

**Jobs and Intimate Partner  
Violence – Evidence from a  
Field Experiment in Ethiopia**

*Andreas Kotsadam, Espen Villanger*

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The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email [office@cesifo.de](mailto:office@cesifo.de)

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# Jobs and Intimate Partner Violence – Evidence from a Field Experiment in Ethiopia

## Abstract

We identify the effects of employment on Intimate Partner Violence (IPV) by collaborating with 27 large companies in Ethiopia to randomly assign jobs to equally qualified female applicants. The job offers increase formal employment, earnings, and earnings shares within couples in the short and medium run but we can reject relatively small effects in any direction on our main outcome, physical IPV. In the short run, job offers reduce emotional abuse and there are indications of heterogeneous effects whereby women with low bargaining power at baseline experience increased risks of abuse if offered a job.

JEL-Codes: J200, O100, Z100.

Keywords: employment, gender, RCT, IPV, violence Ethiopia.

*Andreas Kotsadam*  
*The Ragnar Frisch Centre for*  
*Economic Research*  
*Norway – 0349 Oslo*  
*andreas.kotsadam@frisch.uio.no*

*Espen Villanger*  
*Christian Michelsen Institute*  
*Norway – 5892 Bergen*  
*espen.villanger@cmi.no*

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# I Introduction

Female employment is on the rise in the poorest countries of the world, driven in part by a general shift from agriculture to service sector jobs and light manufacturing (Heath and Jayachandran, 2016). This trend is strong in Ethiopia, where the manufacturing sector is growing quickly and provides many jobs for women (Gelb et al., 2017). Improved employment opportunities for women has been shown to increase their human capital, delay fertility, mobilize career aspirations, and is generally believed to increase female empowerment (Jensen, 2012; Heath and Mobarak, 2015). The effects of women’s employment on intimate partner violence (IPV)<sup>1</sup> are, however, ambiguous. On the one hand, employment may reduce women’s risk of IPV by increasing their bargaining power and improve outside options. On the other hand, it may fuel aggressive responses from partners viewing their status as threatened or by partners intending to extract some of the extra resources brought by the job. The worry that IPV increases with female employment makes the net utility of female employment at the individual level uncertain (Heath and Jayachandran, 2016). In addition to being harmful in itself, IPV has also been shown to entail substantial externalities (Carrell and Hoekstra, 2010; Pollak, 2004; Doyle and Aizer, 2018; Aizer, 2011). Fearon and Hoeffler (2014) estimate that the global costs of IPV amount to over 5 percent of World GDP and that the costs of IPV in Sub-Saharan Africa amount to almost 15 percent of the regional GDP.

We investigate the effects of women’s employment on IPV in Ethiopia using a large scale pre-registered randomized field experiment. Qualified female job applicants were randomly assigned to a job offer which substantially increased earnings and job probabilities in our 6 months, 12 months, and 18 months follow up surveys. We can reject relatively small effects on physical abuse in either direction. We find that being offered a job decreases emotional violence after 6 months but our longer term results suggest that

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<sup>1</sup>We mainly use the terms IPV or abuse when we refer to physical violence against women perpetrated by their partners. When we do not refer to physical abuse we will explicitly label the violence with other terms, such as emotional violence or controlling behavior.

this effect is unstable over time. We find short run heterogeneous effects whereby women with low bargaining power at baseline experience increased abuse if they are randomly assigned a job offer. This is consistent with the theoretical models in Eswaran and Malhotra (2011) and Tauchen et al. (1991) as well as with the empirical results in Heath (2014). Apart from the differential effects with respect to baseline bargaining power we do not find any heterogeneity. In particular, we do not find that the effects are moderated by previous levels of abuse or previous employment, nor robustly by community level factors.

Our paper contributes to a rapidly growing literature on IPV in economics. Economists have investigated a range of different determinants of IPV such as education (Erten and Keskin, 2018; Gulesci et al., 2018), property rights (Amaral, 2017), culture and social norms (Alesina et al., 2016; Tur-Prats, 2018), divorce laws (Brassiolo, 2016; Stevenson and Wolfers, 2006; Garcia-Ramos, 2017), weather shocks (Miguel, 2005; Cools et al., 2019; Abiona and Koppensteiner, 2016; Sekhri and Storeygard, 2014) and gender ratios (Amaral and Bhalotra, 2017). They have also investigated the effects of interventions to reduce partner violence, such as female police stations (Amaral et al., 2018), mandatory arrest laws and no drop policies (Iyengar, 2009; Aizer and Dal Bo, 2009), gender and entrepreneurship training (Green et al., 2015; Bulte and Lensink, 2018), awareness raising (Villanger, 2019), and edutainment (Banerjee et al., 2018; Green et al., 2017). There is also a literature on the male motives of partner violence, focusing on expressive factors such as relieving frustration (Tauchen et al., 1991), information asymmetries and signalling (Anderberg et al., 2018, 2016), emotional cues (Card and Dahl, 2011) and instrumental reasons such as resource extraction (Bloch and Rao, 2002).

By estimating the causal effects of jobs on IPV, our paper is most closely related to the literature on female employment and IPV. In particular, we provide strong evidence for the non-existence of large average individual level effects in our setting. Previous studies in the US (Aizer 2010), in Spain (Tur-Prats 2017), in the UK (Anderberg et al.

2016), in Mexico (Davila, 2018), and in India (Amaral et al., 2015; Chin, 2012) that have investigated the question with quasi-experimental methods have all investigated the effects of employment at the aggregate level with mixed results. There are related areas of study that have utilized randomized assignment to programs in order to identify causal parameters, such as the effects of cash transfers (e.g. Haushofer et al. (2019); Hidrobo et al. (2016); Heath and Roy (2018); Angelucci (2008)) and microcredit (Pronyk et al. 2006). These studies often find that increased resources to women reduce IPV or that it has no effect.<sup>2</sup> Haushofer et al. (2019) are able to dig further into husbands motives for IPV by exploiting a large randomized cash transfer in Kenya that is sometimes given to the husband and sometimes given to the wife. With the exception of sexual violence, they find that husbands use physical abuse instrumentally to extract resources from the wives. Cash transfers and microcredit are, however, likely to have other effects than formal employment has. Women’s employment directly challenges men’s breadwinner status, it is observable from outside the household, affects daily behavior directly, and provides access to social networks (Cools and Kotsadam, 2017).

Access to a wide battery of moderators at baseline, as well as measures of likely important mediators such as empowerment and attitudes (which are highly correlated with abuse), enables us to test different mechanisms more fully than previous studies on jobs and IPV. In doing so we also obtain results that speak to the literature on other effects of female employment apart from IPV (see Heath and Jayachandran (2016) for an overview of this literature). For instance, and in contrast to e.g. Atkin (2009), we do not find that women’s bargaining power increases with job offers. Neither do we find an effect on controlling behavior nor on attitudes towards abuse.

We are further able to investigate the role of relative earnings within the household as well as spending behavior. It does not seem to be the case that women’s relative income affects the risk of abuse, not even if she starts earning more than her partner or if the

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<sup>2</sup>Across the 56 quantitative outcomes included in a recent review by Buller et al. (2018), more than half were statistically insignificant.

partner is unemployed. In contrast to the results in Haushofer et al. (2019), exploiting the panel feature of our data to investigate how changes in abuse affect changes in spending, we do not find that abuse seems to be used instrumentally by the husband to alter the wife’s spending behavior.

Our results also speak to the larger literature on the effects of industrialization on individual welfare. Blattman and Dercon (2018) find that industrial job offers in Ethiopia did not increase wages or even the probability of being employed after one year.<sup>3</sup> In contrast, we find that the job offers increase earnings and that there are still differences in employment probabilities over time. As such, our results are more in line with results from observational studies, and in particular with Getahun and Villanger (2018) who find that employment in Ethiopian flower farms increased welfare for rural women.

## II Employment and IPV

The correlation between individual level female employment and IPV is generally positive in Sub-Saharan Africa (Guarnieri and Rainer, 2018) and even more so in areas with higher acceptance of abuse (Cools and Kotsadam 2017), and in countries with less gender equality (Heise and Kotsadam 2015). The literature using quasi experimental designs has found that local level female employment reduces abuse in the US and the UK (Aizer, 2010; Anderberg et al., 2016), and increases abuse in Mexico (Davila, 2018) and in areas of Spain with stronger male breadwinner norms (Tur-Prats, 2017).

Theories on the effects of employment on IPV also point in different directions, largely depending on whether violence is seen as expressive or instrumental and whether the effects are moderated by other behavior and attitudes at the micro or macro level. In bargaining models of the household that consider violence to be expressive, so that men get increased utility from abusing, employment and increased female resources are seen as

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<sup>3</sup>They found that an entrepreneurial program had larger effects on employment in the short run, but going back to the sample five years later they found complete convergence in employment across all groups over time (Blattman et al., 2019).

protective as they improve women's outside options (Manser and Brown 1980; McElroy and Horney 1981; Lundberg and Pollak 1996; Farmer and Tiefenthaler 1997; Pollak 2005; Anderberg et al. 2016). If violence is instrumental, however, an increase in women's resources may yield a higher risk of abuse despite initially increased female bargaining power. The reasons are that violence may be used to counteract the concomitant increase in female power and because there are more resources to "extract" from female hands (Eswaran and Malhotra 2011; Heise and Garcia-Moreno 2002; Heath 2014). A condition is that the increase in bargaining power still leaves her below her exit point, for instance due to the exit point being too far away to start with. Heath (2014) finds a positive correlation between employment and IPV in Bangladesh only for women with low education or who were younger when they married. The result is consistent with the baseline level of bargaining power being an important moderator for the effects of employment.

Relative resources between spouses are likely to matter for identity reasons, especially if women start earning more than their partners. Such atypical roles may lead to status inconsistencies and, hence, threaten male identity (Akerlof and Kranton, 2000; Bertrand et al., 2015). Theories of male identity and IPV stress that his aggressive behavior is triggered when his breadwinner status is threatened (Hornung et al., 1981; Jewkes, 2002; Macmillan and Gartner, 1999), especially for men with conservative gender norms (Atkinson et al., 2005; Angelucci, 2008).

The effects of female employment are generally thought to be moderated by macro level factors, such as acceptance of divorce, the share of women working, male identity norms, and the degree of acceptance of abuse in society. One possible reason for the positive correlation between employment and IPV in developing countries is that partnership dissolution may be costlier for financial or social reasons and therefore the outside option is practically non-existent or further away (Bhalotra et al., 2018; Doyle and Aizer, 2018). This is for instance the reason provided by Bulte and Lensink (2018), whom conduct an evaluation of a gender and entrepreneurship training in Vietnam and find that

it increased IPV. They argue that the results are driven by increased female incomes in combination with a large stigma associated with divorce, which leaves little real outside options. Vyas and Watts (2009) point to a pioneering hypothesis whereby the risk of IPV may be largest for the women that start taking the first jobs in an area because they break with norms about women’s roles. Consistent with this, Heise and Kotsadam (2015) find that the positive association between abuse and working for cash is strongest in countries where fewer women work. Cools and Kotsadam (2017) argue that community level attitudes toward abuse are also likely to be important by giving a sort of impunity to husbands that want to reinstate their power within the household. They find a larger positive correlation between working and abuse for women in areas where wife-beating is considered more acceptable. Kotsadam et al. (2017) find that mining increases female employment and that it leads to higher levels of IPV in areas with higher levels of acceptance. This is also consistent with the finding by Tur-Prats (2017) that the response to better labor market conditions for women is increased violence in parts of Spain with a traditional nuclear family tradition and no effects in areas of Spain with a traditional stem family tradition. She interprets her results in an identity framework where men lose identity utility if their breadwinner role is threatened in traditional cultures. The effects of employment on IPV are thus argued to be context dependent.

### **III The Context and The Field Experiment**

Ethiopia is one of the least developed countries in the world, with a majority of the population working in agriculture. The culture is generally described as patriarchal and there is a widespread acceptance of IPV (Kedir and Admasachew, 2010). While women’s legal rights with respect to divorce and civil liberties are formally equal to men’s, informal rules and adverse cultural norms affect family relations and in practice women often lose their property when divorcing (CEDAW, 2011). Using data from the world values survey (WVS) and from the Demographic and Health Surveys (DHS) we show in Figure 1

that Ethiopia scores low on acceptability of divorce and high on acceptance of abuse.<sup>4</sup> According to the theories outlined in Section II, both of these factors would lead us to expect that the effects of employment on IPV would be more negative in Ethiopia than in many other places.

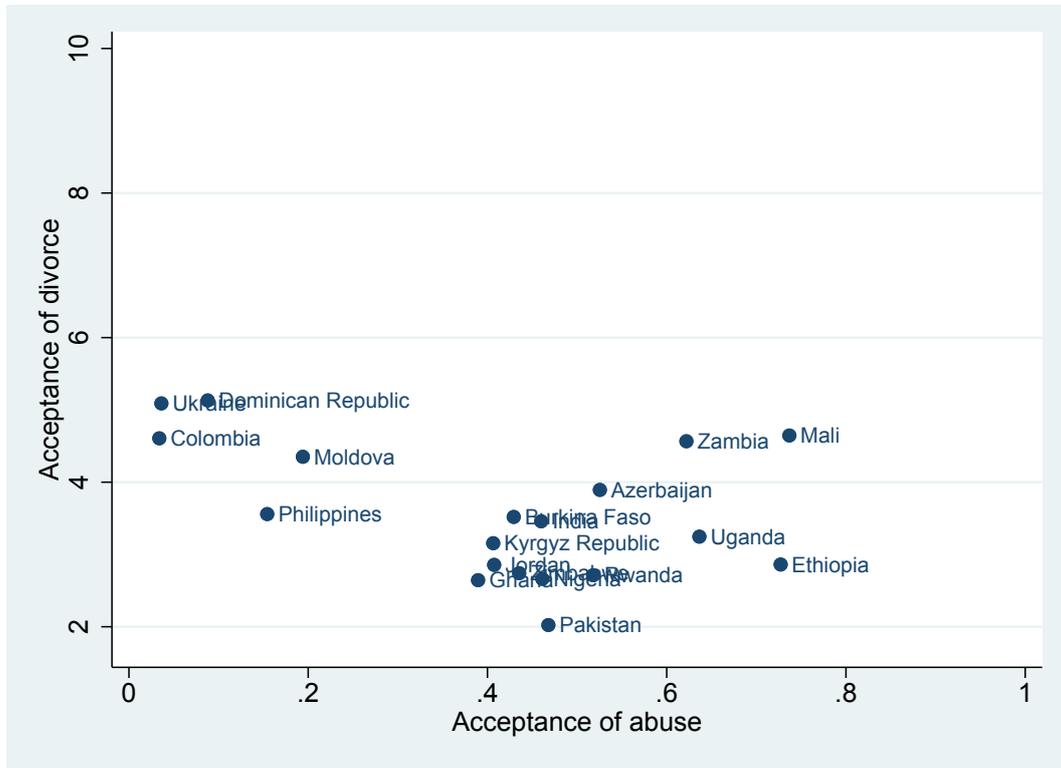


Figure 1: Comparison of Ethiopia to other countries  
*Own calculations based on data from the WVS and the DHS, see text.*

The Ethiopian manufacturing sector is growing quickly and the Ethiopian Government is actively accommodating foreign direct investors. One way of doing so is to build industrial parks to provide economies of scale for the potential investors. We work with 27 firms within such industrial parks. More specifically, our intervention centers on shoes and garment factories in five different regions: Tigray, Amhara, Oromia, SNNP, and Dire

<sup>4</sup>The question in the WVS is "Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. Divorce" The answers are given on a scale from 1-10, where 1 is never justified and 10 is always justified. The mean across all 100 countries in the WVS is 4.7 and in Ethiopia it is 2.9. In fact, only 10 countries have a lower score. The acceptance of abuse variable in the DHS data is based on the same questions we have for acceptance of abuse and is equal to one if abuse is accepted in at least one of the cases. The sample of DHS countries are those included in Heise and Kotsadam (2015) and DHS data for Ethiopia in 2000, 2005, and 2011 is added (adding 2016 data for Ethiopia does not change the ranking of the countries).

Dawa. In the factories we study, people earn on average 1021 ETB (around 38 dollars) per month and they usually work for 8 hours per day, 6 days a week. The location of the industrial parks are shown in Figure 2a.

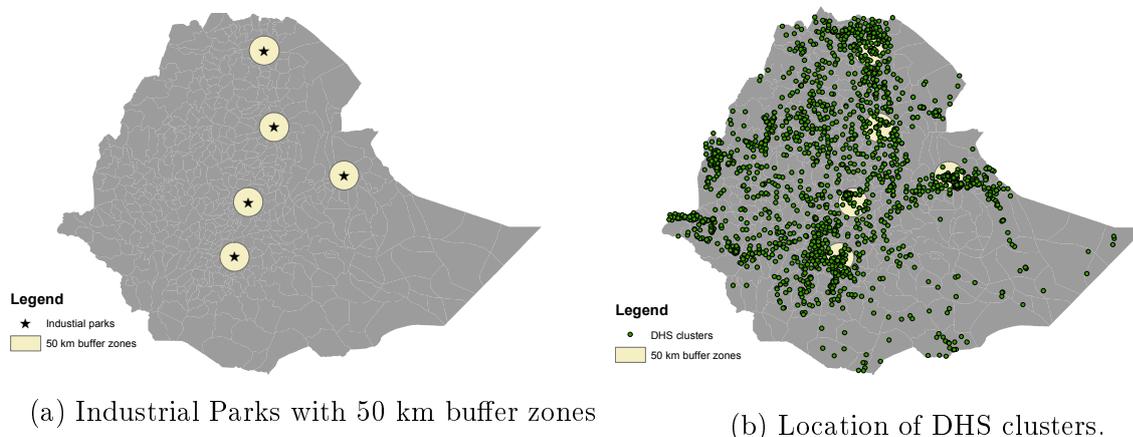


Figure 2: Industrial Parks and DHS data

The factories' standard procedure of hiring is to advertise bulks of positions by posting on the front gate, by word of mouth, and on local job boards. The applicants are asked to gather on a specific day and are screened for eligibility using verbal and physical tests. The companies we collaborate with were hiring new workers and were willing to slightly alter their recruitment process. They first assess all job applicants and determine whether each applicant is eligible for the job or not. Then, from the pool of eligible candidates, we create lists of women having partners. From the lists with eligible and partnered entry-level applicants, we randomly assign around half (depending on the number of available positions and the number of available partnered women) to either receiving a job offer in the given factory (treatment) or to a control group. The randomization is possible since there is large surplus demand for jobs. The randomization was done using computers and the lists were sent back via email. The applicants are informed about the procedure before the randomization is conducted.

## IV Data and empirical strategy

The women were interviewed before they started working. This baseline data collection took place between March 2016 and March 2018, depending on when the firms were hiring. The first follow up data collection was conducted around 6 months after the first interview.<sup>5</sup> The survey contains modules gathering demographic and background information, including measures of earnings and other socio economic variables. We developed a comprehensive module for IPV containing questions on both attitudes and experience with IPV. We also include questions on female empowerment similar to the questions in the Demographic and Health Surveys (DHS).

We interviewed 1871 partnered women at baseline. Of these, 374 were not randomly allocated to jobs due to a misunderstanding in one place and due to internet problems during the state of emergency in another. We still collected data for these women but we do not include them in our main analysis.<sup>6</sup> Out of the 1463 randomly assigned women in our baseline sample we managed to interview 1262 for the first follow up (619 treated and 643 control women). We show in Appendix Table A1 that attrition is unrelated to treatment status. The only variable correlated with attrition is age: older women are less likely to attrit.

Our main specification is:

$$(1) Y_{i,t1} = \alpha Y_{i,t0} + \beta Treatment_i + \gamma X_{i,t0} + \delta List_i + \epsilon_{it},$$

where  $i$  indexes individuals,  $t0$  refers to baseline values, and  $t1$  is the first follow up. We will also show results for  $t2$  and  $t3$ , that is for the more medium run follow up surveys.  $Y_{i,t1}$  will most often be a measure of abuse (see below).  $Treatment_i$  is a the dummy variable equal to 1 if the woman was randomized to get the job offer and zero if not.

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<sup>5</sup>There is some variation in timing due to a state of emergency and insecurities in some areas at some points in time.

<sup>6</sup>The results including these women are very similar and none of the conclusions change if we do include them as we show in the Appendix Section A.7.

This captures the so called intention to treat effect and it gives us an estimate of the total effect of being randomized to get a job offer. We always include  $List_i$ , which are list fixed effects (blocking variables) as women are randomized within this unit. As long as treatment status is randomly assigned we do not expect any baseline differences between treated and control women. We include control variables in some specifications to see if we can increase precision. In particular we include *Abuse last 3 months* at baseline and a vector of individual level baseline controls  $X_{i,t0}$  (described below). We use robust standard errors.<sup>7</sup>

Our main outcome variable, *Abuse last 3 months*, is set equal to one for women who answer that they had a partner doing one of the following to them during the last 3 months prior to being interviewed: Pushing, shaking, slapping, throwing something, twisting an arm, striking with a fist or something that could cause injury, or kicking or dragging (any of which is classified by the DHS as "less severe violence"), attempting to strangle or burn, threatening with a knife, gun, or other type of weapon, and attacking with a knife, gun, or other type of weapon (any of which is classified by the DHS as "severe violence"), or physically forcing intercourse or any other sexual acts, or forcing her to perform sexual acts with threats or in any other way (any of which is classified by the DHS as "sexual violence").

It is important to apply accurate descriptions of the violence that has occurred in order to maximize disclosure (Ellsberg et al. 2001) and we therefore ask about a wide range of abusive acts using indicators of internationally validated standardized IPV measures. We base the questions and sequencing on the WHO Violence Against Women Instrument (Ellsberg and Heise 2002) and the Conflict Tactics Scales (Straus 1979; Hindin et al. 2008). Using a modified Conflict Tactics Scale (CTS) has several advantages compared to many other datasets on violence (see Kishor (2005) for an extensive overview). A characteristic of CTS is that it uses several different questions regarding specific acts of

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<sup>7</sup>There is no need to cluster the standard errors at the factory level since the randomization is at the level of the individual (Abadie et al., 2017).

violence. In this way the measure is less likely to be polluted by different understandings of what constitutes violence. CTS is also argued to reduce underreporting, as it gives respondents multiple opportunities to disclose their experiences of violence (Kishor 2005; La Mattina 2017).

In Table 1 we see that around 29 percent of the women in the sample have ever been abused and around 13 percent have been so during the last three months. Notably, we see that the rate of recent abuse in the full sample has decreased from 19 to 13 percent from baseline to the first follow up. In addition to our main outcome we also measure emotional violence and controlling behaviors. The questions about emotional violence are the same as in the DHS surveys and are coded as one if the partner humiliated, threatened or insulted the woman.<sup>8</sup> We follow Heise and Kotsadam (2015) and create a variable for the number of controlling issues last 3 months by adding the number of positive responses to questions regarding jealousy, controlling and manipulating behaviors.<sup>9</sup>

We measure female empowerment with questions on intra-household decision making (see Seymour and Peterman (2018) for a recent review and discussion about such measures). We create an empowerment index based on 12 different questions on intra-household decision making.<sup>10</sup> For each of the 12 questions we create a dummy variable which equals 1 if the partner has the final say or if the partner decides together with some other member of the household.<sup>11</sup> We then add the 12 variables together and divide by 12 to get an index ranging between 0 and 1. The survey also includes 11 questions on a wider set of attitudes toward gender equality. We recode each of these questions into

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<sup>8</sup>See survey questions 13-15b in the survey provided in Appendix Section A9 for exact wordings.

<sup>9</sup>See questions 7b-11b.

<sup>10</sup>We have 15 different questions in the survey on intra-household decision making. Not all questions apply to all people in the sample, however. For example, the decision to send a child to school has missing values for all individuals that do not have children. We therefore pre-registered that we would use the 12 questions that were more likely to apply to everyone (questions J1.03-J1.15 in the survey).

<sup>11</sup>If the individual decides together with the partner we code the variable as zero only if she has "a lot" of input into the decision (i.e. category 4 on the J1B questions) and otherwise as 1. All other values of J1A are coded as zero on the partner has the final say variables.

Table 1: Descriptive statistics

	(1)	
	Mean	SD
<i>Physical abuse variables (1st follow up)</i>		
Abuse	0.290	(0.454)
Abuse last 3 months	0.129	(0.336)
Less severe	0.260	(0.439)
Less severe last 3 months	0.109	(0.311)
Severe	0.018	(0.134)
Severe last 3 months	0.003	(0.056)
Sexual	0.092	(0.289)
Sexual last 3 months	0.036	(0.187)
<i>Other outcome variables (1st follow up)</i>		
Emotional	0.399	(0.490)
Emotional last 3 months	0.177	(0.382)
Nr of control issues	1.010	(1.549)
Nr control last 3 months	0.376	(0.862)
Empowerment index	0.361	(0.327)
Nr empowerment items	4.334	(3.919)
Equality index	0.126	(0.136)
Nr equality items	1.260	(1.361)
<i>Employment and income variables (1st follow up)</i>		
Any wage job last 6 months	0.498	(0.500)
Earnings from wage job last 6 months (in Birr)	2114	(3244)
Share of earnings from wage job	0.320	(0.395)
Earnings last 6 months (in Birr)	2818	(3919)
Share of earnings	0.349	(0.395)
Income last 6 months (in Birr)	3434	(4116)
Share of income	0.229	(0.274)
She earns more than him	0.249	(0.433)
<i>Main baseline variables</i>		
Treatment	0.490	(0.500)
Abuse last 3 months	0.193	(0.395)
Any formal wage job (ever)	0.308	(0.462)
Age	24.909	(6.139)
Justified: goes out	0.300	(0.459)
Justified: neglects ch	0.352	(0.478)
Justified: refuses sex	0.151	(0.358)
Justified: argues	0.197	(0.398)
Justified: burns food	0.196	(0.397)
Muslim	0.140	(0.347)
Protestant	0.229	(0.420)
Medium education	0.514	(0.500)
High education	0.215	(0.411)
Father beat mother	0.351	(0.477)
<i>N</i>	1262	

*Notes:* All variables are measured at the first follow up except for Treatment and the baseline controls.

dummy variables so that 1 is gender unequal.<sup>12</sup> We again create an index where we add the dummies together and divide by 11.

