Online appendix for:

International Migration, Remittances and Remaining Households: Evidence from a Trade Embargo

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Appendix A Extra Background

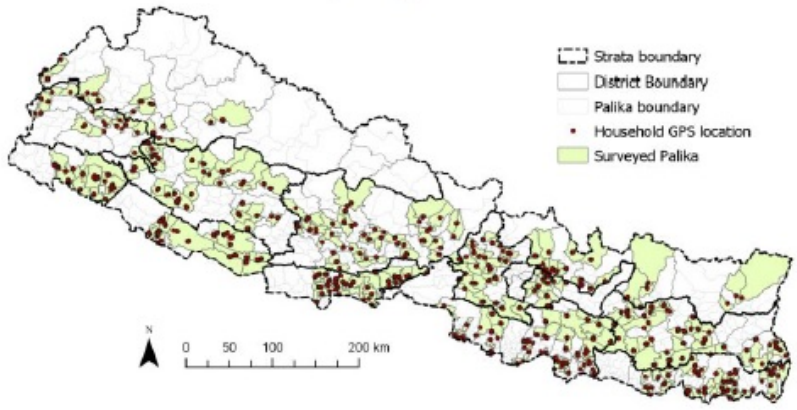
Figure A.1: Nepal surveyed districts

Table 2.1. Division of Districts by Stratum

Stratum	Districts (Bold indicates district was included in sample)	No. of PSUs*
Mountain	**Bajhang, Bajura, Darchula, Dolakha**, Dolpa, Humla, **Jumla, Kalikot**, Manang, Mugu, Mustang, Rasuwa, Sankhuwasabha, **Sindhupalchok, Solukhumbu, Taplejung**	40
Far Western Hill	**Achham, Baitadi**, Dadeldhura, **Doti**	18
Mid Western Hill	**Dailekh, Jajarkot**, Pyuthan, **Rolpa, Rukum**, Salyan, **Surkhet**	34
Western Hill	Arghakhanchi, **Baglung, Gorkha, Gulmi**, Kaski, **Lamjung, Myagdi, Palpa**, Parbat, **Syangja, Tanahu**	48
Central Hill	**Dhading, Kavrepalanchok, Makwanpur, Nuwakot**, Ramechhap, **Sindhuli**	48
Eastern Hill	**Bhojpur, Dhankuta, Ilam, Khotang, Okhaldhunga**, Panchthar, Terhathum, **Udayapur**	39
Far Western Terai	**Kailali**, Kanchanpur	18
Mid Western Terai	**Banke**, Bardiya, **Dang**	24
Western Terai	Kapilbastu, **Nawalparasi, Rupandehi**	35
Central Terai	**Bara**, Chitawan, **Dhanusa, Mahottari, Parsa**, Rautahat, **Sarlahi**	48
Eastern Terai	**Jhapa, Morang, Saptari**, Siraha, **Sunsari**	48
Total		400

* 15 households were interviewed in each PSU.

Map 2.1. Surveyed Locations



Source: Walker et al. (2019)

Table A.1: Summary statistics (households with migrants versus no migrants)

