.31 (0.05)	0.28 (0.04)	0.41 (0.07)	0.28 (0.04)
Unlucky	0.55 (0.09)	0.57 (0.09)	0.57 (0.09)	0.62 (0.10)
N	43	39	39	39

Table 6 presents our main results. We find that mentioning that foreign ownership significantly decreases donation and increases donor's expectation of the low income recipient's earning growth in the case of food and beverage manufacturing. This is not true, however, when the recipient resides near an IT firm. This suggests that 1) FDI, through the glamour of foreign brands, indeed shifts perception about economic opportunities for the poor, and consequently reduces redistribution, 2) the change in perception depends on the skill level associated with the industry, with FDI in lower skill industry perceived as bringing more benefits to the poor. Donors support lower levels of redistribution in response to FDI in low-skill industries (e.g.,

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[21] The smallest p-value from our pairwise t-tests is 0.20 for a two-sided t-test comparing donation 1 in High Skill FDI (539) to Low Skill FDI (353). The second smallest p-value is 0.23 for a two-sided t-test comparing Female in Low Skill Baseline (0.41) to Low Skill FDI (0.28).

food and beverage) but increase their level of donation to the poor when confronted with high-

skill FDI (e.g., information technology (IT)).

Table 6: Experimental results

	Donation 2				Poor 2018 - Poor 2013			
	(1)	(2)	(3) Low Skill	(4) High Skill	(1)	(2)	(3) Low Skill	(4) High Skill
VARIABLES	All	All			All	All		
FDI Frame	-9.409	-138.2*	-151.7**	104.3	44.19***	72.64*	75.04*	1.662
	(77.71)	(72.10)	(68.55)	(67.86)	(15.88)	(43.37)	(43.43)	(43.59)
High skill	27.53	-96.84			-37.12*	-2.461		
	(46.72)	(71.11)			(20.38)	(42.99)		
High skill x FDI Frame		250.0**				-60.91		
		(99.90)				(62.59)		
Control var:								
Female	59.20	47.65	-32.46	-106.4	-19.27	-5.973	-11.87	60.02
	(43.47)	(55.11)	(76.84)	(75.98)	(60.52)	(33.90)	(46.42)	(49.80)
Age	2.329	2.515	3.254	3.165	0.492	1.183	0.947	1.027
	(1.417)	(1.938)	(2.607)	(3.068)	(0.668)	(1.238)	(1.452)	(2.953)
Poor unlucky	105.7***	105.8*	107.3	118.1**	-30.66	-36.31	-53.90	-6.424
	(40.13)	(54.16)	(76.14)	(59.55)	(37.28)	(31.97)	(43.90)	(36.96)
Poor are responsible	-120.4*	-122.7**	-126.7*	-13.78	14.31	16.52	39.80	-41.63
	(66.83)	(54.33)	(74.42)	(64.52)	(42.40)	(31.35)	(41.40)	(47.35)
Foreign firms good for poor	65.92	68.87	115.5	12.49				
	(65.42)	(50.50)	(73.43)	(63.92)				
Constant	53.31	109.5	-6.027	165.9	171.5*	118.7	78.08	111.7
	(230.1)	(166.8)	(224.4)	(356.6)	(96.82)	(98.36)	(125.1)	(223.9)
Fixed effects	no	no	no	no	no	no	no	no
Random effects	no	yes	yes	yes	no	yes	yes	yes
ITSector=0	no	no	yes	yes	no	no	yes	yes
Observations	137	137	67	77	112	112	59	55
Number of Session	8	8	8	8	8	8	8	8
R-squared	0.133							

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1, #p<0.106

6. **Conclusion**

Does FDI affect redistribution preferences in developing economies? To answer this, we explored cross-national survey evidence and designed a field experiment in India where ordinary citizens from middle and upper income backgrounds were given an opportunity to donate to low income recipients. As recipients, we recruited two types of low income individuals: those who lived within commuting distance of a large foreign IT firm, and those who lived within near a large foreign food and beverage firm. This allowed us to check whether perception about new economic opportunities for the poor varies with different types of FDI, particularly with respect to the skill level associated with particular industries.