The vector of individual level controls are all taken from the baseline survey. Employment at baseline is based on the answer to the survey question: "Have you ever had a formal job with salary before?". From this we create the variable *Any formal wage job (ever)*, which equals one if the answer is yes. Table 1 shows that around 31 percent of women have ever had a formal job at any time before the survey.

We also collected data on attitudes toward IPV by asking the same questions as the main ones used in the DHS surveys. For each of the five variables we code them as one if the respondent agrees that a husband is justified in beating his wife in the five following situations: She goes out without telling him, she neglects the children, she argues with him, she refuses to have sex with him, or she burns the food. Following previous research (e.g. Cools and Kotsadam 2017) we also create a variable *Father beat mother*, which is equal to one if the respondent answers yes to the question: "As far as you know, did your father ever beat your mother?".

We include a set of demographic variables. We retain the continuous coding of age in years and dummy code the religious affiliation of our respondents. The majority are Orthodox Christians and we let that be the base category (together with the few people answering Catholic or Other and create dummies for the other two main denominations (Muslim and Protestant). We recode the years of schooling variable into low (<10 years), medium (10 years), and high (>10 years) and use low education as the base category.

We test for baseline balance on these variables both individually and together by regressing  $Treatment_i$  on the variables one by one while controlling for the blocking variables (Lists). As many variables are tested we do not necessarily expect all of them to be statistically insignificant. We see in columns 1 and 2 of Table 2 that being Muslim

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<sup>12</sup>See questions GA1-GA11 in the survey, we recode e.g. 1 or 2 to be 1 on statement GA1 and 3 or 4 on statement GA2.

Table 2: Balance tests and predictions of control variables.

	(1)	(2)	(3)	(4)
	Treatment		Abuse last 3 months 1st follow up	
Abuse last 3 months (B)	-0.0057 (0.037)	0.0069 (0.037)	0.19*** (0.032)	0.19*** (0.032)
Any formal wage job (ever)	0.00063 (0.0030)	-0.0018 (0.0031)	0.017 (0.022)	0.0077 (0.022)
Age	-0.065** (0.032)	-0.053 (0.039)	-0.0012 (0.0019)	-0.0012 (0.0019)
Justified: goes out	-0.053* (0.032)	-0.040 (0.040)	0.014 (0.022)	-0.0051 (0.025)
Justified: neglects ch	-0.068* (0.041)	-0.050 (0.049)	0.016 (0.021)	-0.0072 (0.027)
Justified: refuses sex	-0.015 (0.037)	0.040 (0.045)	-0.0091 (0.028)	-0.060* (0.032)
Justified: argues	-0.015 (0.039)	0.041 (0.049)	0.041 (0.026)	0.036 (0.030)
Justified: burns food	0.039 (0.033)	0.040 (0.033)	0.046* (0.027)	0.040 (0.033)
Muslim	-0.13** (0.054)	-0.13** (0.058)	0.0036 (0.037)	-0.0012 (0.038)
Protestant	0.12* (0.065)	0.11 (0.067)	0.0064 (0.042)	0.034 (0.042)
Medium education	-0.061* (0.034)	-0.068 (0.051)	-0.010 (0.022)	-0.029 (0.029)
High education	0.056 (0.037)	-0.010 (0.056)	-0.0059 (0.024)	-0.019 (0.032)
Father beat mother	-0.059* (0.031)	-0.064** (0.031)	0.026 (0.021)	0.019 (0.021)
No. of observations	1262	1262	1262	1262
R-squared		0.08	0.11	0.11
F-test		1.26		3.43
P-value of F-test		0.26		0.06

*Notes:* Columns 1 and 3 show coefficients when we include the variables one by one. All regressions control block fixed effects. Robust SE in parentheses.

and having seen your father abuse your mother are statistically significantly correlated with treatment. We also include all variables at the same time and find that the variables cannot predict treatment status together in an F-test ( $F=1.26$   $p=0.26$ ). We therefore view the randomization as successful. In columns 3 and 4 we test how the same control variables predict IPV at follow up and we note that they do ( $F=3.43$   $p=0.06$ ), but that IPV at baseline is the only strong predictor. We note that Muslim, which is the variable with the strongest imbalance in treatment probability, is not correlated with Abuse.

In the Appendix Section A.2 we compare data from our survey to data from the

DHS. The rates of IPV are similar and comparing our data to the same areas in the DHS, the numbers are similar also with respect to employment. We also show that there is variation across our study areas with respect to levels of abuse, employment, divorce rates, and acceptance of abuse as measured in the DHS. We later use these data to explore heterogeneous treatment effects.

## A) Employment and income variables

We have several measures that enable us to investigate the effects of job assignment on job take-up and earnings. In the 6 months follow up analysis we create a variable, *Any wage job last 6 months*, which equals one if the respondents answer affirmatively on either one of the two questions: "Did you start working at Factory X" (the one where the respondent applied) or "Have you had any other formal salaried job with salary since the last interview". For the later follow up analyzes (at 12 and 18 months) we instead create a dummy variable based on earnings from any wage job (where 1 equals positive earnings).<sup>13</sup>

As not all women offered a job start working and as some women not offered a job at this time are able to find another job we do not expect treatment to perfectly predict job status. To measure and to some extent account for imperfect compliance we also estimate an IV model of the following form:

$$(2) \text{Any wage job last 6 months}_{i,t1} = \alpha Y_{i,t0} + \beta \text{Treatment}_i + \gamma X_{i,t0} + \delta \text{List}_i + \epsilon_{it};$$

$$(3) Y_{i,t1} = \alpha Y_{i,t0} + \beta \text{Predicted}(\text{Any wage job last 6 months})_{i,t1} + \gamma X_{i,t0} + \delta \text{List}_i + \epsilon_{it}$$

That is, we predict recent formal wage employment with the randomization and use the predicted values for formal employment in the second stage to calculate the local average treatment effect of having a formal job on Abuse last 3 months. It should be noted that the exclusion restriction need not hold for variables such as earnings and

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<sup>13</sup>This was not pre-specified in the analysis plan but we change it anyway as it makes little sense to continue to base the variable on whether they started working at the factory.

Table 3: First stages: Effects of treatment on employment and earnings.

	(1)	(2)	(3)	(4)
	Any wage job	Earnings from wage job	Share of wage earnings	She earns more
Treatment	0.40*** (0.025)	1726.8*** (172.6)	0.19*** (0.025)	0.14*** (0.028)
Mean dep. var in C group	0.29	1292.02	0.23	0.18
No. of observations	1262	1262	930	930
R-squared	0.29	0.22	0.22	0.16
Controls	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The outcomes refer to the last six months. Share of wage earnings refers to her share of the total couple wage earnings during the last six months. She earns more is a dummy for whether the woman has higher earnings than her partner.

income shares as it is likely that getting a job affects a person's identity in addition to the effects it has on income. We therefore pre-specified that the intention to treat specification is the main specification. The IV models should rather be seen as explorative tests of mechanisms for the results.

## V Main results

We start by showing the effects of the randomization on employment related variables in Table 3. We see a large effect on the probability of having had any wage job during the last six months. While 29 percent in the control group have had such a job, this share increases to 69 percent for the treatment group. We also see large effects on earnings and on the woman's share of couple earnings and incomes. The women's earnings from wage jobs is more than doubled (column 2), her share of within couple earnings is increasing (column 3), and the probability that she earns more than her partner increases from 18 percent to 32 percent (column 4). In Appendix Table A2 we show the first stages on more employment variables and in Appendix Table A3 we show that the results are very similar if we include the full set of baseline controls.

In Table 4 we show the effects of job offers (Treatment) on IPV. Treatment is not statistically significantly related to physical abuse and the coefficients are close to zero in the first follow up data. In column 1 we show the results from our main specification, which only includes the list fixed effects. The coefficient for Treatment is 0.01 and con-

Table 4: Reduced form estimates. The effects of treatment assignment on various forms of violence.

	(1)	(2)	(3)	(4)	(5)	(6)
	Abuse	Abuse	Emotional	Emotional	Controlling	Controlling
Treatment	-0.0100 (0.020)	-0.012 (0.019)	-0.053** (0.022)	-0.054** (0.022)	-0.021 (0.050)	-0.024 (0.049)
Mean dep. var in C group	0.13	0.13	0.20	0.20	0.38	0.38
No. of observations	1262	1262	1262	1262	1261	1261
R-squared	0.06	0.11	0.07	0.09	0.06	0.09
Controls	Block	Full	Block	Full	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

ducting an equivalence test with two one-sided t-tests (TOST), we can reject effects more negative than -0.043 and more positive than 0.023. Hence, we can reject relatively small effects in any direction. The results are very similar if we add the vector of individual level baseline controls, as we show in column 2.<sup>14</sup>

Exploring other types of violence, we see in columns 3 and 4 that there is a negative effect on emotional violence.<sup>15</sup> This effect is large and suggests that emotional violence is reduced with 5.3 percentage points (26.5 percent from the mean in the the control group). In Appendix Table A9 we show that the estimated effect on emotional violence seems to be driven by all three components (humiliation, threats, and insults) being reduced. We find no statistically significant effect on controlling behavior. In general the control variables do not do much to affect the estimates, but they do not affect the standard errors much either.<sup>16</sup>

In Table 5 we show results for our main variable to be instrumented, "Any wage job last 6 months". In columns 1 and 2 we show the OLS relationships between baseline wage job and abuse. We note that the correlation is positive, as in previous literature focusing on Africa and as in the DHS survey for Ethiopia in 2016 (where women employed last

<sup>14</sup>Breaking the effect down by different components of physical abuse we see in Appendix Table A4 that there does not seem to be any effect on less severe, severe, or sexual abuse.

<sup>15</sup>While we pre-registered the analyses of the other types of violence we still view the results as exploratory as these are not our main outcome.

<sup>16</sup>In Appendix Table A6 we show that the results are also similar when using an "optimal" set of controls, using a double-debiased LASSO regularization approach (Belloni et al., 2014). Notably, the only selected control variable for the abuse regression is abuse at baseline. This analysis was not pre-specified.

Table 5: Correlations and effects of wage jobs on abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	First stage	First stage	IV	IV
Any wage job last 6 months (B)	0.054** (0.026)	0.050* (0.026)				
Any wage job last 6 months					-0.025 (0.049)	-0.031 (0.049)
Treatment			0.40*** (0.025)	0.39*** (0.026)		
Mean dep. var in C group	0.13	0.13	0.29	0.29	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262
R-squared	0.09	0.11	0.29	0.31	0.06	0.11
Controls	Block	Full	Block	Full	Block	Full

*Notes:* Robust SE in parentheses. (B) refers to baseline such that columns 1 and 2 refer to any wage job last 6 months as measured at baseline. The First stage regression has Any wage job last 6 months (at follow up) as the outcome variable. The IV results are results from two stage least squares regressions where Treatment is used to instrument for any wage job last 6 months at follow up.

year have a 2 percentage points higher IPV rate last year). In columns 3 and 4 we show the first stage relationships again for completeness. In columns 5 and 6 we show the causal effects of having had a wage job during the last six months on abuse when it is instrumented by the randomized job offer. We see that the coefficient is negative but it is not statistically significant. In Appendix Table A5 we present the results from IV models with other employment related variables.

In Appendix Section A.3 we present longer term results. Importantly, attrition is still unrelated to Treatment and there is still a first stage effect of Treatment on employment and earnings. There is no effect on IPV in any of the follow up surveys and the effect on emotional abuse is not present after 12 months but is there after 18 months as well.

## VI Mechanisms and heterogeneity

There may be several reasons why employment does not affect IPV. It could be that employment does not affect important mediators such as empowerment and gender attitudes, or that it affects different types of women in opposite directions and that the effects cancel out on average. It may also be that female employment at the individual level is not important on its own, but that it is the relative position within couples that

Table 6: Correlation at baseline between abuse and potential moderators.

	(1)	(2)	(3)	(4)
	Abuse	Abuse	Abuse	Abuse
Equality index (B)	0.058 (0.076)			
Empowerment index (B)		0.084** (0.041)		
Acceptance index (B)			0.080*** (0.024)	
Nr of control issues (B)				0.096*** (0.0088)
Mean dep. var in sample	0.19	0.18	0.19	0.19
No. of observations	1260	935	1262	1262
R-squared	0.09	0.11	0.10	0.21
Controls	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The indices for female empowerment and equality are reverse coded so that higher values imply less empowered or equal. The sample includes everyone without missing values of the outcome at baseline and follow-up.

matters. In this section we explore these mechanisms.<sup>17</sup>

## A) Effects of job offers on potential mediators

Empowerment, attitudes toward gender equality, attitudes toward abuse, and controlling behavior are factors that are likely mediators for how employment could impact abuse. We show in Table 6 that there is indeed a positive correlation between these variables and abuse at baseline (except for the gender equality index for which the correlation is very small and not statistically significant). The indices are coded such that higher values imply less female empowerment ("He has final say over...") and less gender egalitarian attitudes.

<sup>17</sup>In the Appendix Section A.4 we show non pre-registered results that abuse does not seem to be instrumentally used for resource extraction in our setting. We find that job offers increase female expenditures on both private and public goods. Using our longitudinal data we also note, however, that changes in abuse are not correlated with changes in spending. In Appendix Section A.5 we investigate the role of time use for abuse in our setting. This analysis was not pre-registered. First we show that travel time is positively affected by treatment. We also show that it is positively correlated with abuse, so it does not give any support for a exposure reduction theory of violence. We find that women do less household work if they are randomly assigned to a job offer but, again, household work is not correlated with abuse. Hence, abuse does not seem to be used instrumentally in order to punish women for doing less household work.

Table 7: Reduced form effects on potential mediators.

	(1)	(2)	(3)	(4)
	Equality index	Empowerment index	Acceptance index	Nr controlling issues
Treatment	-0.0075 (0.0074)	-0.012 (0.019)	-0.034 (0.027)	-0.020 (0.087)
Mean dep. var in sample	0.13	0.38	0.44	1.05
No. of observations	1260	1041	1262	1262
R-squared	0.16	0.22	0.15	0.13
Controls	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The indices for female empowerment and equality are reverse coded so that higher values imply less empowered or equal.

In Table 7 we see that there is no treatment effect on any of these variables.<sup>18</sup> In Appendix Tables A7 and A8 we show the estimated effects on answers to each of the questions that comprise the empowerment and equality indices. We see that there is only one statistically significant effect of job offers out of all the gender equality variables. Women in the treatment group are 4.5 percentage points more likely to agree that "It is okay for women to travel or to leave the house for several nights to do business". The limited effects on these potential mediators is a likely explanation for the lack of effects of Treatment on IPV.

## B) Heterogeneity with respect to baseline characteristics and across areas

Despite the fact that there is no average effect of employment on IPV or on any of the likely mediators, it may be the case that heterogeneity in the effects across women go in different directions so that the average effect becomes close to zero. As discussed in Section II, the level of bargaining power is likely to be an important moderator for the effects of employment and we present the heterogeneity for the empowerment index in Table 8.<sup>19</sup> We see that there is some indication for the effects being more negative for women with lower bargaining power at baseline. The effect is only statistically significant

<sup>18</sup>In Appendix Table A10 we see very similar results when we control for the full set of baseline variables.

<sup>19</sup>Note that we, as pre-registered, code missing values on control variables as zero and add dummy variables for missing variables in order to not reduce the sample unnecessarily. When the same variables are used as outcomes, however, no recoding of missing values is done.

(and only at the 10 percent level,  $p=0.082$ ) when we add the baseline controls, however. In column 2 we see that Treatment is correlated with a decline of abuse of 4.5 percentage points for women with a high degree of bargaining power (where the index is zero so that the partner does not have sole decision making power over any of the issues) but is 9 percentage points higher for women where the partner has total decision making power (index=1). The Appendix Tables A11 to A16 also show the heterogeneity results for all baseline variables and the different components of the empowerment index with and without controls. Investigating the different components of the empowerment index we see that the result is driven by decision making power over starting a business, opening a bank account, and contraception use.<sup>20</sup>

We find no evidence of effect heterogeneity with respect to any of the baseline control variables (see Appendix Tables A11 and A12). That is, there is no statistically significant difference in the effects for women of different ages, religion, or education levels. Neither is there any difference for women with different attitudes towards domestic violence or whom had different experiences with their fathers abusing their mothers. We further note that there is no difference in the effects for women who had been employed before or not, nor between women that had recently been abused before or not.<sup>21</sup> In total, we note that there is very limited evidence for heterogenous treatment effects, with the exception for heterogeneity with respect to baseline empowerment. In Appendix Section A.3 we further show that there is no treatment effect heterogeneity with respect to baseline empowerment after 12 or 18 months.

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<sup>20</sup>In addition, we have tested whether there are heterogenous effects across couples with larger and smaller differences in age and education at baseline, and we did not find any such heterogeneity. Neither do we find any statistically significant heterogeneity if we use controlling behavior or the gender equality index at baseline and interact it with treatment.

<sup>21</sup>We also tested whether there was a difference in effects between those that had ever been abused or not. In the theoretical model of Anderberg et al. (2016), such a situation offers the most interesting case in terms of revealing information about husband type. The prediction is that men will be less likely to signal that they are of the abusive type in situations where women have a better outside option. This would also be consistent with Tankard et al. (2019) who find that a savings intervention in Colombia reduced the risk of IPV only for women never abused at baseline. We find no difference in the effects across these groups.

Table 8: Heterogeneity in reduced form effects by the baseline empowerment index. Dependent variable is Abuse last 3 months.

	(1)	(2)
	Abuse	Abuse
Treatment	-0.038 (0.027)	-0.045* (0.027)
Empowerment index	-0.0063 (0.039)	-0.030 (0.038)
Empowerment*Treatment	0.079 (0.053)	0.090* (0.052)
Mean dep. var in C group	0.13	0.13
No. of observations	1262	1262
R-squared	0.07	0.12
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The index for female empowerment is reverse coded so that higher values imply less empowerment.

The effects of jobs on IPV are likely to differ in different settings. Studies using observational data from more developed countries find that female employment is protective in areas with relatively greater gender equality in terms of attitudes and more liberal divorce laws and practices (the UK and the US versus Mexico and traditional areas of Spain). In Appendix Section A.2 we present results moderated by area levels of divorce rates, abuse, female employment, and acceptance of abuse. We find some differences across areas but no difference is statistically significant when we include all characteristics at the same time. Neither do we find any effects in any specific region, nor when excluding the region with the weakest first stage relationship.

### C) Relative employment and relative income

Theoretically, it is often stressed that relative resources within the couple are important (e.g. Cools and Kotsadam 2017). There are different theories on the role of relative resources which yield different predictions. For instance, according to the marital dependency theory, a woman's lower relative income may lead her to be economically dependent on her male partner and thereby increase her risk of abuse as she is less likely or able to

exit the relationship. On the other hand, identity based theories focus more on status inconsistencies and stress that a woman's higher relative income may lead to more abuse because it threatens the male breadwinner identity.

We start by investigating the differential effects of Treatment on IPV as moderated by the woman's partner's employment status in Table 9. In column 1 we include Treatment, a dummy variable for whether the husband has a wage job at the first follow up, and their interaction. We see that there is a negative correlation between having a husband with a wage job and abuse for the control group women but this negative correlation is canceled out for the treated women. This may suggest that the status component of relative earnings matter since husbands with a job having wives without a job maintain their breadwinning status, while in households where both have job the husbands' status could be undermined. The interaction term is not statistically significant, however.

We proceed to investigate the relationship between relative earnings and abuse. In column 2 we use his earnings during the last 6 months (in 1000 Birr) and interact it with treatment. We see that having a partner with higher earnings is correlated with lower rates of abuse for the control group but again less so for the treatment group. For the control group, having a husband with 1000 Birr higher earnings is correlated with 0.35 percentage points lower risk of abuse. The mean of husband earnings is around 12,000 Birr and has a standard deviation of 13,000 Birr (in both baseline and follow up). Hence a standard deviation change in husband earnings predicts quite substantial differences in abuse rates (4.55 percentage points). Using the baseline earnings of the husband instead, we see in column 3 that the pattern is similar but the precision is lower. These results indicate that that the relative protection of having a husband earning more money is reduced for women being offered a job.

Taken together, we see no evidence for the marital dependency theory as there is a negative correlation between partner working as well as partner earnings and abuse for the control group. This correlation is smaller for the treatment group but it does not turn

Table 9: Relative employment, identity and IPV.

	(1)	(2)	(3)	(4)	(5)	(6)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.038 (0.032)	-0.038 (0.028)	-0.033 (0.027)		0.021 (0.027)	0.0076 (0.034)
Husband has a job	-0.052* (0.028)					
Husband job*Treatment	0.053 (0.040)					
Husband earnings 6 months		-0.0035*** (0.0011)				
Husband earnings*Treatment		0.0025** (0.0013)				
Husband earnings 6 months (B)			-0.0014* (0.00075)			
Husband earnings (B)*Treatment			0.0025* (0.0014)			
Share of earnings from wage job				0.042 (0.096)	0.016 (0.10)	-0.069 (0.15)
She earns more than him				0.13 (0.21)	0.22 (0.21)	0.76* (0.44)
She earns more*Share of earnings				-0.11 (0.24)	-0.094 (0.23)	-0.57 (0.47)
She earns more*Treatment					-0.13** (0.063)	-0.87* (0.48)
She more*Share*Treatment						0.65 (0.54)
Share of earnings*Treatment						0.13 (0.21)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1231	1222	1252	931	930	930
R-squared	0.07	0.07	0.07	0.08	0.08	0.09
Controls	Block	Block	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Husband earnings are in 1000 Birr's. When we use baseline variables we indicate this with (B). Robust SE in parentheses.

into a positive correlation. On the other hand, there is no clear evidence for the status inconsistency theory either. While the association between his earnings and abuse seem less negative for the treatment group it is also the case that treatment is not significantly correlated with more abuse for women without a working partner, as this theory would predict.

The status inconsistency experienced by the husband should be largest in the cases where she earns more than him. In order to investigate this more closely we proceed as is in Bertrand et al., (2015) and test whether there is a discontinuity at the point where they earn the same (0.5) in the share of the couple earnings distribution. Column

4 of Table 9 shows the results for the full sample (of both treated and control women). We see that there is a positive correlation between her share of earnings and abuse for women in couples where she earn less than him and a negative correlation between her share of earnings and abuse for women in couples where she earn more than him. The coefficient for "She earns more than him" is positive, indicating that there is a jump in the probability of being abused at the threshold of her earning exactly the same. None of the coefficients in column 4 are, however, statistically significant. A disadvantage of pooling the treated and control women together is that the earnings share may be endogenous with respect to both his and her income. In column 5 we therefore interact treatment with the discontinuity variable in order to introduce exogenous variation in her earnings.<sup>22</sup> We note that there is a difference whereby women that are randomly assigned to job offers who earn more than their partners are less likely to be abused compared to women who earn more than their partners in the control group. That is, being randomly assigned a job offer drives the correlation of earning more towards zero. In column 6 we also interact the forcing variable and its interaction with the discontinuity with treatment as well. We then note that there is a jump in the probability of abuse at the margin where she starts to earn more than him for the control group but that this effect disappears for the treatment group (both statistically significant at the 10 percent level).

These results do not give much support for the status inconsistency theory, rather they seem more consistent with relative income having no impact on abuse once selection effects are controlled for by randomizing job offers.<sup>23</sup> This interpretation is also consistent with the IV results in Table A5, in particular the finding that she earning more than him has a very small and statistically insignificant effect on abuse once instrumented with treatment.

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<sup>22</sup>His earnings response may theoretically be affected by treatment, but we do not find any effects of her treatment status on her partners earnings or job probability

<sup>23</sup>In Appendix Tables A17 to A19 we show that the results for the relative employment and earnings regressions are similar and that the conclusions stay the same if we also control for baseline abuse.

## VII Addressing reporting issues: results from list experiments

Reported abuse is a function of both abuse and the propensity to report it, and we cannot separately identify the two. When asking about experience with IPV we worry that individuals may conceal their experiences in order to conform to social norms or because they are ashamed. If such social norm bias is related to employment it can seriously undermine the credibility of our self-reported measures. While we believe that under reporting may occur in our data we still think that the problem is limited due to the careful data collection. One indication of this is the high actual reported prevalence and the high acceptance of violence in the data. In any case, there exist no available data on IPV from other sources (e.g. from the police or hospitals) at the local level in Ethiopia. Even if such data would exist, it is unlikely that reporting bias would be lower. Using DHS data, Palermo et al. (2014) show that there is much larger underreporting to formal sources than in surveys. In fact, only 7 percent of the women that reported IPV in the DHS surveys had reported to a formal source.

In order to investigate the issue of underreporting and social desirability bias we randomly divided a sample (see below) into two groups and asked respondents to count the number of true statements on a list that either includes a sensitive statement or not, in a so-called "list experiment". By comparing the number of statements reported as true across the two groups we get a measure without any specific individual having revealed their own status. By also asking a question about the sensitive statement directly to the list control group we can assess the degree of underreporting by comparing the results when using the two different ways of asking. The degree of underreporting can then also be compared across subgroups of e.g. those offered a job and not or those employed and non-employed. Three papers use list experiments to investigate underreporting of IPV across subgroups and none of them find it to be correlated with employment (Peterman

et al., 2018; Agüero and Frisancho, 2017; Joseph et al., 2017). Bulte and Lensink (2018), however, evaluate an empowerment course and find that it makes a difference for the conclusions whether they use list experiments or not.