Summary Statistics (wave 1)							
	No Migrants HH			Migrants HH			
	Mean	SD	Obs.	Mean	SD	Obs.	t-test
Remit (millions)	0.00	0.02	3884	0.16	0.20	1508	-0.159*** (-48.03)
Muslim HH	0.02	0.15	3926	0.01	0.11	1508	0.00966* (2.27)
Christian HH	0.02	0.15	3926	0.02	0.13	1508	0.00726 (1.67)
Hindu HH	0.86	0.35	3926	0.87	0.33	1508	-0.0187 (-1.78)
Buddhist HH	0.08	0.27	3926	0.08	0.27	1508	-0.00148 (-0.18)
Kirant HH	0.02	0.14	3926	0.02	0.13	1508	0.00161 (0.39)
HH Size	4.92	1.95	3884	5.78	2.03	1508	-0.863*** (-14.38)
Member<16	0.73	0.44	3884	0.79	0.41	1508	-0.0614*** (-4.67)
Head Male	0.90	0.31	3884	0.61	0.49	1508	0.284*** (25.55)
Head age	48.36	13.83	3884	49.03	13.90	1508	-0.666 (-1.59)
Head Single	0.01	0.08	3926	0.00	0.06	1508	0.00188 (0.85)
Head Married	0.89	0.32	3926	0.87	0.34	1508	0.0177 (1.81)
Head Widow	0.09	0.28	3926	0.12	0.32	1508	-0.0315*** (-3.56)
Head Divorced	0.01	0.11	3926	0.01	0.10	1508	0.00126 (0.40)
Age (mig)	3.68	9.25	3926	29.64	8.75	1508	-25.95*** (-93.99)
Months away (mig)	3.40	15.13	3926	22.79	32.04	1508	-19.39*** (-30.17)
Expect Return (mig)	0.15	0.36	3926	0.97	0.16	1508	-0.822*** (-86.25)
lincomepc	6.25	4.60	3884	4.91	4.39	1508	1.342*** (9.74)
incq-1	0.33	0.47	3884	0.43	0.49	1508	-0.096*** (-6.65)
incq-2	0.13	0.33	3884	0.19	0.39	1508	-0.060*** (-5.65)
incq-3	0.24	0.43	3884	0.26	0.44	1508	-0.019 (-1.41)
incq-4	0.30	0.46	3884	0.12	0.33	1508	0.175*** (13.52)
Head Occup 1	0.03	0.17	3926	0.03	0.18	1508	-0.002 (-0.54)
Head Occup 2	0.22	0.41	3926	0.08	0.28	1508	0.135*** (11.70)
Head Occup 3	0.54	0.50	3926	0.63	0.48	1508	-0.096*** (-6.43)
Head Occup 4	0.08	0.27	3926	0.05	0.22	1508	0.030*** (3.91)
Head Educ 1	0.37	0.48	3926	0.49	0.50	1508	-0.121*** (-8.17)
Head Educ 2	0.39	0.49	3926	0.38	0.49	1508	0.011 (0.77)
Head Educ 3	0.18	0.38	3926	0.09	0.29	1508	0.082*** (7.54)
Head Educ 4	0.05	0.21	3926	0.03	0.18	1508	0.015** (2.49)

Notes: we only include households with international migrants (mig) observed in waves 1 and 3. Migrants are defined pre-embargo and refer to overseas migrants only. We drop households with mixed migrants (i.e. those households with migrants in Qatar and other international destinations). All variables are reported for wave 1 (pre-embargo). These include at the household level: the number of members including overseas, the household's per capita income (in log), an indicator for whether the household is in the 2^{nd}, 3^{rd} or top quartiles of the sample distribution of household's per capita income; at the household head level: the age, the marital status being single, various indicators related to the highest level of education completed by the household head and the head's occupation; at the migrant level: the age of migrants and the number of months away. Migrants' variables are the average of all migrants within a given households. Remittances are reported in million Nepali Rupees. For the t-test, we report the mean and t-test of difference in parenthesis.

Table A.2: Summary statistics (Qatar versus Other migrants)

Summary Statistics (wave 1)							
	Other Migrants			Qatar Migrants			
	Mean	SD	Obs.	Mean	SD	Obs.	ttest
remit	0.13	0.18	1563	0.17	0.13	260	-0.0358** (-3.06)
Months Away	24.14	38.72	1562	19.04	22.88	260	5.095* (2.06)
mig. earnings	0.02	0.03	1563	0.03	0.04	260	-0.00730** (-3.21)
female	0.07	0.26	1563	0.02	0.14	260	0.0511** (3.15)
male	0.93	0.26	1563	0.98	0.15	260	-0.0479** (-2.93)
move (marriage)	0.00	0.00	1562	0.00	0.00	260	0 (.)
move (follow family)	0.06	0.23	1562	0.00	0.00	260	0.0551*** (3.89)
move (other family reason)	0.01	0.08	1562	0.00	0.00	260	0.00576 (1.23)
move (educ)	0.03	0.17	1562	0.00	0.00	260	0.0307** (2.87)
move (training)	0.00	0.04	1562	0.00	0.00	260	0.00128 (0.58)
move (job search)	0.44	0.50	1562	0.32	0.47	260	0.124*** (3.77)
move (start new business/job)	0.49	0.50	1562	0.72	0.45	260	-0.222*** (-6.73)
move (job transfer)	0.00	0.07	1562	0.00	0.00	260	0.00448 (1.08)
move (family conflict)	0.00	0.04	1562	0.00	0.00	260	0.00192 (0.71)
move (natural disaster)	0.00	0.00	1562	0.00	0.00	260	0 (.)
move (easy lifestyle)	0.00	0.06	1562	0.00	0.00	260	0.00320 (0.91)
move (other)	0.00	0.06	1562	0.00	0.00	260	0.00384 (1.00)
remit (land purchase)	0.01	0.12	1195	0.03	0.18	238	-0.0194* (-2.09)
remit (livestock purchase)	0.02	0.15	1195	0.03	0.17	238	-0.00682 (-0.63)
remit (business farm use)	0.05	0.21	1195	0.05	0.23	238	-0.00692 (-0.45)
remit (dwelling purchase)	0.01	0.09	1195	0.00	0.06	238	0.00333 (0.56)
remit (improve dwelling)	0.09	0.28	1195	0.07	0.26	238	0.0148 (0.75)
remit (marriage/funeral/ceremony)	0.05	0.21	1195	0.03	0.17	238	0.0175 (1.20)
remit (migration)	0.01	0.07	1195	0.02	0.13	238	-0.0118* (-2.00)
remit (repay debt/interest)	0.32	0.47	1195	0.40	0.49	238	-0.0803* (-2.40)
remit (other)	0.01	0.12	1195	0.02	0.13	238	-0.00258 (-0.30)