We find that mentioning that foreign ownership significantly decreases donation and increases donor's expectation of the low income recipient's earning potential. Consequently, through the glamour of foreign brands, FDI indeed shifts perception about economic opportunities for the poor, and reduces redistribution. The caveat, however, is that the change in perception depends on the skill level associated with the industry. It appears that the presence of FDI in a lower skill industry (food and beverage) affects donor's perceptions that more economic opportunities are available to the poor. In contrast, a higher-skill foreign industry (IT) has minimal impact on redistribution, and in some cases even prompts donors to increase their donation contributions. Our findings are critical since both existing studies and our own data analysis indicate that FDI has shown little evidence of increasing (or decreasing) the poor's mobility in developing economies thus far.

What are the long-term implications of our findings, given that FDI is a relatively new occurence in many developing countries? Once the upper and middle income arrives at the misperception that the poor no longer needs as much help, it may be difficult to return support for redistribution to its previous level. Research in behavioral economics has shown that individuals readily exploit "moral wiggle room" to justify less altruistic actions. This includes avoiding information about the recipient that may induce the donor to give more (Dana et al.2007, Fong and Oberholzer-Gee 2011) and embracing plausible excuses that allow them to give less while protecting their reputation (Andreoni and Bernheim, 2009, Linardi and McConnell, 2011).   This is an issue worth exploring in future research.

In sum, we are the first to empirically identify one channel through which prospects for upward mobility for the poor can change and directly impact support for pro-poor policies as a consequence: globalization.   Our findings suggest that we bring back a large body of research on micro-level determinants (ala Piketty, 1995) that has been overlooked by scholars focused on explaining redistribution policies from a political institutions perspective.   This includes the vast literature that explore demographic determinants of redistribution – such as gender, wealth, age, ideology and number of children[22] , and more specifically studies in political economy that focus on how an individual's beliefs about differences in social mobility affect her preferences for redistribution.

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[22] For effect of beliefs about social mobility on preferences for redistribution, see Piketty 1995, Benabou and Ok 2001, Ravallion and Lokshin 2000, Kaufman 2009, Alesina and LaFerrara 2005, Alesina and Guiliano 2009,Checchi and Filippin 2004, Beckman 2006, Neudstadt and Zweifel 2009. For the "luck or effort" angle see Fong 2001, Krawczyk 2010, Ravallion and Lokshin 2000, Alesina and Angeletos 2005. Briefly, when individuals perceive that poverty is a function of   factors beyond individual control, such as bad luck, random chance and/or the absence of opportunity, they are more likely to support redistribution (i.e., principle of inequality aversion). On the other hand, when individuals perceive that poverty is a function of (the lack of) effort then they are less likely to support redistribution (i.e, fairness principle). For the effect of demographics, see Svallfors 1997, Finseraas 2008, Alesina and Ferrara 2005, Rehm 2005, Linos 2003, Alesina and Giuliano 2009.

This analysis also suggests that the globalization-redistribution link in advanced industrialized economies functions differently in developing nations. Our findings represent a clear departure from existing research (focused mainly on OECD nations) which assumes globalization generates insecurities that automatically translate into greater demands for redistribution (Rodrik 1996, Garrett 1998). We hereby provide a missing piece of the puzzle for why previous research has found that LDC governments have been lowering government welfare assistance concomitant with globalization: the demand for redistribution amongst the better-off groups has been decreasing in response to the increasing presence of (low-skill) foreign firms.

Appendix A

Table 1:
Full Regression results from Table 2 Panel A, Base model

	(1) Cross section Ordered Logit Eliminating large inequality Important (1-5)	(2) Cross section Ordered Logit Gov do too little against poverty (1-3)	(3) Time series OLS w time/country FE Gov provide for everyone (1-10)
FDI (% GDP)	**-0.144***	**-0.0454***	**-0.216****
	(0.0242)	**-0.0154**	**-0.0918**
Trade (% GDP)	-0.00120	0.00792*	-0.0261
	(0.00178)	(0.00420)	(0.0238)
Polity	-0.0703***	-0.00511	-0.0240
	(0.0214)	(0.0191)	(0.0438)
Growth in GDP per capita	0.0980***	-0.0753***	-0.0579
	(0.0317)	(0.0285)	(0.0434)
GDP per capita	0.171	-0.0576	-1.316
	(0.178)	(0.0930)	(1.310)
Employment /Population	0.0591***	-0.0338	0.109
	(0.0151)	(0.0226)	(0.0811)
Individual Level Indicators			
Fully Employed	-0.0153	0.0329	-0.0621**
	(0.0408)	(0.0690)	(0.0301)
Scale of Income	0.126***	-0.00372	-0.0635***
	(0.0213)	(0.0190)	(0.0149)
Male	0.142***	-0.101***	-0.0809**
	(0.0403)	(0.0306)	(0.0323)
Age	-0.0142***	0.00274	0.00850***
	(0.00216)	(0.00247)	(0.00191)
Number of Children	-0.0303	-0.0565***	-0.0146
	(0.0205)	(0.0196)	(0.0101)
Country FE	Yes	Yes	Yes
Time FE	No	No	Yes
R2	0.0413	0.0355	0.018
Observations	15,249	40,608	95,930
Number of countries	14	32	50