We conduct the list experiment on a sample of 367 women (254 of which are in our main sample) that were participating in an empowerment course in January-April 2018. At the final day of the course we had them answer a questionnaire. The data collection started with a detailed instruction of how to answer the questions (see Appendix Figure A1). In Figure 3 we show the control and treatment questions when the variable of interest is "My partner sometimes hits me". The control questions include four statements that we are not interested in and that are used only to get an average to compare the other group with. The treatment list includes the same questions and adds the question of interest. The control questions are created to avoid ceiling and floor effects and to include items that are negatively correlated so as to increase power (Glynn, 2013). To take a concrete example, let us say that the list control group answers that two of the four statements are true on average and the list treatment group answers that 2.5 of the statements are true on average. Since the only difference between the two groups are the extra question on IPV we would infer that 50 percent of the individuals in the list treatment group had experienced IPV.

We also included another list in order to measure "Partner punched last 3 months". The list treatment group got the list shown in Appendix Figure A2 and the list control group got a list without item 2.

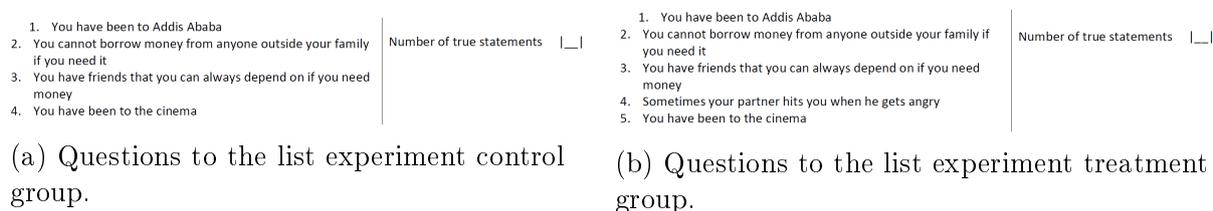


Figure 3: List experiment for the question "Partner sometimes hits"

In Table 10 we show the results of the list experiments. We see that individuals

Table 10: List experiment.

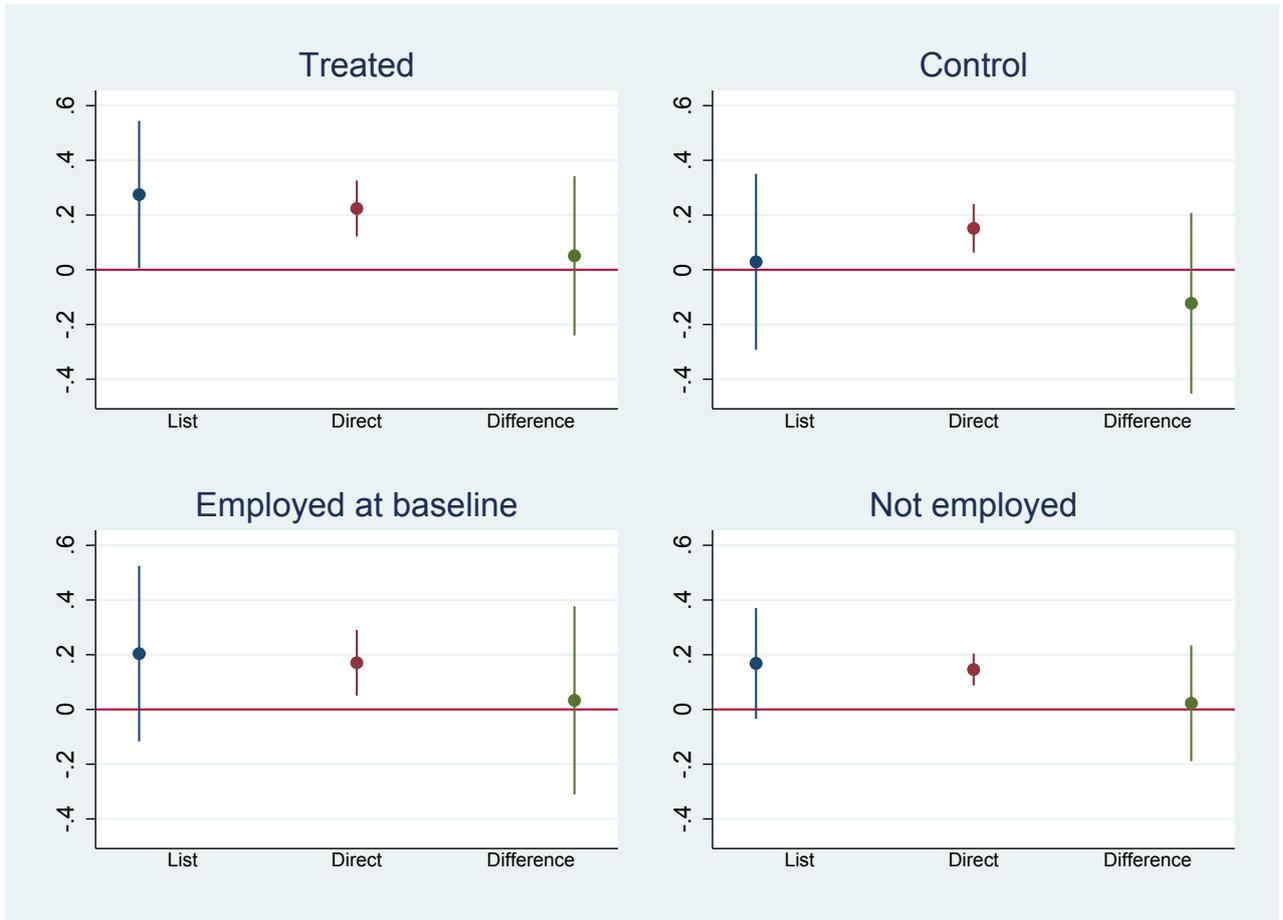
	(1)	(2)
	Partner hits sometimes	Partner punched last 3 months
List treatment	0.18** (0.087)	0.11 (0.092)
Mean nr answers in C group	1.49	1.50
Mean direct question in C group	0.15	0.06
SE mean direct question in C group	(0.026)	(0.018)
No. of observations	367	367
R-squared	0.01	0.00
Controls	None	None

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

getting the list with the additional question about partner sometimes hitting answer 0.18 more true statements on average. The interpretation from this is that 18 percent of the individuals have partners that sometimes hit them. When asking the question directly to the control group we see that 15 percent answer that they have partners that sometimes hit them. While slightly lower, the difference is very small and not statistically significantly different. For the list experiment with "been punched by your husband in the last three months" we get a larger difference but it is not statistically different either. We see that people in the list control group answer that around 1.5 of the four control items are true on average for both lists.

Moving over to differences in reporting across subgroups we split the samples into those offered a job (treated) and not (control) and into those employed at baseline or not. As seen in Figure 4, which shows the point estimates and 95 percent confidence intervals, there does not seem to be a difference for the statement "partner sometimes hits" for any of these groups. An important caveat to these analyses is that jobs may affect the control items as well so the results should be interpreted with care. Another disadvantage is that the list experiment leads to relatively noisy estimates. Appendix Figure A3 shows the same type of figure for the second list experiment.

While we can never completely rule out that being offered a job affects reporting, we find the results reassuring. In addition, we are not particularly worried about researcher



*Notes:* Treated and control refers to the randomization of job offers in the field experiment. List refers to the estimated prevalence of having partner sometimes hitting in the list experiment. Direct refers to the prevalence when using a direct survey question. Difference refers to the difference between asking in the list experiment minus asking directly. 95 percent confidence intervals are shown.

Figure 4: List experiment: "Partner sometimes hits" by sub-groups

demand effects whereby the respondents would answer the questions in a way to try to please the enumerators. First of all, neither the enumerators nor the respondents had any reason to believe that the main interest lies in investigating IPV. The survey was framed as one "to study the lives of women seeking work in the industrial sector in Ethiopia". The survey is also long (it takes between 60 and 90 minutes to complete the interviews) and only a small subset of the questions are about IPV.

In our data, abuse decreases for both treatment and control women from baseline to the first follow up. We do not know why abuse has declined in our sample. It may be that general changes in Ethiopian society and in our areas in particular (such as high growth, increased male and female employment rates, and political liberalization) reduce IPV. It may also be that reporting of abuse decreases when women are interviewed several times. We do not believe this to be the case for several reasons. First of all, we would expect more reporting over time as the women build up a relationship with the enumerators. Secondly, previous studies have not found any evidence for such survey effects, even when explicitly testing for them (Haushofer et al., 2019). For social desirability to affect the internal validity of our conclusions it would have to be the case that abuse either increases, or decreases less, in the treatment group but that they do not want to tell us (anymore) or that abuse decreases in the treatment group but the control group do not want to tell us that they are still abused. As we do not observe any effects of treatment on the acceptance of abuse we find such effects particularly unlikely.

## VIII Conclusion

Intimate partner violence (IPV) is harmful and costly for society (Fearon and Hoeffler, 2014). It is related to a host of negative outcomes for the women who are abused and people around them (Carrell and Hoekstra, 2010; Pollak, 2004; Doyle and Aizer, 2018; Aizer, 2011). IPV is prevalent in all societies, but the level and the degree to which it is considered acceptable vary greatly (Cools and Kotsadam, 2017). In Ethiopia, data

from the Demographic and Health Survey in 2016 shows that 16 percent of women had been physically abused by their partners in the last year. Acceptance levels, i.e. the degree to which a husband is perceived as justified in beating his wife, is also very high in Ethiopia, with more than half of the women in 2016 finding it acceptable under at least one condition.

Most previous evidence on employment and IPV is based on correlational studies (see e.g. Cools and Kotsadam 2017; Heise and Kotsadam 2015). While correlations are illustrative they do not tell us whether employment affects IPV, whether IPV affects employment, or whether there is some other factor that affects both employment and IPV. Recent literature has also investigated the effects of contextual level employment level using Bartik instruments, finding that when labor markets have better conditions for women, abuse decreases in the US and in the UK (Aizer, 2010; Anderberg et al., 2016), but increases in Mexico and in areas of Spain where men are traditionally breadwinners (Davila, 2018; Tur-Prats, 2017).

We identify the individual level effects of formal employment on IPV by randomly assigning job offers to equally qualified applicants, in collaboration with large companies in Ethiopia. We find no effect of being offered a job on physical abuse, despite finding large effects on the probability of working and on earnings. We find that job offers reduce emotional violence in the short run but the longer term results suggest that this effect is not stable over time. We find some indications of heterogeneous effects whereby women with low bargaining power at baseline seem to experience increased abuse in the short run if randomly assigned a job offer. There are no effects of job offers on attitudes toward gender equality, attitudes toward abuse, female empowerment, or controlling behavior. The lack of effects on these potential mediators are a likely explanation for the limited effects on abuse.

In investigating the effects of job offers and of abuse on spending patterns, it does not seem as if abuse is instrumentally used to extract resources in our setting. Being offered

a job increases spending but abused women spend less on household goods. Neither does it seem to be the case that status inconsistencies trigger abuse for the women offered a job. In particular, job offers are not correlated with abuse for women with partners that are not working. In general, relative incomes within the household do not seem to matter much for abuse once we use the random assignment of jobs to control for selection effects. It is difficult to know why there is a correlation between employment and abuse in the cross-section but our results suggest that it may be driven by selection rather than being a causal relationship. In addition, the margin we study the effects at is one where everyone apply for a job, it could be the case that it is the decision to apply that causes violence. It could also be that contextual level employment is more important than individual level employment. In a bargaining framework, improved employment opportunities increase the bargaining power of all women, including those who are currently not employed, and hence the contextual level of employment may be what determines outside options and threat points (Aizer, 2010). In any case, our results speak against the theories focusing on individual level or couple level resources.

The context under which we are investigating the effects is one where we should expect the increases in abuse following job offers to be large. Acceptance of abuse is high and acceptance of divorce is low in Ethiopia. Finding that job offers do not increase abuse in such a setting is comforting and we view it as possible that job offers could be protective in other settings with different moderating macro level factors. We strongly urge future studies to conduct similar field experiments in different settings so that we will learn whether there is no relationship overall or whether our results stand out in some way.

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# Online Appendix

Table A1: Attrition.

	(1)	(2)
	Attrition	Attrition
Treatment	-0.0030 (0.018)	-0.00050 (0.018)
Any formal wage job (ever)		-0.015 (0.020)
Age		-0.0075*** (0.0020)
Justified: goes out		0.024 (0.026)
Justified: neglects ch		0.020 (0.027)
Justified: refuses sex		0.041 (0.032)
Justified: argues		0.0035 (0.029)
Justified: burns food		-0.023 (0.030)
Abuse last 3 months		0.0098 (0.023)
Muslim		-0.011 (0.035)
Protestant		-0.025 (0.047)
Medium education		-0.012 (0.034)
High education		0.013 (0.037)
Father beat mother		-0.017 (0.020)
Mean dep. var in C group	0.14	0.14
No. of observations	1463	1463
R-squared	0.07	0.08
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

## A.1 Tables referred to in the text

In this section we present tables that we explicitly refer to in the main text.

Table A2: First stages: Effects of treatment on employment and earnings.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Any wage job	Any factory job	Earnings from wage job	Share	Earnings	Share	Income	Share	She earns more
Treatment	0.40*** (0.025)	0.37*** (0.024)	1726.8*** (172.6)	0.19*** (0.025)	1361.0*** (208.3)	0.061*** (0.021)	1245.1*** (224.7)	0.067*** (0.016)	0.14*** (0.028)
Mean dep. var in C group	0.29	0.16	1292.02	0.23	2171.34	0.32	2824.93	0.19	0.18
No. of observations	1262	1262	1262	930	1262	1222	1259	1210	930
R-squared	0.29	0.28	0.22	0.22	0.13	0.22	0.11	0.13	0.16
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. Earnings from wage job only includes earnings from wage jobs and the share of within couple in column 4 refers to her share of such earnings. Earnings refers to earnings from any source and incomes include remittances and transfers in addition. The share in column 6 refers to her share of earnings and the share in column 8 refers to her share of incomes. She earns more is a dummy for whether the woman has higher earnings than her partner.

Table A3: First stages: Effects of treatment on employment and earnings.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment	Any wage job	Any factory job	Earnings from wage job	Share	Earnings	Share	Income	Share	She earns more
	0.39*** (0.026)	0.36*** (0.024)	1664.9*** (169.2)	0.19*** (0.025)	1283.6*** (205.7)	0.065*** (0.021)	1182.2*** (223.1)	0.065*** (0.016)	0.14*** (0.028)
Mean dep. var in C group	0.29	0.16	1292.02	0.23	2171.34	0.32	2824.93	0.19	0.18
No. of observations	1262	1262	1262	930	1262	1222	1259	1210	930
R-squared	0.31	0.31	0.26	0.25	0.16	0.26	0.14	0.17	0.18
Controls	Full	Full	Full	Full	Full	Full	Full	Full	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A4: Reduced form estimates. The effects of treatment assignment on various forms of violence.

	(1)	(2)	(3)	(4)	(5)	(6)
	Less severe	Less severe	Severe	Severe	Sexual	Sexual
Treatment	0.0013 (0.018)	0.0023 (0.018)	-0.00065 (0.0028)	-0.00078 (0.0024)	-0.0091 (0.011)	-0.011 (0.011)
Mean dep. var in C group	0.11	0.11	0.00	0.00	0.04	0.04
No. of observations	1262	1262	1262	1262	1262	1262
R-squared	0.04	0.09	0.08	0.09	0.08	0.10
Controls	Block	Full	Block	Full	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A5: Instrumental variables estimates on abuse last 3 months. Other employment related variables instrumented with treatment.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Earnings from wage job last 6 months	-0.0000058 (0.0000011)						
Share of earnings from wage job		0.0011 (0.12)					
Earnings job last 6 months			-0.0000073 (0.0000014)				
Share of earnings				-0.12 (0.32)			
Income last 6 months					-0.0000079 (0.0000016)		
Share of income						-0.10 (0.29)	
She earns more than him							0.0015 (0.17)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	930	1262	1222	1259	1210	930
R-squared	0.06	0.07	0.06	0.05	0.06	0.06	0.07
Controls	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A6: Reduced form estimates with optimal controls. The effects of treatment assignment on various forms of violence.

	(1)	(2)	(3)
	Abuse	Emotional	Controlling
Treatment	-0.0093 (0.019)	-0.053** (0.021)	-0.021 (0.049)
Mean dep. var in C group	0.13	0.20	0.38
No. of observations	1262	1262	1261
R-squared			
Controls	Optimal	Optimal	Optimal

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A7: Reduced form effects on female empowerment ("He has final say over...").

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Sick	Nr ch	contrac	earn outs	visit rel	her earn	his earn	small p	bulk p	large p	bank	business
Treatment	-0.014 (0.025)	0.018 (0.027)	0.015 (0.021)	-0.028 (0.025)	-0.0082 (0.026)	-0.0081 (0.024)	-0.023 (0.026)	-0.010 (0.014)	-0.021 (0.025)	-0.036 (0.027)	-0.028 (0.027)	-0.021 (0.027)
Mean dep. var in C group	0.31	0.37	0.16	0.30	0.32	0.22	0.68	0.08	0.29	0.52	0.53	0.54
No. of observations	1262	1249	1254	1261	1261	1119	1200	1261	1260	1261	1254	1253
R-squared	0.14	0.16	0.15	0.14	0.15	0.14	0.18	0.13	0.15	0.16	0.20	0.20
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

## A.2 Comparison with DHS data and heterogeneity across areas

Using DHS data for the years 2000, 2005, 2011, and 2016 we show descriptive statistics in all years and in 2016 separately in Table A20. Questions on experience with IPV were only included in 2016 but we can see that attitudes have changed considerably to not accept IPV and female wage employment has remained relatively stable.

We use 50 km buffer zones around the industrial parks and spatially join all points from the GPS data in the DHS surveys to them (see Figure 2b). In Table A21 we compare the factory areas included in our analysis to the rest of the data from Ethiopia in the DHS 2016. We see that the rates of IPV are similar but that acceptance is lower and employment higher in the factory areas. Comparing our baseline data in Table 1 with the factory areas in the DHS we see that the numbers are similar.

We can also investigate the variation across the different areas. As seen in Table A22, there is some variation across our study areas with respect to important variables such as levels of abuse, employment, divorce rates, and acceptance of abuse. As pre-registered, we will later use the variation across areas to investigate if there are different effects of job offers in areas with high and low values on these different macro-level characteristics.

Using the DHS data we investigate whether the effect of job offers varies across our areas. To link the results more closely to factors we think are important we spatially merge our factory area buffers with data from the DHS surveys and aggregate a set of macro level factors for different areas. We focus on divorce rates, levels of abuse, female employment, and acceptance of abuse in the areas. In Table A23 we show results from models where we interact Treatment with having above median values on the variable of interest from the DHS data. In column 1 we see that the effect of job offers is negative in areas with low divorce rates (statistically significant at the 10 percent level), and statistically

Table A8: Reduced form effects on gender equality (Higher values=unequal).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	School	Earn	Decide	Leave	childcare	hh work	Men decide	Tolerate	harassment	sex. harassment
Treatment	0.0069 (0.0093)	-0.013 (0.020)	-0.0047 (0.020)	-0.045** (0.020)	0.016 (0.012)	0.0032 (0.014)	-0.0041 (0.017)	-0.0079 (0.026)	-0.0056 (0.015)	-0.019 (0.015)
Mean dep. var in C group	0.03	0.16	0.15	0.18	0.05	0.07	0.15	0.35	0.08	0.09
No. of observations	1260	1262	1262	1262	1262	1262	1262	1261	1262	1262
R-squared	0.20	0.16	0.13	0.10	0.05	0.10	0.24	0.17	0.19	0.20
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A9: Reduced form effects on the components of emotional violence.

	(1)	(2)	(3)
	Humiliated	Threatened	Insult
Treatment	-0.020 (0.013)	-0.011 (0.0078)	-0.037* (0.021)
Mean dep. var in C group	0.07	0.02	0.18
No. of observations	1261	1262	1262
R-squared	0.06	0.05	0.07
Controls	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A10: Reduced form effects on potential mediators. Results with full set of baseline controls.

	(1)	(2)	(3)	(4)
	Equality index	Empowerment index	Acceptance index	Nr controlling issues
Treatment	-0.0055 (0.0074)	-0.0061 (0.019)	-0.021 (0.026)	-0.042 (0.086)
Mean dep. var in sample	0.13	0.38	0.44	1.05
No. of observations	1260	1041	1262	1262
R-squared	0.18	0.23	0.25	0.16
Controls	Full	Full	Full	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The indices for female empowerment and equality are reverse coded so that higher values imply less empowered or equal.

significantly more positive in areas with higher divorce rates. This is surprising to us as we would expect the opposite. We also see that job offers have a statistically significantly more negative effect on IPV in areas where there is more IPV. We see some support for the effect being negative in areas with relatively less acceptance of abuse (we have here taken the share of individuals agreeing that IPV is justified in at least one of the situations) but the coefficient is only statistically significant at the 10 percent level. We find no statistically significant difference between areas with high or low female employment and, if anything, the effect is more positive in areas where many women work, in contrast to the pioneering hypothesis.

There are many other differences across areas and the heterogeneity results by no means show a causal effect of the moderators. In Table A24 we standardize the variables to have mean zero and a standard deviation of 1 and run the same type of regressions. We see that none of the interaction terms is statistically significant when we include them

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.0030 (0.023)	-0.0099 (0.023)	0.0056 (0.024)	-0.0084 (0.021)	-0.0075 (0.021)	-0.00067 (0.021)	-0.026 (0.019)	0.024 (0.075)	-0.0016 (0.021)	-0.0019 (0.022)
Any wage job ever (B)	0.030 (0.031)									
Justified: goes out		0.012 (0.031)								
Justified: neglects ch			0.037 (0.030)							
Justified: refuses sex				-0.0039 (0.036)						
Justified: argues					0.046 (0.037)					
Justified: burns food						0.069* (0.038)				
Abuse last 3 months							0.14*** (0.041)			
Age								-0.00051 (0.0027)		
Muslim									0.028 (0.046)	0.026 (0.049)
Protestant										
*Treatment	-0.024 (0.042)									
*Treatment		0.0021 (0.043)								
*Treatment			-0.044 (0.041)							
*Treatment				-0.014 (0.055)						
*Treatment					-0.011 (0.052)					
*Treatment						-0.048 (0.052)				
*Treatment							0.091 (0.061)			
*Treatment								-0.0014 (0.0029)		
*Treatment									-0.059 (0.057)	
*Treatment										-0.040 (0.050)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.06	0.06	0.06	0.06	0.06	0.06	0.11	0.06	0.06	0.06
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block	Block

Table A12: Heterogeneity in reduced form effects by baseline control variables. Dependent variable is Abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.032 (0.028)	-0.0058 (0.022)	-0.019 (0.023)	-0.014 (0.026)	-0.041 (0.025)	-0.034 (0.023)	-0.023 (0.026)	-0.015 (0.025)
Medium education	-0.033 (0.030)							
High education		0.0041 (0.034)						
Father beat mother			0.011 (0.028)					
She sick				-0.0026 (0.029)				
nr ch					-0.0092 (0.030)			
contraception						-0.042 (0.029)		
earn outside							-0.055** (0.026)	
visit relatives								0.0013 (0.029)
*Treatment	0.043 (0.039)							
*Treatment		-0.018 (0.045)						
*Treatment			0.029 (0.041)					
*Treatment				0.0090 (0.039)				
*Treatment					0.069* (0.039)			
*Treatment						0.079* (0.043)		
*Treatment							0.032 (0.039)	
*Treatment								0.013 (0.041)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06
Controls	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A13: Heterogeneity in reduced form effects by empowerment variables. Dependent variable is Abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.026 (0.022)	-0.046 (0.031)	-0.015 (0.021)	-0.025 (0.024)	-0.024 (0.028)	-0.055* (0.028)	-0.061** (0.029)	-0.038 (0.027)	-0.038 (0.027)
use her earnings	-0.036 (0.030)								
use his earnings		-0.0030 (0.031)							
small purchases			-0.0049 (0.036)						
bulk purchases				0.0054 (0.028)					
large purchases					0.026 (0.029)				
bank						0.0026 (0.030)			
business							-0.012 (0.029)		
index								-0.0063 (0.039)	
nr items									-0.00053 (0.0032)
*Treatment	0.073 (0.045)								
*Treatment		0.057 (0.039)							
*Treatment			0.036 (0.054)						
*Treatment				0.037 (0.039)					
*Treatment					0.022 (0.038)				
*Treatment						0.076** (0.038)			
*Treatment							0.082** (0.039)		
*Treatment								0.079 (0.053)	
*Treatment									0.0066 (0.0044)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A14: Heterogeneity in reduced form effects by baseline control variables. Dependent variable is Abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.0021 (0.023)	-0.011 (0.022)	0.0030 (0.023)	-0.0095 (0.021)	-0.011 (0.021)	-0.0012 (0.021)	0.025 (0.075)	-0.0046 (0.021)	-0.0070 (0.021)
Any wage job last 6 months (B)	0.024 (0.031)								
Justified: goes out		-0.0035 (0.031)							
Justified: neglects ch			0.013 (0.034)						
Justified: refuses sex				-0.053 (0.038)					
Justified: argues					0.040 (0.039)				
Justified: burns food						0.068* (0.041)			
Age							-0.00045 (0.0027)		
Muslim								0.020 (0.046)	0.046 (0.049)
Protestant									
*Treatment	-0.032 (0.042)								
*Treatment		-0.0049 (0.043)							
*Treatment			-0.045 (0.040)						
*Treatment				-0.018 (0.053)					
*Treatment					-0.0079 (0.050)				
*Treatment						-0.057 (0.050)			
*Treatment							-0.0015 (0.0030)		
*Treatment								-0.054 (0.056)	
*Treatment									-0.024 (0.049)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Controls	Full	Full	Full	Full	Full	Full	Full	Full	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A15: Heterogeneity in reduced form effects by baseline control variables. Dependent variable is Abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.033 (0.028)	-0.0050 (0.022)	-0.024 (0.023)	-0.020 (0.026)	-0.041 (0.025)	-0.038* (0.023)	-0.028 (0.025)	-0.017 (0.024)
Medium education	-0.050 (0.035)							
High education		-0.0028 (0.040)						
Father beat mother			0.0015 (0.028)					
She sick				-0.019 (0.028)				
nr ch					-0.017 (0.029)			
contraception						-0.048* (0.029)		
earn outside							-0.069*** (0.026)	
visit relatives								-0.0028 (0.029)
*Treatment	0.041 (0.038)							
*Treatment		-0.032 (0.045)						
*Treatment			0.035 (0.041)					
*Treatment				0.016 (0.038)				
*Treatment					0.064* (0.039)			
*Treatment						0.087** (0.042)		
*Treatment							0.039 (0.038)	
*Treatment								0.013 (0.040)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.11
Controls	Full	Full	Full	Full	Full	Full	Full	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A16: Heterogeneity in reduced form effects by empowerment variables. Dependent variable is Abuse last 3 months.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.030 (0.022)	-0.046 (0.030)	-0.017 (0.021)	-0.034 (0.024)	-0.029 (0.028)	-0.063** (0.028)	-0.062** (0.029)	-0.045* (0.027)	-0.045* (0.027)
use her earnings	-0.042 (0.030)								
use his earnings		-0.018 (0.030)							
small purchases			-0.015 (0.033)						
bulk purchases				-0.019 (0.027)					
large purchases					0.0093 (0.029)				
bank						-0.015 (0.030)			
business							-0.023 (0.029)		
index								-0.030 (0.038)	
nr items									-0.0025 (0.0031)
*Treatment	0.075* (0.044)								
*Treatment		0.053 (0.038)							
*Treatment			0.034 (0.050)						
*Treatment				0.051 (0.039)					
*Treatment					0.027 (0.038)				
*Treatment						0.084** (0.038)			
*Treatment							0.080** (0.038)		
*Treatment								0.090* (0.052)	
*Treatment									0.0075* (0.0043)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262	1262	1262	1262	1262
R-squared	0.12	0.12	0.11	0.11	0.11	0.12	0.12	0.12	0.12
Controls	Full	Full	Full	Full	Full	Full	Full	Full	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A17: Relative employment and IPV. Controlling for baseline violence.

	(1)	(2)	(3)	(4)	(5)	(6)
	Abuse	Abuse	Abuse	Abuse	Abuse	Abuse
Any wage job last 6 months	0.034*	0.035*			0.035*	0.038*
	(0.020)	(0.021)			(0.020)	(0.021)
Any wage last 6 months (B)		-0.00055				0.0098
		(0.025)				(0.026)
Husband has a job			-0.024	-0.0026	-0.025	-0.0065
			(0.020)	(0.021)	(0.020)	(0.021)
Husband has a job (B)				-0.053**		-0.050**
				(0.021)		(0.021)
Abuse last 3 months (B)	0.19***	0.19***	0.20***	0.20***	0.20***	0.20***
	(0.031)	(0.032)	(0.033)	(0.032)	(0.033)	(0.032)
Mean dep. var in sample	0.13	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1246	1231	1224	1231	1214
R-squared	0.11	0.11	0.11	0.12	0.12	0.12
Controls	base viol					

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A18: Relative earnings and IPV. Controlling for baseline violence.

	(1)	(2)	(3)	(4)
	Abuse	Abuse	Abuse	Abuse
Treatment	-0.024	-0.00022	-0.034	-0.035
	(0.031)	(0.032)	(0.028)	(0.026)
Husband has a job	-0.039			
	(0.028)			
Husband job*Treatment	0.031			
	(0.039)			
Husband has a job (B)		-0.054*		
		(0.027)		
Husband job (B)*Treatment		-0.0098		
		(0.038)		
Husband earnings 6 months			-0.0032***	
			(0.0011)	
Husband earnings*Treatment			0.0023*	
			(0.0013)	
Husband earnings 6 months (B)				-0.0014*
				(0.00077)
Husband earnings (B)*Treatment				0.0027*
				(0.0014)
Abuse last 3 months (B)	0.20***	0.18***	0.20***	0.19***
	(0.033)	(0.031)	(0.033)	(0.032)
Mean dep. var in C group	0.13	0.13	0.13	0.13
No. of observations	1231	1255	1222	1252
R-squared	0.12	0.12	0.12	0.11
Controls	base viol	base viol	base viol	base viol

*Notes:* All regressions control block fixed effects. Husband earnings are in 1000 Birr's. Robust SE in parentheses.

Table A19: Identity and IPV. Controlling for baseline violence.

	(1)	(2)	(3)
	Abuse	Abuse	Abuse
Share of earnings from wage job	0.0049 (0.096)	-0.016 (0.099)	-0.15 (0.15)
She earns more than him	0.069 (0.20)	0.15 (0.20)	0.74* (0.41)
She earns more*Share of earnings	-0.025 (0.23)	-0.015 (0.22)	-0.51 (0.44)
She earns more*Treatment		-0.11* (0.063)	-0.93** (0.45)
Treatment		0.019 (0.026)	-0.0023 (0.032)
She more*Share*Treatment			0.66 (0.51)
Share of earnings*Treatment			0.21 (0.20)
Abuse last 3 months (B)	0.21*** (0.038)	0.21*** (0.038)	0.21*** (0.038)
Mean dep. var in C group	0.13	0.13	0.13
No. of observations	930	930	930
R-squared	0.13	0.13	0.14
Controls	base viol	base viol	base viol

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A20: Descriptive statistics DHS

	All years			2016		
	(1)			(2)		
	Mean	SD	N	Mean	SD	N
Abuse	0.234	(0.424)	4727	0.234	(0.424)	4727
Abuse last year	0.159	(0.366)	4720	0.159	(0.366)	4720
Justified: goes out	0.471	(0.499)	61002	0.374	(0.484)	15533
Justified: neglects ch	0.527	(0.499)	61059	0.416	(0.493)	15552
Justified: argues	0.467	(0.499)	60876	0.367	(0.482)	15546
Justified: refuses sex	0.387	(0.487)	59638	0.317	(0.465)	15415
Justified: burns food	0.455	(0.498)	61082	0.330	(0.470)	15556
Any formal wage job (ever)	0.229	(0.420)	61576	0.233	(0.423)	15683
Divorced	0.055	(0.228)	61635	0.056	(0.230)	15683
<i>N</i>	61635			15683		

Notes: Data from the DHS surveys for the years 2000, 2005, 2011, and 2016.

Table A21: Descriptive statistics from the DHS in 2016 for our areas and for the rest of Ethiopia

	Factory areas			Other areas		
	(1)			(2)		
	Mean	SD	N	Mean	SD	N
Abuse	0.249	(0.433)	1193	0.229	(0.421)	3534
Abuse last year	0.161	(0.368)	1189	0.159	(0.365)	3531
Justified: goes out	0.242	(0.428)	4904	0.435	(0.496)	10629
Justified: neglects ch	0.277	(0.448)	4910	0.480	(0.500)	10642
Justified: argues	0.219	(0.414)	4907	0.435	(0.496)	10639
Justified: refuses sex	0.187	(0.390)	4882	0.378	(0.485)	10533
Justified: burns food	0.193	(0.395)	4908	0.393	(0.489)	10648
Any formal wage job (ever)	0.369	(0.483)	4935	0.171	(0.377)	10748
Divorced	0.064	(0.245)	4935	0.052	(0.223)	10748
<i>N</i>	4935			10748		

*Notes:* Data from the DHS surveys for the year 2016. The factory areas are all DHS points that are located within 50 kilometer from our factory areas. The other areas are all other areas in the 2016 Ethiopia DHS.

Table A22: Descriptive statistics from the DHS across the different factory areas in 2016

	Dire Dawa		Eastern		Hawassa		Kombolcha		Mekelle	
	(1)		(2)		(3)		(4)		(5)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Abuse	0.277	(0.448)	0.226	(0.419)	0.302	(0.461)	0.111	(0.317)	0.190	(0.394)
Abuse last year	0.202	(0.402)	0.111	(0.315)	0.217	(0.414)	0.093	(0.293)	0.083	(0.276)
Justified: goes out	0.291	(0.455)	0.120	(0.325)	0.466	(0.500)	0.409	(0.493)	0.316	(0.466)
Justified: neglects ch	0.285	(0.451)	0.170	(0.376)	0.503	(0.501)	0.434	(0.497)	0.492	(0.501)
Justified: argues	0.249	(0.433)	0.100	(0.300)	0.430	(0.496)	0.321	(0.468)	0.415	(0.493)
Justified: refuses sex	0.253	(0.435)	0.057	(0.232)	0.377	(0.485)	0.314	(0.466)	0.263	(0.441)
Justified: burns food	0.228	(0.420)	0.062	(0.242)	0.468	(0.500)	0.352	(0.479)	0.345	(0.476)
Any formal wage job (ever)	0.338	(0.473)	0.467	(0.499)	0.219	(0.414)	0.195	(0.397)	0.254	(0.436)
Divorced	0.069	(0.253)	0.060	(0.237)	0.017	(0.129)	0.107	(0.310)	0.086	(0.281)
<i>N</i>	2039		1963		356		159		418	

*Notes:* Data from the DHS surveys for the year 2016. The 5 different areas consist of the DHS points that are located within 50 kilometer from the factory cluster in the area.

Table A23: Heterogeneity across areas above and below DHS 2016 characteristics

	(1)	(2)	(3)	(4)
	Abuse	Abuse	Abuse	Abuse
Treatment	-0.061*	0.028	-0.044	-0.073*
	(0.032)	(0.026)	(0.030)	(0.044)
<i>Above median values of ... in the area</i>				
Divorce	0.039			
	(0.14)			
Abuse		-0.046		
		(0.10)		
Employment			0.052	
			(0.10)	
Acceptance				0.14
				(0.093)
*Treatment	0.089**			
	(0.040)			
*Treatment		-0.078**		
		(0.040)		
*Treatment			0.063	
			(0.040)	
*Treatment				0.080
				(0.049)
Mean dep. var in C group in below median areas	0.16	0.11	0.16	0.17
No. of observations	1262	1262	1262	1262
R-squared	0.07	0.06	0.06	0.06
Controls	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The data on contextual variables comes from the DHS survey for the year 2016 and are based on averages for all individuals within 50 kilometer from the factory cluster in the area. We here further create dummy variables for whether the average is above the median or not of all the factory areas.

all in the same regression. This analysis was not pre-specified.

Table A24: Heterogeneity across areas with standardized DHS 2016 characteristics

	(1)	(2)	(3)	(4)	(5)
	Abuse	Abuse	Abuse	Abuse	Abuse
Treatment	-0.012 (0.020)	-0.013 (0.020)	-0.012 (0.020)	-0.012 (0.020)	-0.014 (0.020)
<i>Standardized values of ... in the area</i>					
Divorce	-0.13 (0.14)				-0.023 (0.075)
Abuse		-0.49 (0.62)			-0.011 (0.10)
Employment			0.030 (0.055)		0.037 (0.083)
Acceptance				-0.42 (0.49)	0.018 (0.033)
*Treatment	0.032 (0.021)				0.060 (0.060)
*Treatment		-0.039* (0.020)			0.059 (0.11)
*Treatment			0.032 (0.020)		0.032 (0.068)
*Treatment				0.038* (0.021)	0.051 (0.032)
Mean dep. var in C group	0.13	0.13	0.13	0.13	0.13
No. of observations	1262	1262	1262	1262	1262
R-squared	0.06	0.06	0.06	0.06	0.07
Controls	Block	Block	Block	Block	Block

*Notes: ....*

Table A25: Heterogeneity across areas in effects on "Any formal employment"

	(1)	(2)	(3)	(4)	(5)
	Amhara	Dire Dawa	Oromia	SNNP	Tigray
Treatment	0.89*** (0.051)	0.41*** (0.060)	-0.27* (0.15)	0.75*** (0.042)	0.22*** (0.036)
Mean dep. var in C group	0.06	0.27	0.90	0.16	0.38
No. of observations	70	251	23	305	613
R-squared	0.80	0.18	0.46	0.60	0.23
Controls	Block	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A26: Heterogeneity across areas in effects on Abuse

	(1)	(2)	(3)	(4)	(5)	(6)
	Amhara	Dire Dawa	Oromia	SNNP	Tigray	Excl. Oromia
Treatment	0.032 (0.083)	-0.061 (0.047)	-0.20 (0.14)	-0.049 (0.046)	0.028 (0.026)	-0.0063 (0.020)
Mean dep. var in C group	0.11	0.17	0.20	0.15	0.11	0.13
No. of observations	70	251	23	305	613	1239
R-squared	0.01	0.02	0.17	0.09	0.08	0.06
Controls	Block	Block	Block	Block	Block	Block

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. In column 6 we exclude Oromia (the region with the weakest first stage).

We also pre-specified that we would conduct analyses separately in each of the 5 regions and run a separate analysis in where we drop the region with the weakest first stage. These results are presented in in Table A25 and A26. We note that there is no statistically significant effect on abuse in any of the specifications.

Table A27: Attrition after 12 months.

	(1)	(2)
	Attrition	Attrition
Treatment	-0.020 (0.021)	-0.018 (0.021)
Any formal wage job (ever)		0.0040 (0.024)
Age		-0.010*** (0.0022)
Justified: goes out		0.020 (0.030)
Justified: neglects ch		0.030 (0.031)
Justified: refuses sex		0.016 (0.037)
Justified: argues		-0.0024 (0.033)
Justified: burns food		0.0019 (0.036)
Abuse last 3 months		0.026 (0.028)
Muslim		-0.020 (0.041)
Protestant		-0.060 (0.049)
Medium education		-0.016 (0.037)
High education		0.022 (0.041)
Father beat mother		-0.020 (0.022)
Mean dep. var in C group	0.21	0.21
No. of observations	1463	1463
R-squared	0.07	0.09
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

### A.3 Longer term results: 12 and 18 months follow up

In this section we present results from medium term follow up surveys. We start by presenting results for the sample after 12 months and then after 18 months. The results are commented on in the text.

Table A28: First stages after 12 months: Effects of treatment on employment and earnings.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment	Any wage job	Any factory job	Earnings from wage job	Share	Earnings	Share	Income	Share	She earns more
	0.24*** (0.028)	0.26*** (0.026)	1661.1*** (200.2)	0.15*** (0.027)	1219.0*** (233.4)	0.063*** (0.023)	967.4*** (266.0)	0.048*** (0.019)	0.10*** (0.031)
Mean dep. var in C group	0.33	0.18	1841.30	0.30	2862.79	0.36	3664.87	0.25	0.26
No. of observations	1174	1174	1174	866	1174	1161	1174	1141	866
R-squared	0.19	0.25	0.18	0.21	0.10	0.18	0.07	0.15	0.17
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A29: Reduced form estimates after 12 months. The effects of treatment assignment on various forms of violence.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Abuse	Abuse	Less severe	Less severe	Severe	Severe	Sexual	Sexual	Emotional	Emotional	Controlling	Control
Treatment	-0.0017 (0.017)	-0.00028 (0.017)	0.0053 (0.016)	0.0083 (0.016)	0.0018 (0.0033)	0.0021 (0.0037)	-0.0089 (0.0084)	-0.010 (0.0089)	0.0035 (0.020)	0.0071 (0.020)	0.018 (0.045)	0.014 (0.045)
Mean dep. var in C group	0.09	0.09	0.08	0.08	0.00	0.00	0.03	0.03	0.12	0.12	0.24	0.24
No. of observations	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174
R-squared	0.07	0.11	0.06	0.11	0.02	0.04	0.07	0.08	0.09	0.13	0.05	0.08
Controls	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A30: 18 Months Heterogeneity in reduced form effects by the empowerment index. Dependent variable is Abuse last 3 months.

	(1)	(2)
	Abuse	Abuse
Treatment	-0.013 (0.024)	-0.017 (0.023)
Empowerment index	-0.0035 (0.034)	-0.025 (0.033)
Empowerment*Treatment	0.033 (0.046)	0.046 (0.044)
Mean dep. var in C group	0.09	0.09
No. of observations	1174	1174
R-squared	0.08	0.11
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The index for female empowerment is reverse coded so that higher values imply less empowerment. Note that female empowerment is measured at baseline.

## A.4 Expenditures and IPV

To further investigate different theories on the motivations for abuse we move on to investigate the correlation between abuse and spending patterns. In particular, we want to investigate if abuse is used instrumentally by the husband to alter the wife's spending behavior. We start by investigating the effect of treatment on the spending of the women. Starting with the effects of job offers on various infrequent expenditures ("In the last six months, how much of the purchase of X was financed from your income(s)?"), we see in Panel a of Table A35 that treatment causes women to spend more on women's and children's schooling and health. In Panels b and c of Table A35, we investigate the effects on frequent expenditures ("In the last month...") and we see that treatment causes women to spend more on a mix of items that are more likely private (women's care items, transportation, and mobile) and more public for the household (rent, charcoal, fuel, toiletries, children's care items, social and religious expenditures, and food). To some extent these expenditure increases are matched by a similar reduction in the partner's spending on the same items (in particular clothing, rent, toiletries and care items) as we

Table A31: Attrition after 18 months.

	(1)	(2)
	Attrition	Attrition
Treatment	-0.0075 (0.023)	-0.0036 (0.023)
Any formal wage job (ever)		0.0052 (0.026)
Age		-0.0090*** (0.0025)
Justified: goes out		0.061* (0.034)
Justified: neglects ch		0.060* (0.033)
Justified: refuses sex		0.025 (0.042)
Justified: argues		-0.0035 (0.038)
Justified: burns food		-0.017 (0.041)
Abuse last 3 months		0.012 (0.031)
Muslim		-0.046 (0.045)
Protestant		-0.061 (0.054)
Medium education		0.0037 (0.040)
High education		0.035 (0.044)
Father beat mother		-0.028 (0.025)
Mean dep. var in C group	0.27	0.27
No. of observations	1463	1463
R-squared	0.07	0.09
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses.

Table A32: First stages after 18 months: Effects of treatment on employment and earnings.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Any wage job	Any factory job	Earnings from wage job	Share	Earnings	Share	Income	Share	She earns more
Treatment	0.17*** (0.031)	0.23*** (0.027)	1392.1*** (250.7)	0.097*** (0.029)	1047.1*** (302.7)	0.016 (0.025)	948.5*** (347.4)	0.048** (0.021)	0.057* (0.032)
Mean dep. var in C group	0.36	0.19	2437.13	0.35	3689.51	0.41	4545.74	0.28	0.30
No. of observations	1074	1074	1074	794	1074	1066	1074	1053	794
R-squared	0.15	0.25	0.14	0.20	0.09	0.18	0.08	0.17	0.19
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A33: Reduced form estimates after 18 months. The effects of treatment assignment on various forms of violence.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treatment	Abuse	Abuse	Less severe	Less severe	Severe	Severe	Sexual	Sexual	Emotional	Emotional	Controlling	Controlling
	-0.016	-0.014	-0.026	-0.024	0	0	0.011	0.0097	-0.047**	-0.044**	0.028	0.021
	(0.018)	(0.017)	(0.016)	(0.016)	(.)	(.)	(0.0083)	(0.0083)	(0.020)	(0.020)	(0.036)	(0.036)
Mean dep. var in C group	0.10	0.10	0.10	0.10	0.00	0.00	0.01	0.01	0.14	0.14	0.16	0.16
No. of observations	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073	1073
R-squared	0.06	0.10	0.06	0.11	.	.	0.04	0.05	0.10	0.14	0.09	0.11
Controls	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

Table A34: 18 Months Heterogeneity in reduced form effects by the empowerment index. Dependent variable is Abuse last 3 months.

	(1)	(2)
	Abuse	Abuse
Treatment	0.0028 (0.025)	-0.0012 (0.025)
Empowerment index	0.036 (0.038)	0.015 (0.037)
Empowerment*Treatment	-0.048 (0.049)	-0.035 (0.048)
Mean dep. var in C group	0.10	0.10
No. of observations	1073	1073
R-squared	0.06	0.10
Controls	Block	Full

*Notes:* All regressions control block fixed effects. Robust SE in parentheses. The index for female empowerment is reverse coded so that higher values imply less empowerment. Note that female empowerment is measured at baseline.

show in Tables A37 to A39.

Moving over to the relationship between abuse and spending behavior we run regressions of abuse during the last three months on spending, controlling for follow up and baseline earnings, baseline spending, and baseline values of abuse. As such we can see the relationship between changes in abuse and spending, but also if this effect differs by treated and control women. In Table A36 we see that, for the control group, increases in abuse are correlated with a reduction in her spending on men’s clothing, health, and care, and on toiletries and fuel.<sup>24</sup> As such, we immediately see that changes in abuse are not correlated with her spending more which weakens the interpretation of domestic violence being instrumental to extract resources. There is only weak evidence for that the relationship between abuse and spending is different for treatment and control women. The interaction between treatment and abuse is only statistically significant in two out of 25 cases.

<sup>24</sup>Looking at men’s spending in the same way we see that abuse is correlated with husbands in the control group spending less on women’s clothing, toiletries, mobile, remittances, and men’s care (see Tables A40 to A42).

Table A35: Jobs and spending

(a) Effects of job offer on her spending on infrequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	M clothing	W clothing	C clothing	M health	W health	C health	C school	M school	W school
Treatment	2.34 (4.02)	63.4*** (19.0)	27.0*** (9.11)	-1.58 (1.46)	14.6 (10.6)	7.87** (3.70)	8.32 (16.5)	0 (.)	37.7** (16.8)
Mean dep. var in C group	4.59	123.19	26.42	2.29	7.81	4.17	33.60	0.00	38.29
No. of observations	1256	1262	1262	1261	1262	1262	1262	1261	1262
R-squared	0.11	0.12	0.12	0.04	0.02	0.07	0.04	.	0.07
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

(b) Effects of job offer on her spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Rent	Water	Electricity	Charcoal	Fuel	Toiletries	M care	W care
Treatment	21.7*** (8.02)	1.69 (1.42)	0.24 (1.19)	10.4** (4.90)	1.86** (0.87)	10.7*** (2.54)	-0.56 (0.59)	9.80*** (3.41)
Mean dep. var in C group	37.03	9.34	4.93	36.13	1.59	20.92	0.96	28.58
No. of observations	1262	1261	1262	1261	1262	1259	1214	1260
R-squared	0.09	0.19	0.10	0.08	0.08	0.10	0.02	0.15
Controls	Block	Block	Block	Block	Block	Block	Block	Block

(c) Effects of job offer on her spending on frequent expenditures continued.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	C care	Recreation	Social	Transportation	Mobile	Remittance	Food	Tobacco and alco
Treatment	3.24** (1.51)	0.79 (1.12)	9.56* (5.27)	8.43** (4.15)	5.31*** (1.65)	-8.04 (6.11)	51.1*** (15.7)	-0.52 (1.87)
Mean dep. var in C group	4.80	2.68	17.71	19.39	14.96	20.00	152.15	3.12
No. of observations	1262	1262	1262	1261	1258	1262	1262	1241
R-squared	0.08	0.13	0.05	0.16	0.11	0.05	0.13	0.07
Controls	Block	Block	Block	Block	Block	Block	Block	Block

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects and baseline values of the outcome variable. Robust SE in parentheses.

Table A36: Abuse and spending

## (a) Abuse and her spending on infrequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	M clothing	W clothing	C clothing	M health	W health	C health	C school	M school	W school
Treatment	-1.83 (4.78)	22.4 (22.1)	7.89 (10.7)	-3.40 (2.91)	12.9 (12.5)	3.31 (3.56)	-2.47 (18.1)	0 (.)	26.7 (19.3)
Abuse last 3 months	-9.81** (4.96)	-2.11 (36.8)	-2.20 (15.1)	-3.48* (1.91)	1.83 (8.03)	-6.08 (4.50)	29.6 (27.2)	0 (.)	-3.76 (23.9)
Treatment*Abuse	-5.02 (12.4)	-14.1 (54.2)	38.4 (31.4)	2.67 (2.25)	-12.7 (16.9)	19.9* (11.6)	-70.0** (34.4)	0 (.)	9.16 (53.8)
Mean dep. var in C group	4.64	122.85	26.39	2.32	7.81	4.15	33.97	0.00	38.71
No. of observations	1239	1245	1245	1244	1245	1245	1245	1244	1245
R-squared	0.12	0.14	0.13	0.05	0.02	0.08	0.06	.	0.07

## (b) Abuse and her spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Rent	Water	Electricity	Charcoal	Fuel	Toiletries	M care	W care
Treatment	-2.93 (8.21)	-0.034 (1.59)	-2.20 (1.61)	1.18 (5.49)	0.78 (1.05)	3.88 (3.07)	-0.61 (0.67)	-1.07 (4.01)
Abuse last 3 months	9.82 (19.1)	-1.35 (3.23)	-0.14 (2.03)	0.086 (9.98)	-1.68* (0.99)	-6.88* (4.17)	-1.33* (0.70)	-8.52* (5.00)
Treatment*Abuse	39.2 (31.2)	0.14 (3.67)	2.39 (2.86)	6.47 (15.9)	3.09 (2.25)	5.47 (6.91)	0.50 (0.74)	16.6** (8.31)
Mean dep. var in C group	36.26	9.37	4.98	35.89	1.61	20.81	0.97	28.49
No. of observations	1245	1244	1245	1244	1245	1242	1198	1243
R-squared	0.16	0.21	0.13	0.11	0.09	0.15	0.02	0.21
Controls								

## (c) Abuse and her spending on frequent expenditures continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	C care	Recreation	Social	Transportation	Mobile	Remittance	Food	Tobacco and alco
Treatment	1.46 (1.78)	0.44 (1.09)	1.81 (4.23)	3.87 (4.87)	0.21 (1.91)	-12.3* (6.30)	-1.56 (19.3)	-0.73 (2.50)
Abuse last 3 months	1.02 (2.22)	-1.72 (2.49)	5.63 (8.89)	-0.52 (7.16)	-5.81** (2.59)	-19.1** (8.84)	25.5 (34.7)	-4.57 (3.04)
Treatment*Abuse	1.56 (4.14)	1.76 (2.98)	-22.2* (12.8)	-4.96 (10.5)	3.84 (3.69)	13.4 (10.2)	1.00 (47.5)	4.35 (3.75)
Mean dep. var in C group	4.80	2.71	17.83	19.30	14.87	19.98	152.15	3.16
No. of observations	1245	1245	1245	1244	1241	1245	1245	1224
R-squared	0.10	0.14	0.08	0.18	0.19	0.06	0.22	0.08
Controls								

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects, follow up and baseline earnings, baseline values of the outcome variable, and baseline values of abuse. Robust SE in parentheses.