Full Regression results from Panel A for Interaction model and Panel B to be added.

Appendix B: Effect of FDI on objective measures of poverty

	(1) GDP per capita Growth	(2) GDP Growth	(3) Infant Mortality Rate (logged)	(4) Life Expectancy (logged)
FDI (% GDP)	0.226	0.226	-0.00507	-0.00141
	(0.275)	(0.275)	(0.00979)	(0.00203)
Population Growth	-0.0100	-0.0100	0.154*	-0.0341
	(1.546)	(1.546)	(0.0818)	(0.0227)
Polity	-0.175	-0.175	0.00588	-0.00219
	(0.153)	(0.153)	(0.00708)	(0.00180)
Government Consumption				
(% GDP)	-0.258	-0.258	0.00419	0.000201
	(0.230)	(0.230)	(0.00395)	(0.000915)
Trade (% GDP)	0.108***	0.108***	-0.00399**	0.000588
	(0.0272)	(0.0272)	(0.00197)	(0.000564)
GDP per capita (logged)	-3.321	-3.321	-0.303***	0.0416*
	(3.052)	(3.052)	(0.0905)	(0.0247)
Constant	0.226	0.226	-0.00507	-0.00141
	(0.275)	(0.275)	(0.00979)	(0.00203)
Country Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes
Observations	138,021	138,021	139,941	139,941
R-squared	0.376	0.376	0.788	0.421
Number of Countries	51	51	51	51

Robust standard errors in parentheses ; *** p<0.01, ** p<0.05, * p<0.1

Appendix C: Sectoral effect of FDI in India on objective economic measures

VARIABLES	(1) GDPcap	(2) GINI (urban)	(3) GDPcap	(4) GINI (urban)	(5) GDPcap	(6) GINI (urban)	(7) GDPcap	(8) GINI (urban)	(9) GDPca
FDI total	2.640	-1.91e-07							
	(2.042)	(1.22e-06)							
popgrowth	-117,208	0.00658	10,375	0.000789	-241,253	0.125	6.052e+06	3.171	259.9
	(175,946)	(0.108)	(176,890)	(0.108)	(202,749)	(0.115)	(1.201e+07)	(5.170)	(203,46
growth	225,670***	0.0574	219,862***	0.0443	293,716***	0.0312	666,888**	0.0268	253,391
	(61,495)	(0.0479)	(63,835)	(0.0481)	(88,826)	(0.0552)	(285,149)	(0.122)	(100,15
excess rainfall		-0.0141**		-0.0140**		-0.0142**		-0.0338**	
		(0.00574)		(0.00581)		(0.00627)		(0.0125)	
gov health spending		-7.86e-06				-8.63e-06		4.81e-05*	
		(5.22e-06)				(5.59e-06)		(2.80e-05)	
FDI in manuf			4.633	-2.61e-06					
			(3.485)	(2.13e-06)					
FDI services					-11.54*	-3.34e-07			
					(6.350)	(3.57e-06)			
FDI textiles							-6.975	1.37e-05	
							(69.54)	(3.07e-05)	
FDI chemicals									-21.81
									(26.74
FDI food&bev									
Constant	13,217	0.318***	24,308*	0.315***	7,474	0.318***	-63,722	0.260***	44,599
	(14,065)	(0.00958)	(14,156)	(0.00947)	(18,948)	(0.0114)	(207,158)	(0.0909)	(18,741
Observations	281	207	246	204	211	177	52	52	165
R-squared	0.636	0.640	0.692	0.635	0.697	0.636	0.868	0.445	0.700
Number of id	28	17	25	17	24	17	10	10	17

Standard errors parentheses
*** p<0.01, ** 0.05, * p<0.1