Table A37: Effects of job offer on his spending on infrequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	M clothing	W clothing	C clothing	M health	W health	C health	C school	M school	W school
Treatment	3.95 (38.4)	-88.9** (39.7)	-42.8* (22.7)	-21.2 (15.7)	-11.8 (17.6)	8.60 (9.10)	-24.2 (40.7)	-25.0 (24.3)	-14.5 (15.3)
Mean dep. var in C group	453.28	374.75	299.05	53.30	62.07	28.57	350.63	82.04	69.02
No. of observations	1256	1262	1262	1261	1262	1262	1262	1260	1262
R-squared	0.13	0.11	0.26	0.07	0.05	0.07	0.29	0.08	0.14
Controls	Block	Block	Block	Block	Block	Block	Block	Block	Block

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects and baseline values of the outcome variable. Robust SE in parentheses.

Table A38: Effects of job offer on his spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	Rent	Water	Electricity	Charcoal	Fuel	Toiletries	M care	W care
	-19.6 (17.9)	0.71 (2.73)	-2.12 (2.27)	-10.5 (6.69)	0.014 (1.32)	-9.69*** (3.66)	-5.54** (2.44)	-8.22** (3.32)
Mean dep. var in C group	308.45	19.42	17.01	110.79	4.14	57.50	33.33	37.76
No. of observations	1262	1261	1262	1261	1261	1259	1181	1260
R-squared	0.40	0.16	0.16	0.18	0.14	0.18	0.12	0.18
Controls	Block	Block	Block	Block	Block	Block	Block	Block

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects and baseline values of the outcome variable. Robust SE in parentheses.

Table A39: Effects of job offer on his spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	C care	Recreation	Social	Transportation	Mobile	Remittance	Food	Tobacco and alco
Treatment	-2.90 (2.56)	-4.31 (6.37)	-13.6 (25.1)	5.30 (8.06)	-1.87 (6.04)	4.72 (12.3)	-42.9 (32.6)	-8.43 (11.1)
Mean dep. var in C group	17.79	29.79	97.68	73.69	84.69	33.90	909.48	83.90
No. of observations	1262	1262	1262	1261	1250	1262	1262	1235
R-squared	0.13	0.14	0.05	0.06	0.24	0.10	0.29	0.20
Controls	Block	Block	Block	Block	Block	Block	Block	Block

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects and baseline values of the outcome variable. Robust SE in parentheses.

Table A40: Abuse and his spending on infrequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	M clothing	W clothing	C clothing	M health	W health	C health	C school	M school	W school
Treatment	-5.54 (45.3)	-79.1* (45.4)	-31.9 (26.1)	-39.3** (16.6)	-9.15 (16.8)	5.61 (11.7)	0.47 (46.6)	-14.5 (25.8)	-7.15 (17.1)
Abuse last 3 months	-20.6 (70.1)	-117.0** (59.6)	-37.2 (39.0)	-20.9 (20.8)	47.7 (42.4)	-10.4 (8.74)	60.8 (73.4)	-5.80 (47.4)	4.69 (32.1)
Treatment*Abuse	42.5 (97.4)	58.1 (85.8)	25.7 (58.5)	44.5 (31.7)	0.21 (67.4)	57.6** (29.2)	-64.8 (103.0)	-25.9 (60.4)	23.7 (47.3)
Mean dep. var in C group	456.00	376.84	301.58	53.24	62.52	27.97	353.86	80.58	69.78
No. of observations	1239	1245	1245	1244	1245	1245	1245	1243	1245
R-squared	0.13	0.11	0.27	0.07	0.05	0.08	0.30	0.09	0.15

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects, follow up and baseline earnings, baseline values of the outcome variable, and baseline values of abuse. Robust SE in parentheses.

Table A41: Abuse and his spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Rent	Water	Electricity	Charcoal	Fuel	Toiletries	M care	W care
Treatment	-7.69 (20.8)	3.13 (3.22)	-0.62 (2.47)	0.50 (7.74)	1.04 (1.45)	-2.08 (4.26)	-7.32** (2.85)	-2.48 (3.90)
Abuse last 3 months	-32.1 (31.0)	-0.51 (4.47)	-2.10 (3.19)	0.87 (13.7)	0.34 (2.22)	-11.9** (5.72)	-9.36** (3.78)	-1.88 (6.64)
Treatment*Abuse	8.98 (49.3)	0.75 (5.97)	-1.55 (4.53)	-4.06 (20.0)	1.28 (4.54)	0.97 (8.23)	4.66 (5.71)	-1.14 (8.21)
Mean dep. var in C group	310.35	19.54	17.12	111.54	4.19	57.96	33.41	38.10
No. of observations	1245	1244	1245	1244	1244	1242	1165	1243
R-squared	0.41	0.16	0.17	0.19	0.15	0.22	0.13	0.20
Controls								

*Notes:* In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects, follow up and baseline earnings, baseline values of the outcome variable, and baseline values of abuse. Robust SE in parentheses.

Table A42: Abuse and his spending on frequent expenditures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	C care	Recreation	Social	Transportation	Mobile	Remittance	Food	Tobacco and alco
Treatment	-1.64 (2.67)	-10.6 (9.25)	-6.06 (29.4)	9.64 (10.7)	2.43 (7.97)	6.68 (14.8)	-11.2 (36.2)	-6.76 (12.8)
Abuse last 3 months	-3.76 (3.51)	-5.82 (11.3)	-42.9 (27.6)	-16.0 (14.3)	-16.9* (9.18)	-22.9* (13.0)	-90.1 (75.6)	48.0 (38.8)
Treatment*Abuse	0.74 (6.46)	13.8 (18.9)	18.3 (40.9)	6.12 (19.3)	6.44 (15.1)	13.8 (17.7)	-10.6 (95.3)	-32.3 (40.7)
Mean dep. var in C group	17.94	30.12	98.68	74.19	85.19	34.28	912.57	84.61
No. of observations	1245	1245	1245	1244	1233	1245	1245	1218
R-squared	0.14	0.14	0.05	0.06	0.25	0.10	0.30	0.21
Controls								

Notes: In the column titles, M is short for Men's, W for Women's, and C for Children's. All regressions control block fixed effects, follow up and baseline earnings, baseline values of the outcome variable, and baseline values of abuse. Robust SE in parentheses.

## A.5 Time use and IPV

There are other theories of abuse that may also be investigated in our setting. We present a set of auxiliary (and not pre-registered) results in Table A43.<sup>25</sup> A popular theory in criminology is exposure reduction (Dugan et al., 2003). At a most general level it is surely true that if the couple never meets (e.g. due to incarceration or migration) it is unlikely that he will abuse her. We believe that exposure reduction due to her getting a job is less likely to matter in our setting. We can investigate this to some extent by looking at travel time since that should be related to exposure. We see in column 1 that travel time is positively affected by treatment. We also see that it is positively correlated with abuse, however. One reason for travel time being positively correlated with abuse could be that abuse is more likely if women do less household work. We find that women do less household work if they are randomly assigned to a job offer (column 3). Household work is, however, not correlated with abuse. As such, it does not seem to be the case that abuse is used instrumentally in order to punish women for doing less household work. A possible reason for this could be that the husbands are not affected that much as they do not have to do more household work (column 5) and the household work is still being done, but by the eldest daughter (column 6).

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<sup>25</sup>In these regressions we control for the baseline values of the outcome variable and also baseline values of the main variable of interest when the outcome is abuse.

Table A43: Time use and IPV

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Travel time	Abuse	hh work	Abuse	husb. hh work	Abuse	Daughter hh work	Abuse
Treatment	0.65*** (0.23)		-1.68*** (0.64)		0.27 (0.31)		1.43** (0.69)	
Travel time		0.0051** (0.0025)						
Household work				0.00050 (0.00078)				
Husband hh work						-0.00021 (0.0022)		
Eldest daughter hh work								0.0013 (0.0023)
Mean dep. var in C group	4.65	0.13	28.04	0.13	1.96	0.13	3.45	0.12
No. of observations	1262	1262	1262	1262	963	963	387	387
R-squared	0.20	0.11	0.16	0.11	0.14	0.12	0.42	0.23
Controls	Block	Block	Block	Block	Block	Block	Block	Block

Notes: All regressions control block fixed effects and baseline values of the outcome variable. Columns 2, 4, 6, and 8 control for baseline values of the main outcome variable. Robust SE in parentheses.

## A.6 List experiment

Here we present the instructions for the list experiment and results for our second list experiment. The instructions in Figure A1 were read and explained to the participants in addition to them being told to read them on their own.

We have some questions about your life, and I will now explain how you should respond to the:

Now I'm going to read some statements about many different things. Some of these statements will be true and some will not. After I read all statements, please tell me HOW MANY of them are true for you.

**And this is important: I don't want to know which ones, just how many.**

Let's try with an example first. Suppose I read you 4 statements. After I read each statement, I want you to count with your fingers if it is true, and keep track **without showing to me**. I will then ask you how many are true. Let me demonstrate first.

NOTE: READ THE STATEMENTS BELOW AND SHOW THEM HOW YOU ARE COUNTING:

1. I went to the movies with my best friend on Sunday
2. I had dinner last night
3. I can speak English
4. Addis Ababa is the capital of Ethiopia

I will now read you the statements. As I'm reading, count with your fingers without showing me (**ENUMERATOR LOOK THE OTHER WAY**). At the end, you'll tell me how many are true for you.

1. You went to the movies with your best friend on Sunday
2. You had dinner last night
3. You can speak English
4. Addis Ababa is the capital of Ethiopia

How many of these statements are true?

Note that I do not know which of the statements that are true if you just give me the number. I only know how many. In this module, you will have several examples of this, remember to only tell us how many things are true so that we can not know which ones are true.

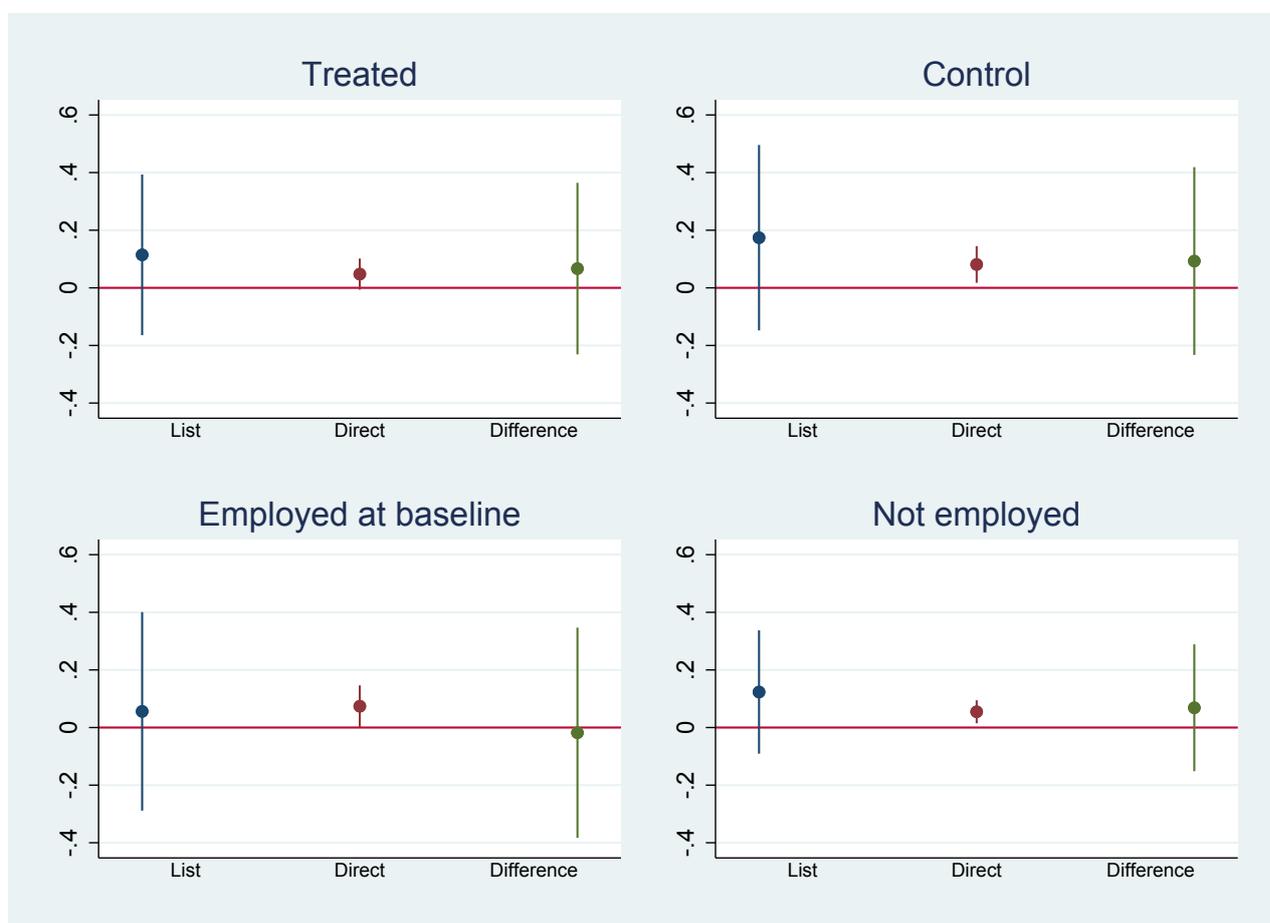
Figure A1: Instructions for the list experiment

LIST 3: **DURING THE LAST 3 MONTHS YOU HAVE:**

1. Attended a religious service, except for a special occasion like a wedding or funeral
2. Been punched by your husband
3. Not travelled anywhere
4. Travelled to Addis
5. Had personal belongings such as money or a mobile phone stolen from you or from your house

Number of true statements |\_\_|

Figure A2: List experiment: "Partner punched last 3 months"



Notes: Treated and control refers to the randomization of job offers in the field experiment. List refers to the estimated prevalence in the list experiment. Direct refers to the prevalence when using a direct survey question. Difference refers to the difference between asking in the list experiment minus asking directly. 95 percent confidence intervals are shown.

Figure A3: List experiment: "Partner punched last 3 months" by sub-groups

## A.7 Full sample analysis

Table A44: Descriptive statistics for the full sample

	(1)	
	Mean	SD
<i>Physical abuse variables (Endline)</i>		
Abuse	0.291	(0.454)
Abuse last 3 months	0.131	(0.338)
Less severe	0.252	(0.434)
Less severe last 3 months	0.109	(0.312)
Severe	0.019	(0.137)
Severe last 3 months	0.003	(0.057)
Sexual	0.104	(0.306)
Sexual last 3 months	0.038	(0.192)
<i>Other outcome variables (Endline)</i>		
Emotional	0.396	(0.489)
Emotional last 3 months	0.176	(0.381)
Nr of control issues	0.991	(1.554)
Nr control last 3 months	0.313	(2.700)
Empowerment index	0.371	(0.319)
Nr empowerment items	4.447	(3.831)
Equality index	0.124	(0.134)
Nr equality items	1.237	(1.339)
<i>Employment and income variables (Endline)</i>		
Any wage job last 6 months	0.493	(0.500)
Earnings from wage job last 6 months	2290.810	(3779.633)
Share of earnings from wage job	0.334	(0.402)
Earnings last 6 months	2950.784	(4313.908)
Share of earnings	0.341	(0.389)
Income last 6 months	3610.956	(4858.260)
Share of income	0.227	(0.272)
She earns more than him	0.264	(0.441)
<i>Main baseline variables</i>		
Treatment	0.503	(0.500)
Abuse last 3 months	0.197	(0.398)
Any formal wage job (ever)	0.289	(0.454)
Age	24.967	(5.767)
Justified: goes out	0.300	(0.458)
Justified: neglects ch	0.351	(0.477)
Justified: refuses sex	0.166	(0.372)
Justified: argues	0.210	(0.407)
Justified: burns food	0.208	(0.406)
Muslim	0.120	(0.325)
Protestant	0.273	(0.446)
Medium education	0.506	(0.500)
High education	0.236	(0.425)
Father beat mother	0.363	(0.481)
<i>N</i>	1514	

*Notes:* All variables are measured at follow up except for Treatment and the baseline controls.

Table A45: Reduced form estimates. The effects of treatment assignment on various forms of violence in the full sample.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treatment	Abuse	Abuse	Less severe	Less severe	Severe	Severe	Sexual	Sexual	Emotional	Emotional	Controlling	Controll
	-0.0031 (0.018)	0.00016 (0.018)	0.00021 (0.017)	0.0054 (0.016)	-0.0017 (0.0026)	-0.0023 (0.0026)	-0.0016 (0.0099)	-0.0013 (0.0100)	-0.044** (0.020)	-0.045** (0.020)	0.050 (0.053)	-0.0039 (0.057)
Mean dep. var in C group	0.13	0.13	0.11	0.11	0.01	0.01	0.04	0.04	0.19	0.19	0.22	0.22
No. of observations	1514	1514	1514	1514	1514	1514	1514	1514	1514	1514	1514	1514
R-squared	0.06	0.13	0.04	0.10	0.08	0.09	0.09	0.11	0.08	0.11	0.07	0.09
Controls	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full	Block	Full

Notes: All regressions control block fixed effects. Robust SE in parentheses.

# **Pre analysis plan for “Jobs and intimate partner violence – Evidence from a Field Experiment in Ethiopia”**

Tigabu Degu Getahun, Andreas Kotsadam, and Espen Villanger\*

## **Abstract**

Most previous evidence on employment and Intimate Partner Violence (IPV) is based on correlational studies. While correlations are illustrative they do not tell us whether employment affects IPV, whether IPV affects employment, or whether there is some other factor that affects both employment and IPV. Recent scholarship has also investigated the effects of contextual level employment level using Bartik instruments finding that when labor markets have better conditions for women, abuse decreases in the US and the UK but increases in areas of Spain where men are traditionally breadwinners. The present project is the first to identify the individual level effects of jobs on IPV. We do so by collaborating with large companies in Ethiopia to randomly assign jobs to applicants. In this plan we describe the analytic decisions that will be made in the analysis of the data in the project. That is, we describe the hypotheses to be tested and how they will be tested. The description includes how the variables are coded, how we will deal with attrition and missing values, and how the estimation equations will look like. We also conduct a power analysis which suggests that we are able to identify relatively small effects. All deviations from the plan will be highlighted in the final paper.

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\* Tigabu Degu Getahun: Ethiopian Development Research Institute. Andreas Kotsadam: The Ragnar Frisch Centre for Economic Research, e-mail: andreas.kotsadam@frisch.uio.no. Espen Villanger: Christian Michelsen Institute.

## Introduction

Intimate Partner Violence (IPV) is considered to be the most widespread form of human rights violation worldwide (Ellsberg et al. 2015; Fried 2003; Garcia-Moreno et al. 2005; Heise 2011). In addition to being harmful in itself, IPV has also been shown to be costly for society and related to a host of negative outcomes for the women who are abused (Krishnan 2005), and people around them (Jewkes 2002; True 2012).

IPV is prevalent in all societies, but the level and the degree to which it is considered acceptable vary greatly. In Ethiopia, data from the WHO shows that 54 percent of ever partnered women in a rural setting have been victims of IPV during the last year (See Table 1). This rate is higher than in all the other locations used in the WHO ten country study (Garcia-Moreno et al. 2008). Acceptance levels, i.e. the degree to which a husband is perceived as justified in beating his wife, is also very high in Ethiopia, ranging from 85 percent of women in year 2000 to 69 percent in 2011 (see Table 1). In Sub-Saharan Africa in general the average acceptance rate among women is 54 % (Cools and Kotsadam 2017).

Table 1: Descriptive statistics for SIPV in Ethiopia in two previous datasets

Dataset	DHS						WHO	
	(1)		(2)		(3)		(4)	
Year	2000		2005		2011			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Beating justified in at least one case	0.85	(0.36)	0.81	(0.39)	0.69	(0.46)		
Abused last year by partner							0.54	(0.5)
<i>N</i>	15283		13991		16472		2261	

We investigate the causal effects of employment on IPV in Ethiopia with the help of a randomized field experiment. Different theories on the relationship between employment and IPV have been stipulated at different levels of analysis. At the individual level, employment is often argued to be empowering and protective against intimate partner violence (Jewkes 2002). One idea is that employment reduces poverty and poverty is associated with stress, which is thought to influence the degree of abuse (Jewkes 2002; Barlett and Anderson 2013). From a more social perspective, resource theory regards the family as a power system and suggests that men with few other resources may use violence to maintain dominance within the family (Goode 1971; Vyas and Watts 2009).

An additional avenue for the protective role of employment is evoked in bargaining theories of the household, where women's outside options, usually considered to be the utility level in case of divorce, are crucial in determining the outcome of the bargain (Manser and Brown 1980;

McElroy and Horney 1981; Lundberg and Pollak 1996; Farmer and Tiefenthaler 1997; Pollak 2005; Eswaran and Malhotra 2011; Anderberg et al. 2016). In these models, improved outside options through individual employment possibilities should reduce intimate partner violence, all else equal (Farmer and Tiefenthaler 1997).

On the other hand, an increase in women's resources may yield a higher risk of abuse (referred to as a violence backlash). As women become more resourceful, men may resort to violence for instrumental reasons, both in order to counteract the concomitant increase in female power and because there are more resources to “extract” from female hands (Eswaran and Malhotra 2011; Heise and Garcia-Moreno 2002). Increased access to resources might also make women more willing to challenge certain norms, which may in turn spur a violent response by their husbands.

At the relationship level, the relative resource theories claim that it is not the woman's resource level in itself, but her position within the household, that matters (Vyas and Watts 2009). These theories come in different forms and yield different predictions about the effects of female employment, with female empowerment and poverty as important mediators. The theory of marital dependency states that being economically dependent on a male partner increases women's risk of abuse, since it makes them less likely or able to exit the relationship (Vyas and Watts 2009). In line with this, Aizer (2010) finds that reductions in the gender wage gap cause less violence against women in California, US. In theories viewing marriage as an exchange relationship, cultural expectations define and put value on different divisions of labor. Masculinity is constructed in relation to femininity, and wives' employment should be studied in relation to their husbands' (Macmillan and Gartner 1999; Pence and Paymar 1993; McCloskey 1996; Atkinson et al. 2006). According to status inconsistency theories, where atypical roles threaten male identity (Hornung et al. 1981), women having more resources than men could lead to increased violence. Hornung et al. (1981) find that women with higher occupational status than their partner are more at risk of abuse in the US. They invoke the explanation that expectations about relative status are normative, and deviations lead to psychological stress -- resulting in violence.

At the community level the degree of structural levels of acceptance, female empowerment, and female employment may act to increase the risks of IPV. Importantly, the effects of the community level factors could work both directly and by way of mediating the effects of individual employment. In the existing literature, interactions across analytic levels have been most saliently hypothesized with respect to employment. Reviewing the literature on women's income and intimate partner violence, Vyas and Watts (2009) show that the results are

heterogeneous across countries. They point to differences in contextual factors as a likely reason, in particular to the prevalence of female wage employment, as “women who pioneer change within a community may be at greatest risk of violence” [p. 598]. Heise and Kotsadam (2005) find that the association between abuse and working for cash is most negative in countries where fewer women work. In the same vein, Kabeer (1997) argues for a need to contextualize the effects of resources, as their meaning and effects are shaped by local circumstances and values. Koenig et al. (2003) find that the effect of participation in a credit group in Bangladesh increased abuse in conservative villages, while it decreased violence in relatively more gender equal villages. Cools and Kotsadam (2017) argue that differences across contexts in how women's paid employment at the micro level impacts their abuse risk can be partly explained when made contingent directly on attitudes at the macro level. The presumed mechanism is that a high tolerance for wife-beating at the community level gives a certain impunity for the violent husband, thereby facilitating a violent response to changes in the household power balance. A woman's employment directly challenges the breadwinner status of her husband. Additionally, it has a direct effect on her behavior and daily activities, and it provides her with access to social networks and outside options. Lastly, it is observable from outside the household, and as such it may constitute even more of a threat to the husband's status in a setting which prescribes male dominance. Based on these views, they propose a “contextual acceptance employment hypothesis”, suggesting that female employment is particularly risky in settings where prevailing norms and values are such that wife-beating is considered acceptable. They find strong support for this in their analysis of SSA.

Similarly, Tur-Prats (2017) finds that the response to better labor market conditions for women is increased violence in parts of Spain with a traditional nuclear family tradition and no effects in areas of Spain with a traditional stem family tradition. She interprets her results in an identity framework where men lose identity utility if their breadwinner role is threatened in traditional cultures.

The present project starts where the previous literature ends. By testing the causal effects of jobs in a setting with high acceptance of IPV we advance the knowledge in this field. Previous studies that have investigated the question with quasi-experimental methods; one in the US (Aizer 2010) one in Spain (Tur-Prats 2017), one in the UK (Anderberg et al. 2016), and one in India (Chin 2012), have all looked at the effects of contextual level employment. Note that some related areas of study e.g. cash transfers (Hidrobo et al. 2015) and microcredit (Pronyk et

al. 2006), have utilized randomized assignment to identify causal parameters but such programs are likely to have other effects than employment has.

Our results will be important for employment and job generation policies since there may be a double dividend from employment promotion for women: Increased incomes and reduced poverty, as well as effects on primary prevention of IPV. This would suggest that more resources should be devoted to including women in formal labor. If there is a violence backlash, however, it is important for policymakers to know so that supplementary policies can be enacted in areas with high female employment growth.

In the present plan we describe how to test the open-ended hypothesis that employment affects violence, how we will code our variables and how we will deal with challenges to our empirical strategy. We will also highlight some potential avenues that we are likely to take in order to investigate the mechanisms of the results. These paths will be contingent on the sign and strength of the results and will thus be more explorative in nature.

### **The field experiment**

The Ethiopian manufacturing sector is growing quickly and the Ethiopian Government is actively accommodating foreign direct investors. One way of doing so is to build industrial parks to provide economies of scale for the potential investors. We work with firms within such industrial parks. More specifically, our intervention centers on shoes and garment factories in five different regions: Tigray, Amhara, Oromia, SNNP, and Dire Dawa. The factories standard procedure of hiring is to advertise bulks of positions by posting on the front gate, word of mouth, and local job boards. The applicants are asked to gather on a specific day and are screened for eligibility using verbal and physical tests.

The project goal is to identify a causal effect of employment. This is a challenging task since separating the effect of the job on IPV from other influential factors is inherently difficult. The key question is what the IPV would have been if the women had not gotten the jobs. Such counterfactual questions require a careful research design. Our approach is to randomly assign jobs to applicants (as in a recent study in Ethiopia by Blattman and Dercon (2016)).

We are collaborating with large companies that are hiring new workers and are willing to slightly alter their recruitment process. The companies included in our study have agreed that they first assess all job applicants and determine whether each applicant is eligible for the job or not. Then, from the pool of eligible candidates, the company randomly selects those that will

get a job. This is possible since there is surplus demand for jobs. The procedure will ensure that the comparison group has similar characteristics as those who got a job. We focus on women with partners in this study. Lists are created containing the eligible partnered entry-level applicants and within these lists some are then randomized to either receiving a job offer in the given factory (treatment) or to a control group. The randomization is done using computers and the applicants are informed about the procedure before the randomization is conducted.

### **Data and empirical strategy for the main analysis**

Pre- and Post- longitudinal data is collected using a detailed structured survey instrument. We have a survey team that is ready to travel to each of the factories as soon as they decide to hire more workers. The women are interviewed before they start working and the first follow up data collection is planned to be around 6 months after the first interview. The dates for the data collection are thus unknown at this time and will depend in particular on when the firms hire. The survey instrument includes modules gathering demographic and background information, including poverty measures and other socio economic variables. A comprehensive module for IPV was developed containing questions on both attitudes and experience with IPV. The survey also includes questions on female empowerment similar to the questions in the Demographic and Health Surveys (DHS).

The IPV module is an add-on to the “Ethiopian women’s employment and livelihoods survey”, which mainly consists of a welfare module and a decision making module. We have complied to the additional ethical and methodological requirements of conducting a IPV study as described by (WHO 2001). Hence, ensuring the safety of respondents, enumerators and research team will direct our approach. To this end, we developed a clear and practical protocol addressing ethical issues that applies to our research. This protocol elaborates on several steps that we will take to minimize the inherent risks involved in IPV studies, particularly to avoid that the research in itself leads to more violence (see the description of the protocol in the appendix for details).

#### *Dependent variable: Abuse last 3 months*

It is important to apply accurate descriptions of the violence that has occurred in order to maximize disclosure (Ellsberg et al. 2001) and we will therefore ask about a wide range of abusive acts using indicators of internationally validated standardized IPV measures. We will base questions and sequencing on the WHO Violence Against Women Instrument (Ellsberg and Heise 2002) and the Conflict Tactics Scales (Straus 1979; Hindin et al. 2008). Hence, three

categories of violence are included, emotional, physical and sexual, in addition to controlling and manipulating behaviors such as threats.

Using a modified Conflict Tactics Scale (CTS) has several advantages compared to many other datasets on violence (see Kishor (2005) for an extensive overview). A characteristic of CTS is that it uses several different questions regarding specific acts of violence. In this way the measure is less likely to be polluted by different understandings of what constitutes violence. CTS is also argued to reduce underreporting, as it gives respondents multiple opportunities to disclose their experiences of violence (Kishor 2005; La Mattina 2017).

The variable that we call “*Abuse last 3 months*” is set equal to one for women who answer that they have ever had a partner doing one of the following to them during the last 3 months prior to being interviewed: Pushing, shaking, slapping, throwing something, twisting an arm, striking with a fist or something that could cause injury, or kicking or dragging (any of which is classified by the DHS as “less severe violence”), attempting to strangle or burn, threatening with a knife, gun, or other type of weapon, and attacking with a knife, gun, or other type of weapon (any of which is classified by the DHS as “severe violence”), and physically forcing intercourse or any other sexual acts, or forcing her to perform sexual acts with threats or in any other way (any of which is classified by the DHS as “sexual violence”). The survey questions are included below and we use the 10 standard variables (17b to 26b) to create our measure.

**Read:** Now I need to ask some more questions about your relationship with your husband/partner. Did your husband/partner ever:

17. push you, shake you, or throw something at you?	<b>If Yes, ask:</b> Did this happen during the last 3 months?	Yes=1	17b.  __
18. slap you?			18b.  __
19. twist your arm or pull your hair?			19b.  __
20. punch you with his fist or with something that could hurt you?			20b.  __
21. kick you, drag you, or beat you up?			21b.  __
22. try to choke you or burn you on purpose?			22b.  __
23. threaten or attack you with a knife, gun, or other weapon?			23b.  __
24. physically force you to have sexual intercourse with him when you did not want to?			24b.  __
25. physically force you to perform any other sexual acts you did not want to?			25b.  __
26. force you with threats or in any other way to perform sexual acts you did not want to?			26b.  __
27. other violent acts against you that we have not mentioned? If yes, specify:	No=0	27b.  __	

### Main independent variables

#### *Any formal wage job (last 6 months)*

A crucial choice is how employment should be measured. Is it any job, any formal job, or any factory job that matters? As it is likely to be a qualitative difference between formal wage jobs and other types of activities we choose to create an indicator variable for having had any formal wage job.

From the baseline data we will use the answer to the survey question: “Have you ever had a formal salaried job with salary before?”. From this we create the variable *Any formal wage job* which equal one if the answer is yes.

In the follow up analysis we will instead create a variable, *Any wage job last 6 months*, which will be equal to one if the respondents answers affirmatively on either one of the two questions: “Did you start working at Factory X” (the one where the respondent applied) or “Have you had any other formal salaried job with salary since the last interview”. This variable will be used in the instrumental variables analysis (see below).

#### *Attitudes towards wife beating:*

We also collect data on attitudes toward IPV by asking the same questions as the main one used in the DHS surveys. For each of the five variables we code them as one if the respondent agrees that a husband is justified in beating his wife in the five following situations: She goes out without telling him, she neglects the children, she argues with him, she refuses to have sex with him, or she burns the food.

#### *Father beat mother*

Based on previous research (e.g. Cools and Kotsadam 2017) we also know that a strong baseline predictor of abuse is whether the respondent reports that her father abused her mother. We therefore create a variable “Father beat mother” that is equal to one if the respondent answers yes to the question: “As far as you know, did your father ever beat your mother?”

#### *Background variables*

We will retain the continuous coding of age in years.

We dummy code the religious affiliation of our respondents. The majority are likely to be Orthodox Christians and we let that be the base category and create dummies for the other denominations (most likely only Muslim and Protestant).

We will recode the years of schooling variable into low (<10 years), medium (10 years), and high (>10 years) and use low education as the base category.

*Main estimation equations:*

There is a lot of uncertainty in how much the treatment will bite in terms of predicting formal employment at the follow up 6 months later. In particular, some people that are not assigned to treatment will find other jobs. Hence we will conduct both intention to treat analyses (ITT), where we regress abuse on the Treatment indicator, controlling for baseline abuse (and other baseline characteristics) and instrumental variable analyses (IV) where we instrument employment with the randomized treatment.

We will start by estimating the following baseline intention to treat model:

$$y_{i,t2} = aTreated\_Job_i + y_{i,t1} + x_{it1}\beta + c_i + e_{i,t}$$

Where  $y_{i,t2}$  corresponds to recent *Abuse last 3 months* for woman  $i$  in time period  $t2$ . This is regressed on a dummy variable that equals one if the woman was randomized to get the job and zero if not. This captures the so called intention to treat effect and it gives us an estimate of the effect of being randomized into treatment. As long as treatment status is randomly assigned we do not expect any other differences between treated and control women. We will test if the groups are similar and also include control variables in order to increase power and precision (see “Power Calculations” for details). In particular we include the experience with IPV at baseline, list fixed effects (blocking variables) as women are randomized within this unit, and a vector of individual level controls  $X$ . The standard errors are clustered at the individual level. There is no need to cluster the cluster the standard errors at the factory level since the randomization is at the level of the individual.

The vector of individual level controls are all taken from the baseline survey and are: *Age*, the five dummies on attitudes towards wife beating, *Muslim*, *Protestant*, *Any formal wage job*, *Father beat mother*, *Medium education*, and *High education*. We will test for baseline balance on these variables both individually and together by regressing  $Treated\_Job_i$  on the variables one by one while controlling for the blocking variable  $c_i$ . As many variables are tested we do not necessarily expect all of them to be statistically insignificant. We will also include all

variables at the same time and we will deem the randomization as successful if the F-test shows that the X variables cannot predict treatment status together.

To account for imperfect compliance we also estimate an IV model of the following form:

$$1) \text{ Any wage job last 6 months}_{it2} = aTreated\_Job_i + y_{i,t1} + x_{it1}\beta + c_l + e_{i,t}$$

$$2) y_{i,t2} = Predicted(\text{Any wage job last 6 months})_{it2} + y_{i,t1} + x_{it1}\beta + c_l + e_{i,t}$$

Where we predict recent formal wage employment with the randomization and use the predicted values for formal employment in the second stage to calculate the local average treatment effect of having a formal job on *Abuse last 3 months*.

### *Threats to the design*

**Attrition:** We expect attrition to be low as the respondents are followed closely but it may be the case that control women move far away or even abroad to find jobs for instance. Attrition from the sample will be investigated. In particular, we will check whether attrition is related to treatment status by the following regression:

$$Attrition_i = aTreated\_Job_i + c_l + e_{i,t}$$

Where *Attrition* is dummy equal to 1 if individual i does not respond on the abuse questions of interest in both surveys. Unless the difference between treatment and control is significantly different from zero at the 5 percent significance level, all estimations will proceed without any adjustment for attrition. If there is a statistically significant difference we will employ Lee bounds (Lee 2009).

**Limited variation:** In order to limit noise caused by variables with limited variation, questions for which 95 percent of the observations have the same value within the relevant sample will be omitted from the analysis.

**Missing values:** If we have missing values on variables we will code the variables as zero and include dummy variables controlling for missing status so that we do not lose observations. In some cases we may have missing values on important variables from the baseline. Sometimes the survey team will not have time to interview everyone before they start working. In such cases we will not use any baseline data on time varying factors such as employment, abuse etc. but we will code them as zero and include an indicator for missing status. In the cases where this applies to whole lists (as is likely), the list fixed effects will subsume the indicator variable for missing observations. We will retain the values for all predetermined variables, however,

such as religion, father beat mother, education, etc. We do not know if this is a problem in our data but the survey team is instructed to interview people that have been randomly assigned to jobs even if they have started working. Such cases will be highlighted by the enumerators.

Possibly weak first stages and heterogeneity in the first stage relationship: We are genuinely uncertain about the strength of the first stage in our study. In addition to the control women finding jobs, some people that are assigned to jobs will quit. We have a question in the survey about if, when, and why people quit their job but this variable is not exogenous. We will describe the patterns of employment duration induced by the treatment using this variable, however. To explore this further we will also investigate hours in income generating activity during the last 7 days before the interview. This variable has the advantage of also capturing the aspect that people may quit. A disadvantage of this variable is that it does not capture whether the employment is formal. The variable will be used as an alternative endogenous variable in an instrumental variables regression.

It may furthermore be the case that the first stage is stronger in some areas than in others due to e.g. less other options. It is difficult to come up with a decision to handle this ex-ante but we will check the first stage in each of the 5 regions and run a separate analyses in the region where the first stage is strongest as well as one where we drop the region with the weakest first stage. Other eventualities are likely to come up during the analyses and we will have to highlight them separately in the paper.

### **Data and empirical strategy for the exploratory analysis of potential mechanisms**

We have chosen to call our tests of mechanisms exploratory as there are many different tests that can be done and as it is difficult to exhaust the list ex-ante. We want to stress that even if the list we give here turns out to be complete, the analysis will have to be seen as exploratory as the number of hypotheses is large.

In order to test mechanisms we will regress treatment on income, controlling behavior, empowerment, and attitudes toward gender equality. If there is an effect on these variables we can include them in the baseline equation to investigate the causal effect of jobs over and above the effect it has on the intermediate variables. Such type of mediation analysis should not be seen as causal, however, as there are likely to be many variables correlated with the mediators that are not included in the analysis. By interacting treatment with the baseline characteristics included as controls, we also explore the extent to which the effect differs across different types of women. In the process of testing mechanisms we will code some new variables.

*Income and income shares:*

We will create a measure from the survey section on intra household income where we have net income for the respondent from:

1. <i>Factory job employment</i>
2. <i>Other wage employment</i>
3. <i>Self-employment</i>
4. <i>Remittances</i>
5. <i>Government or NGO transfer</i>
6. <i>Other (specify).....</i>

Adding up 1 and 2 will give us an indication of whether treatment affected earnings from employment during the last 6 months. Investigating 1 will also tell us how much the treatment affected earnings from factory jobs in total and this will be described descriptively.

The questions about incomes are also asked about the woman's partner and we will create a variable of her share of couple income by adding 1-3 for her and him and then take her income divided by their total income. As most men are likely to be employed in some fashion (see e.g. Cools and Kotsadam 2017) we think the relative share of income is a better measure than coding up breadwinner status based on his and her employment status alone. The relationship between her income share and abuse may also be non-linear. In particular, there may be a difference around the 50 % share where she starts to earn more than him. Discontinuities at this threshold have been documented to affect a large range of outcomes in the US (Bertrand et al. 2015).

*Controlling behavior and different types of violence*

To explore the mechanisms we will also investigate different types of violence. Following Tur-Prats (2017) we will investigate whether there is also an effect on controlling behavior and emotional violence. This analysis can be used to shed light on the distinction between instrumental violence for resource extraction and more identity based violence. We can also explore whether there is an effect on extraction of resources within the household by investigating expenditure patterns.

We will follow Heise and Kotsadam (2015) and create a variable for the number of controlling issues last 3 months by adding the number of positive responses to questions 7b-11b (which are the same ones as the ones included in the DHS surveys).

<b>Read:</b> I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your husband/partner					
7. He (is/was) jealous or angry if you (talk/talked) to other men?	Yes=1	7a.  __	If <b>Yes</b> , ask: Did this happen during the last 3 months?	Yes=1	7b.  __
8. He frequently (accuses/accused) you of being unfaithful?		8a.  __			8b.  __
9. He (does/did) not permit you to meet your female friends?		9a.  __			9b.  __
10. He (tries/tried) to limit your contact with your family?	No=0	10a.  __		No=0	10b.  __
11. He insists/insisted on knowing where you are/were at all times?		11a.  __			11b.  __
12. He controlled your behavior in other ways. If yes => 12.a, Specify:		12.b  __			12c  __

We will test whether emotional violence is affected by creating a variable “Emotional abuse during last 3 months” which is equal to one if 13b, 14b, or 15b is equal to 1 (which are the same ones as the ones included in the DHS surveys).

<b>Read:</b> Now I need to ask some more questions about your relationship with your husband/partner. Did your husband/partner ever:								
13. say something to humiliate you in front of others?	Yes=1	13a.  __	If Yes, ask: Did this happen during the last 3 months?	Yes=1	13b.  __	If Yes last 3 months, ask: Had he been drinking alcohol in at least one of these cases?	Yes=1	13c.  __
14. threaten to hurt or harm you or someone you care about?		14a.  __			14b.  __			14c.  __
15. insult you or make you feel bad about yourself?	No=0	15a.  __		No=0	15b.  __		No=0	15c.  __
16. do other things that scare you or make you not feel safe? If yes, specify:		16a.  __			16b.  __			16c.  __

*Empowerment*

We have 15 different questions in the survey on intra-household decision making. Not all questions apply to all people in the sample, however. For example, the decision to send a child to school has missing values for all individuals that do not have children. To create an empowerment measure we restrict ourselves to the 12 measures that have fewer missing responses (03-15 below). For each of these measures we create a dummy variable for whether the partner has the final say. As seen, this corresponds to the value of 2 in code B. We also code it as one if the partner decides together with some other member of the household. If the individual decides together with the partner we code the variable as zero only if she has “a lot” of input into the decision (i.e. category 4 on the J1B questions) and otherwise as 1. All other values of J1A are coded as zero on the partner has the final say variables. We then add the 12 variables together and divide by 12 to get an index ranging between 0 and 1.

## Section J. Intra-household Decision Making and Domestic Responsibility Allocation

### J1. Who in your household usually has the final say about the following decisions?

Decision-Making		J1A Household Member  <i>Use Code B</i>	J1.B if she is not a sole decision maker, How much input does the respondent have in this decision? Code : 1=no input 2=little 3=some 4=a lot
01	Whether to send or not send children to school		
02	What to do if a child falls sick		
03	What to do if the respondent falls sick		
04	Whether to have children or to have more children		
05	Which family planning methods to use		
06	Whether or not you should earn money outside the house		
07	Whether you can visit your family or relatives?		
08	The use of the wife's earned income		
09	The use of the man's /husband's earned income		
10	Purchase of small daily food purchases		
11	Purchase of bulk or expensive food items		
12	Large purchases of items like furniture, cattle, TV, or other assets		
13	Purchase of children clothing and shoe		
14	Weather to open bank account or borrow money		
15	Whether to start a new business		

Code B: 01 = Respondent 02=husband/partner 03=other female member 04=other male member 12=respondent and husband jointly 13=respondent and other female jointly 14=respondent and other male member 23=husband and other female jointly 24=husband and other male jointly 34=other male and female member

#### *Attitudes towards gender equality:*

The survey also includes questions on a wider set of attitudes toward gender equality. The 11 statements are given below and we code them so that 1 is non-gender equal (e.g. 1 or 2 on statement 1 and 3 or 4 on statement 2). We will investigate whether employment affects these variables individually as well as together by creating an index where we add the dummies together and divide by 11.

<b>Enumerator:</b> “I will read some statements about men and women. Please say whether you strongly disagree, disagree, agree or strongly agree with these statements.” (1=strongly agree      2=agree      3=disagree      4=strongly disagree)		
1	It is better to send a son to school than it is to send a daughter	<input type="checkbox"/>
2	It is okay for women to work outside of the home	<input type="checkbox"/>
3	It is okay for women to earn more money than men.	<input type="checkbox"/>
4	Women have a right to decide what to do with the money they earn.	<input type="checkbox"/>
5	It is okay for women to travel or to leave the house for several nights to do business.	<input type="checkbox"/>
6	Men should be responsible to help with childcare when his wife is busy with business or factory job	<input type="checkbox"/>
7	Men should be responsible to help with domestic duties when his wife is busy with business or factory job	<input type="checkbox"/>
8	The important decisions of the family should be made by the men of the family only.	<input type="checkbox"/>
9	A wife should tolerate being beaten by her husband/partner to keep the family together	<input type="checkbox"/>
10	Woman should seek help if she encounters sexual harassment	<input type="checkbox"/>
11	Woman should seek legal recourse if she encounters sexual harassment	<input type="checkbox"/>

### *Longer term effects and further heterogeneity*

We will also do the analysis separately for our different areas by splitting them into over and below median levels of acceptance and number of women working at baseline (in a similar vein to the analysis in Cools and Kotsadam 2016 and Heise and Kotsadam 2015). We will here also incorporate contextual information from the DHS surveys conducted within buffer zones of 50 km from the factories.

Data collection will probably proceed over time and we will then investigate the effects after 12 and 18 months as well. The analysis at these later points will be similar albeit the first stages are likely to be weaker. In later iterations of the survey we are also planning on investigating reporting biases by means of so called list experiments as well as the correlation between reporting bias and employment.

### Power analysis

We want to ensure that our sample is large enough to detect quite small effects and we also want to assess the sensitivity of the project with respect to sample size and number of factories. We therefore calculate a set of minimal detectable effects (MDE). Such calculations hinge on the number of women surveyed and the amount of variance we can control for with the help of covariates.

Figure 1 below shows the MDE for different values of the parameters of interest using the program *Optimal Design*. We expect to have between 1000-1700 women included in the study with around 50 percent assigned to treatment. The figure below shows that our largest MDE would be around 0.18 standard deviations. This scenario is for a total of 1000 women people in each site. If we further manage to include baseline controls to account for 40 percent of the total variance in IPV we would reach an MDE of 0.14. In the best case scenario with 1700 women and baseline controls to account for 40 percent of the total variance in IPV we would have an MDE of below 0.11 standard deviations.

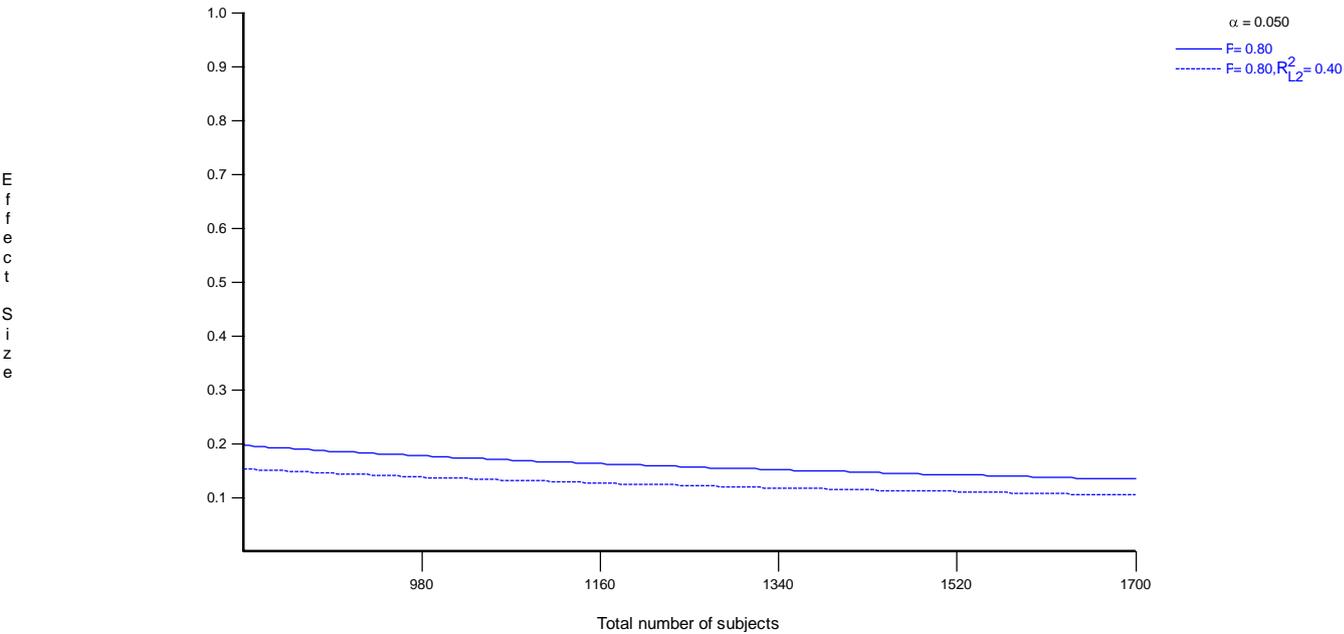


Figure 1: Power analysis calculated using *Optimal Design*.

We want the MDE to be as small as possible and an MDE in the range of 0.2-0.3 is usually considered to be small. As we will have a baseline survey with questions of previous experience with IPV we believe that we can account for a large share of the variation. Our most likely MDE is therefore expected to be below 0.2. Using a previously collected dataset from Ethiopia by the WHO that we have access to as an example, this corresponds to a 5.4 percentage points effect on the probability of IPV.

### **Archive**

The pre-analysis plan is archived before any follow up data is received. We archive it at the registry for randomized controlled trials in economics held by The American Economic Association: <https://www.socialscienceregistry.org/> on November 9 2017. We will receive the first follow up data for a limited sample on November 10. The baseline data collection is still ongoing so it is unclear when the first follow up data collection will be finished.

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## **Appendix: Details on the protocol for data collection on IPV**

The first part of the protocol details a thorough training of enumerators, survey supervisors and research team in the protocol and its practical implications. This includes role-play of the interview setting using the actual IPV questionnaire to visualize the necessary actions to be taken in various scenarios and implications of encountering the specific challenges described in the protocol. Moreover, only female enumerators with documented experience in interviewing respondents about sensitive issues were hired for the project. The enumerators are supported in the field by well-qualified and trained supervisors with the responsibility of overseeing safety of enumerators and respondents. Debriefing also takes place on a regular basis to share experiences and to provide an outlet for emotional stress from recording the stories of violence and abuse.

The second part consists of a procedure to be followed to ensure privacy of information during the interview – no one else than the respondent will be informed that parts of the survey includes IPV questions. The IPV module is part of a larger survey that enables the respondent to explain safely to others the purpose of the interview. Moreover, the IPV module will only be conducted at the end of the larger survey after an initial consent procedure explaining the sensitivity of the questions. Each respondent will be interviewed in a private setting without anyone else present. The enumerators are instructed both by training and in writing on the front cover of the questionnaire that they need to find a place, and if necessary – a new time, where they can be alone during the interview and to ensure complete privacy throughout the interview. Each enumerator needs to sign off before the interview that this has been achieved. If privacy cannot be maintained, the interview will not be conducted. In addition, only one woman in each household will be interviewed so that it will not be revealed to other household members that part of the interview could entail disclosure of IPV.

The third part contains procedures for referral and information about available redress mechanisms. Studies of IPV in our settings are likely to encounter situations where respondents disclose criminal acts that has taken place and not been reported. The enumerators provide the respondents with information about locally available resources for support. Usually, this would be confined to friends and family, and the Women, Children and Youth Affairs offices at the local level (woreda) which are staffed with legal officers that provide advice for women on rights related issues including domestic violence.

Fourth, we will detail a range of measures to protect the confidentiality of the women. No enumerators will conduct interviews in their own community. In addition, the anonymity and confidentiality of personal respondent information will be preserved in the data analysis by using identity codes instead of names and the data handling and storage will be secured.

# Women in the Developmental State Project: Follow-up Survey

Interview only women who are interviewed in the Baseline Survey

## I. Consent

**Read:** Hello. My name is \_\_\_\_\_ and I am working with the Ethiopian Development Research Institute (EDRI). As you know, in collaboration with CMI, a research institute from Norway, we are conducting a survey to study the lives of women seeking work in the industrial sector in Ethiopia. We now conduct the first follow-up of the study. Accordingly, I would like to ask you some questions about you and your household, in privacy, about your current work and time use, education, health, economic and family status. The purpose is to provide information about women in Ethiopia, and to write a paper about this. We are interviewing many women like yourself in several different areas, and no names or information to identify the persons will be available to anyone else than the research team. We would, therefore, kindly request you to participate in this survey. The survey usually takes between 60 and 90 minutes to complete. The purpose is not to offer you assistance, but we would like to offer you ETB 50 for your time if you complete the questionnaire. All your answers will be kept private and confidential. Only the researchers will have access to your “identifying information”, such as your name. The information you provide will not affect your employment relationship in any way and will not be shared with your employer. Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your views are important to our research.

At this time, do you want to ask me anything about the survey?

May I begin the interview now?

Signature of interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

**If anyone else than the respondent is listening in on the interview, politely ask to be allowed to interview the respondent alone. Explain that the interview is private and confidential. Do not continue the interview if others are present.**

## General Instruction

Please use the following Codes for missing values: -77=not applicable (including skipped questions), -88=refusal -99=don't know

Please use the **Ethiopian calendar and time** throughout the survey.

## I. Identification and Tracking information

Questionnaire ID (Copy from Tracking Sheet) \_\_\_\_\_

A.1.	Enumerator name:		A.1 b	Supervisor name	
A.2.	Name of the firm the worker is sampled from		A.3.	Firm ID	____
A.4.	Region	01 =Afar 02 = Tigray 03 = Amhara 04=Oromia 05 = SNNP 06= Addis Ababa 07=Other (Specify) _____			____
A4.1	Have you moved since the last interview?	1 = Yes 0 = No			____
A5.1	If yes to A4.1 Name of the new Woreda and Kabele	a. Woreda _____ b. Kebele _____	C	Name of the new village/town	_____
A6.1	If yes to A4 .1, is she currently living in rural or urban Kebele?	1=rural 2= urban			____
A.7	Place of birth	1=rural 2=urban			____
A.8	Interview date(date/month/year	____ / ____ / ____			
b1	What is your full name (given and father's)?				What is respondent nik-name?
b2	Respondent Id (to be filled by Verifier/Supervisor)	____			
b3	What is your own cell phone number?	Number 1 : { _____ }		Number 2 : { _____ }	
b4	What is the name of your close contact?				b5 The phone number of the close contact { _____ }
b6	When we contact you six months from now, who can we contact to find you?				b7 Phone number of contact
b8	Current address of the respondent	Woreda : { _____ }		b9 kebele: { _____ }	village :{ _____ }
b10	Are you married/living with partner?	1 = Yes 0 = No			____
b11	How many children do you have?	<i>Write number of children</i>			____
b12.1	<b>If yes to A.4 .1</b> , description of the location of the home (please draw the map on the last page)				
b11	What is the travel time if you walk by foot from your home to the closest main (asphalt) road?				____  minutes

b12	What is the travel time if you walk by foot from your home to the closest market?	____   minutes
b13	What is the travel time if you walk by foot from your home to the closest high school?	____   minutes
b14	What is the travel time if you walk by foot from your home to the factory where you applied for the job?	____   minutes

### Section A. Household Roster: Socio-Demographic Characteristics and Occupational Status

A1 Member ID	A2 What is the <b>name</b> of the household members? <i>Start with the household head on the first line, followed by the respondent, then the other members of the household.</i>  <b>Note: Household members are all those who live under the same roof and share food for at least six months over the last twelve months.</b>	A3 What is the <b>relationship</b> between [name] and the head of household? <i>Use Code A</i>	A4 <b>Sex</b> 1=Female 0=Male	A5 How long has [name] lived in the household during last 12 months	A6 Age	If age above 15			If age five or above	
						A7 <b>Ethnicity</b> 1. Oromo 2. Amhara 3. Tigray 4. Harari 5. Somalia 6. Gurage 7. sidama 8. Welayta 9. Other (specify)	A8 <b>Religion</b> 1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other (specify)	A9 Marital status 1. Single 2. Married 3. Divorced 4. Separated 5. Widowed/ widower 6. Living with partner	A10 How many years of education have you completed?	A11 What is the <b>highest level of school/grade</b> that [name] has completed?  <b>Use Code F</b>
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										

A12: How many household members in total? \_\_\_\_\_

ID	If Age 5 to 24, <b>Formal schooling</b>				Skip if completed grade six	If age 15 or above <b>Occupation</b>			<b>Health</b>				
	A12 <b>Formal School Status</b> 1. Never attended 2. Currently attending 3. Stopped attending	A13 If the answer to A12 is 2, in what type of school? 1=private 2=government 3=public 5=NGO	A14 If [name] has <b>never attended /stopped school</b> , what were (are) the two main reasons?  Use code D	A15 If stopped schooling, at what age did [name] leave formal school?	A16 Can [name] <b>read and write in any language</b> ? 1. Read and write 2. Read only 3. Write only 4. Neither read nor write.	A17 During the last 12 months, has (name) engaged in income generated activities? 0=No 1=Yes	A18. If yes, what kind of (main) activities (in terms of income and time) 1=farming 2=non-farm own business 3=industrial employment 4= other employment 5=Other(specify )----- -----	A19 Is [name] currently being breast feed? Ask if aged 5 or below  0=No 1=Yes	A20 Is [name] currently being given supplementary food? Ask if aged 5 or below  0=No 1=Yes	A21.Has [name] experienced illness/injury that made him/her unable to perform normal activities for at least 5 days in the last 30 days? 0=No 1=Yes	A22.If yes to A21, was treatment sought at a health facility?  0=No 1=Yes	A23. If not, why was treatment not sought at a health facility? Use Code E	A24, if yes to A22, where? 1.govt hospital 2.private hospital 3. health post 4.govt health centre 4.1.private clinic 5. NGO Hospital 6. NGO Clinic/health centre 7. other(specify)
1			__/_										
2			__/_										
3			__/_										
4			__/_										
5			__/_										
6			__/_										
7			__/_										
8			__/_										
9			__/_										
10			__/_										
11			__/_										

## Section B. Living Standard of the household and housing conditions

B1	What is the type of tenancy of your home? 1=own 2=rented from government/Kebele 3=rented from private person 4=provided for free or subsidized by employer 5= Other, specify: _____		
B2	How many rooms does your house have? _____		
B3	Do you have a separate room which serves as a kitchen? _____ 1=Yes 0=No		
B4	What is the main construction material of the <b>roof</b> of the main house where the household is living? _____	1 = Corrugated iron sheet 2 = Concrete/cement 3 = Thatch	4 = Wood & mud 5 = Reed/bamboo 6 = Plastic canvas 7 = Asbestos 8 = Bricks 9 = Other (specify)
B5	What is the primary construction material of the <b>external wall</b> of the main household dwelling? _____	1 = Wood and mud 2 = Wood and thatch 3 = Wood only 4 = Stone only 5 = Stone and mud	6 = Stone and cement 7 = Blocks plastered with cement 8 = Blocks unplaster 9 = Bricks 10 = Mud bricks 11 = Steel 12 = Cargo container 13 = Parquet or polished wood 14 = Chip wood 15 = Corrugated iron sheet 16 = Asbestos 17 = Reed/bamboo 18 = Other (specify)
B6	What is the primary construction material of the <b>floor</b> of the main household dwelling? _____	1=Earth/Sand 2= Dung 3=Wood Planks 4=Parquet or polished wood	5=Palm /bamboo 6=Vinyl or Asphalt stripes 7=Ceramic tiles 8=Cement 9=Other (specify):
B7	What is the main <b>source of drinking water</b> for the household? _____	1 = Tap inside the house 2 = Private tap in the compound 3 = Shared tap in the compound 4 = Communal tap outside the compound	5 = Water from kiosks 6 = Protected well (private) 7 = Protected well (shared) 8 = Unprotected well 9=Protected spring 10=unprotected spring 11= River/lake/pound 12 = Rain water 13= Other (specify)
B8	What type of <b>toilet</b> does the household use? _____	1 = Flush toilet (private) 2 = Flush toilet (shared) 3 = Pit latrine (private and ventilated)	4 = Pit latrine (shared and ventilated) 5 = Pit latrine (private and not ventilated) 6 = Pit latrine (shared and not ventilated) 7 = Bucket 8 = Field/forest 9 = Others (specify)
B9	What is the <b>primary fuel</b> used in cooking/energy source? _____	1 = Collected fire wood 2 = Purchased fire wood 3 = Charcoal (either purchased or collected) 4 = Crop residue (either purchased or collected )	5 = Dung/manure (either purchased or collected ) 6 = Saw dust 7 = Butane gas 8 = Kerosene 9 = Electricity 10 = Bio-gas 11 = None 12 = Other
B10	What is the household's main <b>lighting source</b> ? _____	1 = Firewood 2 = Paraffin, gas lantern	3 = Electricity 4 = Solar 5=Torch/battery 6 = Other (specify)

## Section C. Ownership of Assets and Consumer Durable

Serial No.	Item	C1. How many of the following items does your household own?  (write number of items)	C2. Who owns the asset?  Use Code B	C3. If you ever needed to, could you sell this item without getting permission from other hh member? 0=Yes 1=No, only if permission from husband 2= No, only if permission from other male member 3= No, only if permission from other female member 4 = No, only if permission from male and female members
1	Diesel mill			
2	Satellite dish			
3	Modern Stove			
4	Electric mitad			
5	Television			
6	Radio			
7	Jewelry/Gold ( <b>monetary value</b> in C1)			
8	Wrist Watches			
9	Cattle			
10	Pack animal (horse, donkey, mule)			
11	Sheep or goats			
12	Beehive			
13	Mobile phone			
14	Refrigerator			
15	Hand or animal cart			
16	Sewing machine or weaving equipment			
17	Motor cycle			
18	Bajaj			
19	Motor vehicle (Car or Truck)			
20	Land area with certificate (use <b>Hectare</b> in C1)			

21. Ask the following questions for last “Meher” only if the household have engaged in farming.

21.1 Fertilizer (e.g., urea and dap) use and cost			21.2 Pesticide and herbicide use and cost			21.3 Improved seed use and cost			21.4 Hired labor	
1=Yes 0=No			1=Yes 0=No			1=Yes 0=No			1=Yes 0=No	
I. have your household used fertilizer?	ii.If yes quantity in KG	iii. if yes, money spent(birr)	I. have your household used pesticide or herbicide?	ii.If yes quantity in liters	iii. if yes, money spent(birr)	I. have your household used improved seed?	ii.If yes quantity in KG	iii. if yes, money spent(birr)	I. Have your household hired any agricultural labor?	II: if yes, money spent (birr) and/or value of in-kind payment

### Section D. Intra-Household Income

D1. Who was the primary and secondary breadwinner of the household during the last six months? Use code B D.1 primary|\_\_| D.2 secondary|\_\_|

D3. How much income (cash and in kind) did you and other household members obtained from the following sources:

	<i>D4. Previous six months (total)</i>			<i>D5. Last six month (total)</i>		
<u>Net</u> Income from (in birr)	I. Respondent	II. Husband	III. other	I. Respondent	II. husband	II. Other
1. Factory Job employment						
2. Other wage employment						
3. self- employment						
4. Remittances						
5. Government or NGO transfer						
6. Other (specify).....						

## Section E1. Recurrent Expense

Name of good or service		E1.A Last month, how much did your household spend on [name of good/service]? <i>(In cash or value of in-kind payment)</i>	E1.B How much of the purchase of [name of good/service] was <b>financed from your income</b>	E1.C How much of the purchase of [name of good/service] was <b>financed from your partner/husband's income?</b>
01	House rent			
02	Water (bottled, piped or from tank)			
03	Electricity			
04	Charcoal or firewood			
05	Other fuel, such as paraffin or kerosene			
06	Household products and toiletries (laundry soap, toilet paper, brooms, matches, tooth paste, etc.)			
08	Men's personal care item			
09	Women's personal care item			
10	Children's personal care item			
11	Recreation			
12	Costs related to social & religious activities such as funeral, wedding etc.			
13	Transportation fares			
14	Mobile card			
15	Household help/remittance			
16	Food expenses			
17	Tobacco, Shisha and alcoholic drinks			

18. What is the monetary estimate of the food consumed at home last month which is **not purchased** by the household member? \_\_\_\_\_

**Probe:** This includes own produced food items (teff, vegetable etc.) and food transfers from non-household member and government

## Section E2. Infrequent Expense (last 6 months)

Name of good or service		E2.A In the last six months, how much did your household spend on [name of good/service]? <i>(In cash or value of in-kind payment)</i>	E2.B How much of the purchase of [name of good/service] was <b>financed from your income(s)</b> ?	E3.C How much of the purchase of [name of good/service] was <b>financed from your partner/husband income(s)</b> ?
01	Men's clothing and footwear			
02	Women's clothing and footwear			
03	Children's clothing & footwear (excluding school uniforms)			
04	Men's health expenditure (medicine, doctor fee, hospital charges)			
05	Women's health expenditure			
06	Children's health expenditure			
07	Children schooling expense (school fee, uniform, stationary, etc.)			
08	Men's school expense			
09	Women's school expense			

10. Do you, your husband, son(s), daughter(s) have at least two sets of clothes? (0=No, 1=Yes)

10.1 You |\_\_|      10.2 Husband/partner |\_\_|      10.3 Sons |\_\_|      10.4 Daughters |\_\_|

11. Do you, your husband, son(s), daughter(s) have at least two pairs of shoes or sandals? (0=No, 1=Yes)

11.1 You |\_\_|      11.2 Husband/partner |\_\_|      11.3 Sons |\_\_|      11.4 Daughters |\_\_|

## Section F1.Diet Diversity and Food Consumption

Name of food		F1.A. In a normal non-fasting week how many days the house hold members have eaten meals containing (name of food)?	F1.B In a normal non-fasting week, how many meals have eaten by the HH members contained [name of food]?	F1.C in atypical non-fasting month, how much the household spends on (name of food)
01	Any food made from grains/cereals (Injera, bread, spaghetti, rice biscuit etc.)			
02	Tubers and Roots (e.g., potatoes, sweet potato, carrot)			
03	Other vegetables (cabbage, lettuce, tomatoes, onions)			
04	Fruits			
05	Any Meat (beef, poultry, mutton)			
06	Eggs			
07	Fish			
08	Pulses/Legumes (beans, lentils, peas)			
09	Packed foods			
9	dairy products except butter			
10	Oil, fat, butter			
11	Sweeteners (sugar, honey)			
12	Other/ Miscellaneous			

13. How many meals did you, your husband, son(s), daughter(s) eat yesterday?

13.1 You |\_\_|      13.2 Husband/partner |\_\_|      13.3 Sons |\_\_|      13.4 Daughters |\_\_|

14. In a normal week, how many times per day on average you, your husband, sons and daughters in your household usually eat?

14.1 You |\_\_|      14.2 Husband/partner |\_\_|      14.3 Sons |\_\_|      14.4 Daughters |\_\_|

15. In a normal week, on how many days did you, your husband, sons and daughters go to sleep hungry?

15.1 You |\_\_|      15.2 Husband/partner |\_\_|      15.3 Sons |\_\_|      15.4 Daughters |\_\_|

## Section F2. Household Food Insecurity and Access Scale

	In the last 30 days,	F2.A Did this happen 1=Yes 0=No	F2.B If yes, How often did this happen? 1= Rarely (once or twice in the past 30 days) 2 = Sometimes (3-10 times in the past 30 days) 3 = Often (more than 10 times in the past 30 days)
1	Did you worry that your household would not have enough food due to lack of resources?		
2	Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?		
3	Did you or any household member have to eat only a few kinds of foods (limited variety) on a daily basis because of a lack of resources?		
4	Did you or any household member have to eat food that you did not want to eat because of a lack of resources?		
5	Did you or any household member eat smaller meals (portion size) than you felt you needed because there was not enough food?		
6	Did you or any household member eat fewer meals in a day because there was not enough food?		
7	Was there ever no food at all in your household because there were no resources to get it?		
8	Did you or any household member go to sleep hungry at night because there was not enough food?		
9	Did you or any household member go a whole day without eating anything because there was not enough food?		

## Section SC: Saving and Credit

1. Do you have a bank or microfinance saving account? (0=No, 1=Yes) |\_\_\_|
2. Do any other members of this household have a bank or microfinance saving account? (0=No, 1=Yes) |\_\_\_|
3. How much cash did you earn over the last 30 days from all activities? |\_\_\_\_\_|
4. How much did you save over the last 30 days? |\_\_\_\_\_|
5. If your **household** needed 500 birr, 3000 Birr and 10,000 birr respectively for a small business idea, do you think you would be able to borrow it within a month? (0=No 1=yes)
  - 5.1. 500 birr |\_\_\_|
  - 5.2. 3000 birr |\_\_\_|
  - 5.3. 10,000 birr |\_\_\_|
6. If you needed 200 birr for an emergency, from how many people or institution could you obtain it within three days? |\_\_\_|

7. Do you currently owe a person or institution more than 100 Birr? (0=No, 1=Yes) |\_\_\_|

8. If yes, who (is) are the organizations or people you owe this money to? |\_\_\_\_\_| (1= friends 2=relatives 3=Equip 4= Iddir 5= money lenders 6=MFI 7= formal banks)

9. How much do you owe in total? |\_\_\_\_\_| (in birr)

10. Have you given any loan of at least 100 birr to another household? (0=No, 1=Yes) |\_\_\_|

13. If yes to G1.10, how much over the last six months in total? |\_\_\_\_\_| (in birr)

14. Do you think you can open a saving account with an amount as low as 50 birr in any of the banks? |\_\_\_| 1= Yes 0= No 3. Don't know

**Section FH. Additional Fitness and Health related questions**

G1.	Physical fitness	1=Easy 2=Slightly difficult 3=Very difficult 4=Unable
1	Are you able to walk for 2 kilometers? ( <i>pick a Landmark that is 2km distance from the interview location</i> )	
2	Are you able to carry a 20-liter container of water for 20 meters?	
3	Are you able to carry out your usual daily activities by yourself?	
4	Will you be able to stand at a workbench or assembly line for 6 to 8 hours?	

G2. How long does it take to walk to the nearest health facilities? (In minutes) |\_\_\_\_\_|

G3. How long on average will it take to get treatment (including travel and waiting time) from the nearest health facility (hospital, clinic, health post)[in minutes]? |\_\_\_\_\_|

**Section H. Happiness**

H.1 ...is your life compared to other people in your village? |\_\_\_| (1=Much better 2=Better 3=Same 4=Worse 5=Much worse)

H.2...do you rate your living conditions compared to other Ethiopians? |\_\_\_| (1=Much better 2=Better 3=Same 4=Worse 5=Much worse)

H.3 ....do you think your life will be in the future compared to now? |\_\_\_\_\_| (1=Much better 2=Better 3=Same 4=Worse 5=Much worse)

H.4 Overall, how SATISFIED are you with your life as a whole these days?	_____	Use a scale from 0 to 10 0 means not at all satisfied, 10 is completely satisfied.
H.5 Overall, how WORRIED are you with your life as a whole these days?	_____	
H.6 Overall, how MISERABLE are you with your life as a whole these days?	_____	
H.7 How satisfied are you with the economic condition of this country?	_____	
H.8 How satisfied are you with your own living conditions?	_____	

H9. How often during the past month did you feel sad, worried, tense, or anxious? |\_\_\_|

1= All of the time, 2=Most of the time, 3= Some of the time, 4= occasionally, 5= Never

H10. Looking back, how do you rate the economic conditions in the country compared to same time last year? |\_\_\_|

(1=Much better 2=Better 3=Same 4=Worse 5=Much worse, 6=Don't know)

H11. Looking back, how do you rate your own living conditions compared to same time last year? |\_\_\_|

(1=Much better 2=Better 3=Same 4=Worse 5=Much worse, 6= Don't know)

H12. Looking ahead, how do you expect the economic conditions in the country to be around the same time next year? |\_\_\_|

(1=Much better 2=Better 3=Same 4=Worse 5=Much worse, 6=Don't know)

H13. Looking ahead, how do you expect your own living conditions to be around same time next year? |\_\_\_|

(1=Much better 2=Better 3=Same 4=Worse 5=Much worse, 6= Don't know)

H.14. What about the overall direction of the country? Would you say that the country is going in the wrong direction or going in the right direction? |\_\_\_|

(Right direction=1, wrong direction =0, not going in any direction=2, don't know =3)

## Section TU. Time Use

11. How many hours did you or your family member spend on the following activities over the last **seven days**?

ACTIVITY	You	Husband	Oldest daughter	Oldest son	Younger daughters (average)	Younger sons (average)
1. Paid work /income generating activities						
2. Work outside home but unpaid (Apprenticeship, work at family business & farm etc.)						
3. Work inside the home(unpaid)*						
4. Sleeping						
5. Eating and drinking						
6. Personal care						
7. School (include homework)						
8. Travel time						
9. Social and religious activities						
10. Leisure time(watching TV, reading magazine, playing, exercising, recreation etc.)						
11. Maximum	168	168	168	168	168	168

\*Note : All nonpaid and non-leisure activities such as fetching water and firewood, cooking, cleaning and related activities, etc.

## Section J. Intra-household Decision Making and Domestic Responsibility Allocation

### J1. Who in your household usually has the final say about the following decisions?

Decision-Making		J1A Household Member  <i>Use Code B</i>	J1.B if she is <b>not</b> a sole decision maker, How much <b>input does the respondent</b> have in this decision? Code : 1=no input 2=little 3=some 4=a lot
01	Whether to send or not send children to school		
02	What to do if a child falls sick		
03	What to do if the respondent falls sick		
04	Whether to have children or to have more children		
05	Which family planning methods to use		
06	Whether or not you should earn money outside the house		
07	Whether you can visit your family or relatives?		
08	The use of the wife's earned income		
09	The use of the man's /husband's earned income		
10	Purchase of small daily food purchases		
11	Purchase of bulk or expensive food items		
12	Large purchases of items like furniture, cattle, TV, or other assets		
13	Purchase of children clothing and shoe		
14	Weather to open bank account or borrow money		
15	Whether to start a new business		

J2.	Do you have any money of your own that you alone can decide how to use? <input type="checkbox"/> 0 = No 1= Yes
J3.	In some situations when you and your husband/partner make decisions together you might want different things. In such situations, would you agree that how much influence each of you has over the decision is affected by how much income you earn? <input type="checkbox"/> (1=Agree, 2= strongly agree 3= disagree 4= strongly disagree)

J4. Who in your household is primarily responsible for the following domestic chores?

(Code: 1=you 2= Husband 3= oldest daughter 4= young daughter 5= oldest Son 6=respondent relative 7= husband relative 8= domestic helper 9=other(specify ))

1. Fetching water? |\_\_| 4. Fetching firewood/charcoal? |\_\_|  
 2. Cooking? |\_\_| 5. Cleaning, washing, and ironing? |\_\_|  
 3. Regular food shopping? |\_\_| 6. Caring for children? |\_\_|

**Section GA: Gender Attitude**

<b>Enumerator:</b> "I will read some statements about men and women. Please say whether you strongly disagree, disagree, agree or strongly agree with these statements." (1=strongly agree 2=agree 3=disagree 4=strongly disagree)		
1	It is better to send a son to school than it is to send a daughter	__
2	It is okay for women to work outside of the home	__
3	It is okay for women to earn more money than men.	__
4	Women have a right to decide what to do with the money they earn.	__
5	It is okay for women to travel or to leave the house for several nights to do business.	__
6	Men should be responsible to help with childcare when his wife is busy with business or factory job	__
7	Men should be responsible to help with domestic duties when his wife is busy with business or factory job	__
8	The important decisions of the family should be made by the men of the family only.	__
9	A wife should tolerate being beaten by her husband/partner to keep the family together	__
10	Woman should seek help if she encounters sexual harassment	__
11	Woman should seek legal recourse if she encounters sexual harassment	__

**Section KA. Employment History, Earning and Perception**

1. 1	Did you start working at <b>Factory X (Same as in A2)</b>  __  <b>If no, Skip</b> to section KB	0=No 1=Yes
2. 1	Are you still working there?  __	0=No 1=Yes
3.1	If not, why did you quite?  __	1=they fired me 2= salary is less attractive 3=longer working hour 4=no future prospect 5=less secured job 6=work environment is less attractive 7=other(specify).....
4.1	How much is the basic payment (salary /wage) per month from this job?  _____	In birr
5.1	What is the monetary value of additional benefits from this job?  _____  <b>This includes bonuses ,medical and transport allowance, meal subsidy ,overtime payment etc.</b>	In birr

6.1a	How many days a week do you work in this job?  ____	Number of days
6.1b	How many hours a day do you work in this job (on average)?  ____	Number of hours
7.	What is the next best alternative job available to you now (if you quite the job at the factory)?  ____	Use code C
8.	How much could you earn (basic payment) from the alternative job per month?  _____	In birr
9.	What would be the monetary value of the expected additional benefits from the alternative Job?  _____  This includes bonuses ,medical and transport allowance, meal subsidy ,overtime payment etc.	In birr
10.	What is the current occupation of your husband?	Use Code C
11.	How much is the basic payment your husband earns from this Job?  _____	In birr
12.	What is the monetary value of additional benefits he obtained from his job?  _____  This includes bonuses ,medical and transport allowance, meal subsidy ,overtime payment etc.	In birr
13.	What is the occupation of your father?  _____	Use code C
14.	What is the occupation of your mother?  _____	
23	Taking all things together, would you say you are.....about working at the factory?  __  (1=Very happy,2=Quite happy,3=Not very happy,4=Not at all happy,-99= Don't know (don't read))	
Scal	On a scale of 1 to 10, with 1 being the worst possible job you are qualified for and 10 being the best possible job you are qualified for, where would you place this factory job ?  _____	10 point scale
24	Is your husband/partner happy, unhappy or OK about you working at the factory?  __  (1= Very happy, 2= Happy, 3= OK, 4= Unhappy, 5= Very unhappy)	
25	Have you had any health related issues as a result from working in this job?  ____	1=Yes 0=No
26	If yes to 25, specify.....	

### Section KB. Employment History, Earning and Perception

1.	Have you had any other formal salaried job with salary since the last interview  ____	0=No 1=Yes
2.	If yes, when did you start working in that job?  __ _  /  __ _	(month/year)
2.1	Are you still working there?  ____	0=No 1=Yes
2.2	If no, why did you quit?  ____	Use code KA3.1
3.	What occupation is/was that job?  ____	use code C
4.	How much is/was the basic payment (salary /wage) per month from that job?  _____	In birr
5.	What is/was the monetary value of additional benefits from that job?  _____  <b>This includes bonuses ,medical and transport allowance, meal subsidy ,overtime payment etc.</b>	In birr
5.4	Have you had any health related issues as a result from working in this job?  ____	1=Yes 0=No

5.7	If yes to 5.4, specify.....	
6.	Are you applying for jobs?	0=No 1=Yes
7.	On how many days have you visited job vacancy boards in the last 4 weeks?  ____	days
8.	On how many days have you gone to work sites to enquire about work in the last 4 weeks?  ____	days
9.	How many relatives, friends or acquaintances did you ask for help getting a job in the last 4 weeks?  ____	people
10.	How many times have you applied for a formal wage-paying job in the last four weeks?  ____	applications
13.	What is the current occupation of your husband?  ____	Use Code C
14.	How much is the basic payment your husband earns from this Job?  _____	In birr
15.	What is the monetary value of additional benefits he obtained from his job?  _____  This includes bonuses ,medical and transport allowance, meal subsidy ,overtime payment etc.	In birr
16	What is the occupation of your father?  ____	<b>Use code C</b>
17	What is the occupation of your mother?  ____	

## Section L. Marriage and Fertility

*Now I would like to ask you some questions about marriage and the behavior of husband and wives.*

1.	In your opinion, what is the optimal age to marry for women?	__ __  years old
2.	In your opinion, what is the optimal age to marry for men?	__ __  years old
Do you agree or disagree with the following statements? Select one alternative for each statement.		
3.	Women who work for a salary outside the home are more respected in the local community.  ____	1=Agree 0=Disagree 3=I don't know/not sure/depends
4.	In my village, it is generally preferred that married women should work on household tasks such as taking care of children, collecting firewood, cleaning and cooking, and that they should not take salaried employment away from home.  ____	1=Agree 0=Disagree 3=I don't know/not sure/depends
5.	Is there a legal age to get married in Ethiopia?  ____	1= Yes 0= No >>>skip to question 7 2= I don't know >>>skip to question 7
6.	<i>If yes:</i> What is the legal age to get married for women in Ethiopia?	____  years old

I would like to ask you some questions about pregnancies and children.  
Remember that these answers will not be shared with your employer or anyone else.

7.1	Are you pregnant now, or have you been pregnant since we last interviewed you?  ____	(Yes=1, No=0)																																			
8.	Do you have any sons or daughters to whom you have given birth who are alive, but <i>not</i> living with you?  ____	____  (Yes=1, No=0) <i>If No&gt;&gt;&gt;skip to question 10</i>																																			
9.	<p><i>If she has children, not living with her:</i> For each of these children, can you tell me the age, the sex and with whom he/she/they live with?</p> <p><i>Code for sex : 1=female 0=male</i></p>	<table border="1"> <thead> <tr> <th></th> <th>A. Years</th> <th>B. Months</th> <th>C. Sex</th> <th>D. Child lives with</th> </tr> </thead> <tbody> <tr> <td>Child 1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 5</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						A. Years	B. Months	C. Sex	D. Child lives with	Child 1					Child 2					Child 3					Child 4					Child 5					<p><b>Code for lives with</b></p> <p>01= Biological father 02= grandparents 03= other relative(s) 04= Friend of parent(s) 05= Foster parent(s) 06=other (specify)_____</p>
	A. Years	B. Months	C. Sex	D. Child lives with																																	
Child 1																																					
Child 2																																					
Child 3																																					
Child 4																																					
Child 5																																					
10.	<p><i>If she has a child/children living with her:</i></p> <p><b>10.a: If she works at the factory:</b> Who takes care of the child/children living with you when you are at work? can be multiple  _____ </p> <p><b>10.b: If she does not work at the factory:</b> Who usually takes care of the child/children living with you? can be multiple  _____ </p>	<ol style="list-style-type: none"> <li> __  Mother of respondent</li> <li> __  Husband</li> <li> __  Children can take care of themselves</li> <li> __  Older daughter(s)</li> <li> __  Older son(s)</li> <li> __  Relative(s)</li> <li> __  Maid</li> <li> __  Neighbor(s)</li> <li> __  Paid caretaker, how much does that cost per month? Birr  __ _ _ _ _ </li> <li> __  Other (Specify_____)</li> </ol>																																			
11.1	Have you pulled any household member from school to fill in your forgone	____  (Yes=1, No=0) If no>>>skip to question 13																																			
12	<i>If yes, who?</i>  _____	<ol style="list-style-type: none"> <li> __  Oldest daughter</li> <li> __  Oldest son</li> <li> __  Younger daughters</li> <li> __  Younger sons</li> <li> __  Other(specify) _____ </li> </ol>																																			
13.1	Imagine that you got a child next year, how long do you think you would stay home with your child?	<ol style="list-style-type: none"> <li> __ _  years    2.  __ _  months</li> <li> __ _  weeks</li> <li> __  would not return to work &gt;&gt;&gt;skip to question 15.</li> </ol>																																			

14.1	<i>If wanting to return:</i> Who would be home with that child if you return/start to work? Can be multiple   _____	1.  __  Mother of respondent    2.  __  Husband 3.  __  Children can take care of themselves 4.  __  Older daughter(s)    5.  __  Older son(s) 6.  __  Relative(s)            7.  __  Neighbor(s) 8.  __  Maid 9.  __  Paid caretaker, how much does that cost per month? Birr  _____  10.  __  Other (Specify _____)
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15.	<i>If she has living children:</i> If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?	_____  children
16.	<i>If she does not have any living children:</i> If you could choose exactly the number of children to have in your whole life, how many would that be?	_____  children
17.	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	_____  boys  _____  girls  _____  either
18.	What age do you think is a good age for a woman to have her first child?	_____  years old
Do you agree or disagree with the following statements?		
19.	A woman has to have children in order to be happy in life.  _____  ( 0=disagree, 1=agree, 3= I don't know/not sure/depends)	
20.	I think women should be able to take employment if she wants, even when she has children younger than...  20.a  _____   20.b  _____   20.c  _____	a. Younger than 1 year old 1=Agree ,if agree >>>skip to question 21 0=Disagree 3=I don't know/not sure/depends  b. Younger than 7 years old 1=Agree ,if agree >>>skip to question 21 0=Disagree 3=I don't know/not sure/depends  c. Younger than 15 years old 1=Agree 0=Disagree 3=I don't know/not sure/depends

Now I would like to ask you some questions about contraceptive methods and family planning.

20.5	If she has a job: Does your workplace encourage or say anything about use of contraceptives?  ____	Yes=1 No=0
21.	Can you list all the contraceptive methods you know of? (Only report the number of methods she mentions.)	____  methods
22.1	If you have heard about any of the following methods of family planning, can you shortly explain to me what they are?	a.  __  Female sterilization b.  __  Male sterilization c.  __  Pill Yes=1 d.  __  IUD (Intrauterine Device) No=0 e.  __  Injectable f.  __  Implant g.  __  Male condom h.  __  Female condom i.  __  Lactational amenorrhea (LAM) j.  __  Emergency contraception k.  __  Rhythm (traditional) l.  __  Withdrawal (traditional) m.  __  Other (Specify _____)
23.	Can you tell me where you can get any type of contraceptives/ family planning methods?   _____	Do not prompt. List all that are mentioned. 1.  __  Pharmacy 2.  __  School 3.  __  Friend/relative 4.  __  Drug store/vendor 5.  __  Governmental health clinic/hospital/center/post/HEW 6.  __  Private hospital/clinic 7.  __  NGO health facility 8.  __  Shop 9.  __  At the factory/work place 10.  __  Other (Specify _____)
24.1	Have you received any information about family planning methods since we last interviewed you, and where was that?   _____    _____	Do not prompt. List all that are mentioned. 1.  __  Pharmacy 2.  __  School 3.  __  Friend/relative 4.  __  Colleague 5.  __  Health worker at governmental health clinic/hospital/center/post/Health extension worker/model women in the 1to5 network 6.  __  Health worker at private hospital/clinic 7.  __  Health worker at NGO health facility 8.  __  Television 9.  __  Radio 10.  __  Newspaper/magazine 11.  __  Brochure at governmental health clinic/hospital/center/post/HEW 12.  __  Brochure from private health hospital/clinic 13.  __  Brochure from NGO health facility 14.  __  Health worker at factory/workplace 15.  __  Employer at factory/workplace 16.  __  Husband/partner 17. Other (Specify _____) 18.  __  Don't know
25.	Did you and your husband receive this information together?  ____	(Yes=1, No=0)
26.1	Have you and your husband discussed the use and	(Yes=1, No=0)



	<i>Do not prompt, choose all relevant alternatives.</i>	7.  __  Not important for me 8.  __  Religion or other social pressure 9.  __  Don't think contraceptive method's should be used at all 10.  __  Other reason? (Specify _____)
33.	Does your husband/partner want the same number of children that you want, or does he want more or fewer than you want?  __	1= Same number 2= More children 3= Fewer children 4= Don't know

## Section M. Domestic relations

**Read:** Now I would like to ask you questions about some other important aspects of a woman's life. You may find some of these questions very personal. However, your answers are crucial for helping to understand the condition of women in Ethiopia. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else in your household will know that you were asked these questions. If I ask you any question you don't want to answer, just let me know and I will go on to the next question.

**Read:** In your opinion, is a husband justified in beating his wife in the following situations (what is justifiable for her, not what others think is justifiable)

1. If she goes out without telling him?	Yes=1 No=0	__
2. If she neglects the children?		__
3. If she argues with him?		__
4. If she refuses to have sex with him?		__
5. If she burns the food?		__

6. **Read:** Please tell me if you agree or disagree with the statement: "A wife should tolerate being beaten by her husband/partner to keep the family together"  
(Agree =1, Disagree=0 It depends=3) |\_\_| (if she say it depends, write 3, but do not mention this option)

<b>Read:</b> I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your husband/partner					
7. He (is/was) jealous or angry if you (talk/talked) to other men?	Yes=1	7a.  __	If <b>Yes</b> , ask:Did this	Yes=1	7b.  __
8. He frequently (accuses/accused) you of being unfaithful?		8a.  __			8b.  __
9. He (does/did) not permit you to meet your female friends?		9a.  __			9b.  __

10. He (tries/tried) to limit your contact with your family?	No=0	10a.  __	happen during the last 3 months?	No=0	10b.  __
11. He insists/insisted on knowing where you are/were at all times?		11a.  __			11b.  __
12. He controlled your behavior in other ways. If yes => 12.a, Specify: _____		12.b  __			12c  __

**Read:** Now I need to ask some more questions about your relationship with your husband/partner. Did your husband/partner ever:

13. say something to humiliate you in front of others?	Yes=1  No=0	13a.  __	If Yes, ask: Did this happen during the last 3 months?	Yes=1  No=0	13b.  __	If Yes last 3 months, ask: Had he been drinking alcohol in at least one of these cases?	Yes=1  No=0	13c.  __
14. threaten to hurt or harm you or someone you care about?		14a.  __			14b.  __			14c.  __
15. insult you or make you feel bad about yourself?		15a.  __			15b.  __			15c.  __
16. do other things that scare you or make you not feel safe? If yes, specify: _____		16a.  __			16b.  __			16c.  __

17. push you, shake you, or throw something at you?	Yes=1  No=0	17a.  __	If Yes, ask: Did this happen during the last 3 months?	Yes=1  No=0	17b.  __	If Yes, last 3 months, ask: Had he been drinking alcohol in at least one of these cases?	Yes=1  No=0	17c.  __
18. slap you?		18a.  __			18b.  __			18c.  __
19. twist your arm or pull your hair?		19a.  __			19b.  __			19c.  __
20. punch you with his fist or with something that could hurt you?		20a.  __			20b.  __			20c.  __
21. kick you, drag you, or beat you up?		21a.  __			21b.  __			21c.  __
22. try to choke you or burn you on purpose?		22a.  __			22b.  __			22c.  __
23. threaten or attack you with a knife, gun, or other weapon?		23a.  __			23b.  __			23c.  __
24. physically force you to have sexual intercourse with		24a.  __			24b.  __			24c.  __

him when you did not want to?					__		
25. physically force you to perform any other sexual acts you did not want to?		25a.  __			25b.  __		25c.  __
26. force you with threats or in any other way to perform sexual acts you did not want to?		26a.  __			26b.  __		26c.  __
27. other violent acts against you that we have not mentioned? If yes, specify: _____		27a.  __			27b.  __		27c.  __

**If No** to all of the violence questions (13-27), go to Question 35. **If No** to all drinking alcohol when violent last 3 months (13-27), go to Question 29.

28. Has your husband also been violent against you when he has not been drinking alcohol? (1= Yes, 2= No) |\_\_|

29. How many days during the last 30 days did your husband/partner act violently towards you? |\_\_|

30. Did you get injured from any of his violent behavior during the last 3 months? (e.g. pain lasting more than a day, broken bones or loss of consciousness)(1 = Yes, 2= No) |\_\_|

31. Did you seek any help from others during the last 3 months to stop your husband/partner's violent behavior? **Probe:** Did she call the attention of neighbors or relatives to stop her husband/partner including screaming to call their attention, did she take her traditional dispute mechanisms, did she go to formal institutions like police, the family courts, or others? |\_\_\_\_\_| can be multiple

**(1=yes, involved neighbors/relatives, 2=yes, traditional dispute solving, 3=yes, police or formal dispute resolving like family court, 4= Yes, got help from others, 5=No)**

32. Why did the violence occur? Explain

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33. During the last three months when your husband/partner was violent towards you, did you hit back/resist? (Yes=1, No=0) |\_\_|

34a. Do you think that it was wrong of your husband/partner to hit or harass you? (Yes=1, No=0) |\_\_|

34b. **If Yes:**Why? Explain

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35. **Is your husband/partner often angry, frustrated, or stressed?** (Yes=1, No=0) |\_\_|

36. **If Yes:**Is your husband/partner often frustrated because of:

36a. Low income: |\_\_| (Yes=1, No=0)

36b. Poor harvest: |\_\_| (Yes=1, No=0)

36c. Lack of food: |\_\_| (Yes=1, No=0)

36d. Low status in the village: |\_\_| (Yes=1, No=0)

- 36e. Conflict with others:  (Yes=1, No=0)
- 36f. Problems with gossip/rumors:  (Yes=1, No=0)
- 36g. You disobeyed your husband/partner:  (Yes=1, No=0)
- 36h. You disobeyed the elders:  (Yes=1, No=0)
- 36i. You refused to have sex with your husband/partner:  (Yes=1, No=0)
- 36j. You quarreled over money:  (Yes=1, No=0)
- 36k. You did not perform your responsibilities well:  (Yes=1, No=0)
- (responsibilities like cooking, cleaning, taking care of children, elderly or sick, participate in church/mosque or community activities like weddings, funerals etc.)
- 36l. Other reason, specify \_\_\_\_\_

37. Do you punish your children physically sometimes? (Yes=1, No=0)
38. Does your husband/partner punish your children physically sometimes? (Yes=1, No=0)
39. As far as you know, did your father ever beat your mother? (Yes=1, No=0)

## Section N. Networks and participation

1. Do you attend meetings in the Kebele?  Yes=1, No=0
2. If yes, how often?

Code: 1=Every week, 2= Twice a month, 3= Once a month, 4=quarterly 5=Twice a year, 6= Once a year 7=other(specify)\_\_\_\_\_

### Code for Discussion Topic (C4):

1=wedding 2=funerals 3=child birth 4=saving, credit and finance 5=starting up joint business 6=women's right  
 7= property (ownership, inheritance) 8=occupational safety and health 8.1= Freedom of association and collective bargaining 9= payments (wage/salary, bonus, overtime payment) 10= harassment 11=political issues 12=religious issues 13= grievances and dispute resolution 14=agricultural innovation 15= other development related issues 16=other issues (specify)\_\_\_\_\_

### Code for Sources of Information (C5)

1=Family members 2=Media 3= Kebele 4= NGO 5=Colleagues6=friends7=other (specify)

Network (read out)	A. Does this exist in your neighborhood or workplace? (Yes=1, No=0)	B. Are you currently member of the specified network? (Yes=1, No=0)	C.If yes to 2B, ask the following					D. If you are not from this area, were you a member of the specified network in the place of origin? 1= yes 0=no	E. if yes to D, are you still a member of this network in the place of origin? (Yes=1, No=0)
			C1. How long since she became a member? (in months)	C2. How often do you meet? Use codes of question 2.	C3.Do you have an important role in the network? (Yes=1, No=0)	C4. What do you mainly discuss in this network? (use Code C4) Choose Three major topic at most	C5. If you discuss about rights in the network, what are the sources of information? Use code C5		
1. Mahiber(tswa...etc)									
2.Other religious associations									
3.Women's association									
4.Microfinance cooperative									
5.One-to-five networks									
6.Development teams									
7.Idir									
8.Equb									
9.Trade union									
10.Informal Workers group									
11.Users association									
12.customary institution									

13. Other (specify)									
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21. Do you usually follow the radio, TV, newspapers or other media outlets? |\_\_\_\_| (yes=1, No=0>>>> If no, skip to 22.

21.1 If yes, which news do you usually follow? |\_\_\_\_| (Code: 1=local, 2= national, 3=international)

21.2 If yes, which of the media outlets do you use? |\_\_\_\_| (Code: 1=TV, 2=radio, 3=newspaper, 4=websites/internet, 5=social media)

22. Which types of information (news) in the media are of interest for you? |\_\_\_\_|

(Code: 1= Business=1, 2=Political, 3=Sport, 4=Entertainment, 5=Development 6= other news (specify)\_\_\_\_\_ 7= None

23. How interested would you say you are in politics and government? |\_\_\_\_|

(Code: 1= very much very interested 2=somewhat interested 3= not very interested 4= not at all interested)

Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. [If Yes, read out options 2-4]. If not, would you do this if you had the chance? [For No, read out options 0 and 1]

	A. did you did this last year 1=Yes, often 2=Yes, several times 3= Yes, sometimes 4=yes, rarely5=Not at all	B. If not, would you do this if you had the chance? 1=yes 2= no
28. Attended a community meeting		
29. Got together with others to raise an issue		

### Section CS: Cognitive skills

Enumerator: Please Use the translated version. Please Stop this test after 6 minutes and move on to the next part.		
1	If you buy goods for 600 Birr and then sell them for 650 Birr, what is your profit?	_____
2	IF you earn 100 Birr a day for 30 days what is your total monthly income?	_____
3	Selam bought a 1000 birr dress at a 20% discount. How much did she pay for the dress?	_____
4	What is 5 times 10, divided by 2?	_____
5	Suppose you have 5000 birr in a savings account. The account earns 4 percent interest per year. How much would you have in the account at the end of the year?" [Write down the answer.]	_____

### Section TR: Risk and Time Preference

1	Would you prefer to get 1000 birr now, or receive payments of 100 birr each week for the next 12 weeks? 1=first option 2=second option 3=either is fine	_____
2	Do you often spend money on things and regret it later? 1=yes 0=No	_____
3	When you start something and it becomes difficult, will you continue doing it? 1=yes 0=No	_____
4	Would you rather have 500 birr for sure? Or would you rather flip a coin, and win 1000 birr if the head turns up or 0 birr if the head turns down? 1=first option 2=second option 3=either is fine	_____
5	Suppose you have money to do business. Which business will you take? 1= business that can give high profits, but there is an equal chance you can lose your money anytime. Or 2= business with low profit, but you can't lose your money.	_____
6	Suppose there are two jobs. One pays 1000 birr per month but it can end anytime. The other pays 700 birr per month and you can keep the job as long as you want. Which job will you take? 1=first option 2=second option 3=either is fine	_____

### Conclusion

1. Ask if you can take the picture of the respondent so that it is easier for us to find her for follow-up interview. | \_\_\_ | (Yes=1, No=0) If yes, take her picture.
2. In what language was this survey conducted? | \_\_\_ | (1= Amharic 2= Tigrigna 3= Oromigna 4=other (specify)..... )
3. Did the respondent have lots of trouble understanding the questions? 0=Not at all 2=yes some problem 3= Yes ,major problem
4. Map. Please draw a map of where the respondent is living. Use landmark such as churches, mosques, main roads, schools, Kebele offices, shops and other things that can help us find her house.

### Codes

<b>A:Relation to head</b> 01= Father	<b>CODE B:</b>	<b>C: Main Activity</b> <i>Agriculture and Fishing</i>	<b>D: not attend school</b>	<b>E:Reason for not</b>
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<p>02= Mother  03= Parents  04= Maternal grandparent  05= Paternal grandparent  06= Current Spouse/Partner  07= Former Spouse/Partner  08= Brother  09= Sister  10= Cousin  11= Maternal aunt or uncle  12= Paternal aunt or Uncle  13= Son  14= Daughter  15= Grandchild  16= Step Mother  17= Step Father  18= Half-Brother/Sister  19= Mother in Law  20= Father in Law  21= Brother/Sister in Law  22= Co-Wife  23= Other Relative  24= Current Neighbor  25= Former Neighbor  26= Friend from School  27= Friend from Work / Colleague  28= Friend from Church  29= Other Friend  30= Teacher/School official  31= Village elder/ Guide/ Liguru  32= No One/None  33= Self  34= Other (specify)</p>	<p><b>OWNER AND DECISION-Maker</b></p> <p>01 = Respondent  02=husband/partner  03=other female member  04=other male member  12=respondent and husband jointly  13=respondent and other female jointly  14=respondent and other male member  23=husband and other female jointly  24=husband and other male jointly  34=other male and female member</p>	<p>01= Farmer  02= Agricultural laborer  03= Livestock care/Sheppard  04= Fishing  <i>Retail and commercial</i>  05= Sell own agricultural products in market  06= Hawking clothes, food, other items  07= Own shop (retail)  08= Work in other person's shop (retail)  09= Own other commercial or financial business  10= Work in other person's commercial or financial business  <i>Unskilled trades</i>  11= Domestic work (house boy/girl)  12= Hotel, restaurant or tourism job  13= Watchman  14= Vehicle taxi work  15= Bicycle taxi work  16= Unskilled construction laborer  <i>Skilled and semi-skilled trades</i>  17= Barber or hairdresser  18= Tailor or seamstress  19= Butcher  20= Mechanic  21= Welder  22= Skilled construction work (carpenter, mason, plumber, electrician, etc)  23= Factory job  <i>Professionals</i>  24= Teacher  25= Clerical and secretarial work  26= Salaried professional  27= NGO field worker</p>	<p>1=Family could not afford  2= Got pregnant  3=Got married  4=Completed schooling cycle  5=Too many domestic responsibilities  6=Poor performance  7=School too far/no school in vicinity  8=No interest in school  9=Parents did not approve/see benefit  10=Migration  11=Death/separation of parents  12=Sickness or disability  13=No school places available  14=Other (specify)</p>	<p><b><i>sought treatment</i></b></p> <p>1 = Don't know where nearest health center is  2 = Takes too much time to reach health center  3 = Transportation to health center is too costly  4 = Can't afford the fees/medicines  5 = Work/ household work/ other responsibilities  6 = Family, social or religious pressures  7 = Preferred other local or traditional treatments  8 = Did not want to take child(ren) to health center  9 = Recovered without treatment  10 = Other (specify)</p> <p><b>F. Highest Level of Education</b></p> <p>1=No education  2=religious education  3=education through literacy campaign  4= primary incomplete  5= primary completed  6= High school incomplete  7=High school completed(new curriculum)  8=High school completed(old curriculum)  9=Preparatory incomplete  10= Preparatory completed</p>
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		28= Nurse or health technician 29= Doctor 30= Police officer/military officer 31= Other government job 32= Computer/ electronics technician or repair 40= Other (specify) 50= Student 60= No job		11= 10 +1 Vocational (old) 12= 10 +2 Vocational (old) 13= 10 +3 Vocational (old) 14=Vocational school level1 15=Vocational school level 2 16=Vocational school level 3 17=Vocational school level 4 18=Vocational school level 5 19=college/university drop out 20= Diploma 21=B.A/B.sc 22=M.sc and above 23= <b>Kindergarten</b>
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