Notes: this sample is based on individual-level data and corresponds to our sample of main estimation at household level. It follows international migrants (mig) only, looking at their wave 1 pre-embargo characteristics. Other migrants include international migrants in countries other than Qatar. Remittances are reported in million Nepali Rupees. For the t-test, we report the mean and t-test of difference in parenthesis.

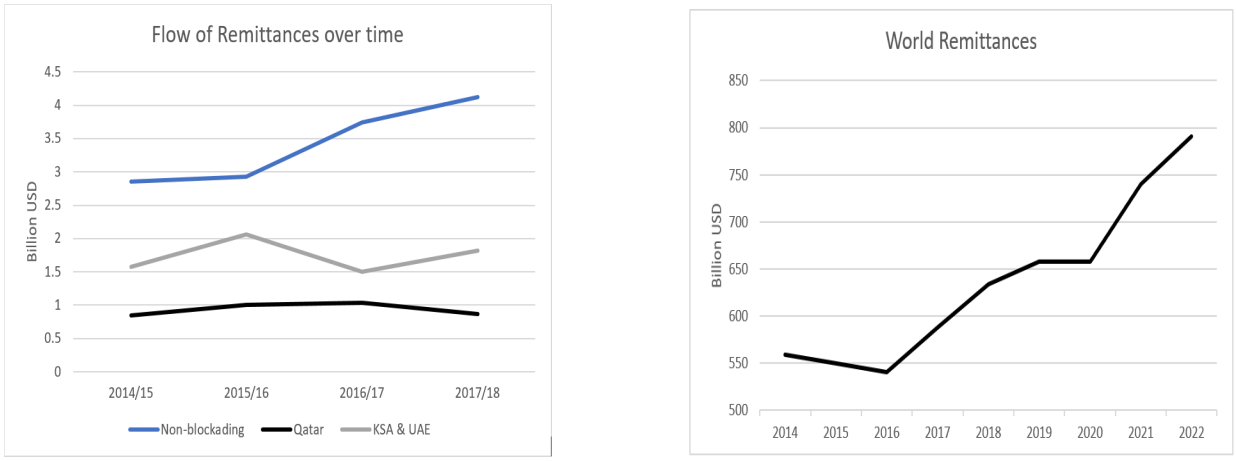
Table A.3: Summary statistics (households with migrants in Qatar versus Other)

Summary Statistics (wave 1)							
	Other Mig. HH			Qatar Mig. HH			
	Mean	SD	Obs.	Mean	SD	Obs.	t-test
Remit (millions)	0.16	0.22	1258	0.17	0.13	250	-0.0108 (-0.77)
Muslim HH	0.01	0.10	1258	0.03	0.17	250	-0.0177* (-2.23)
Christian HH	0.02	0.13	1258	0.01	0.11	250	0.00469 (0.54)
Hindu HH	0.87	0.33	1258	0.88	0.33	250	-0.00719 (-0.31)
Buddhist HH	0.08	0.27	1258	0.06	0.25	250	0.0179 (0.96)
Kirant HH	0.02	0.13	1258	0.02	0.13	250	0.00149 (0.16)
HH Size	5.82	2.05	1258	5.58	1.93	250	0.237 (1.68)
Member<16	0.79	0.41	1258	0.82	0.38	250	-0.0322 (-1.15)
Head Male	0.62	0.49	1258	0.58	0.49	250	0.0329 (0.97)
Head age	49.22	13.79	1258	48.05	14.40	250	1.173 (1.22)
Head Single	0.00	0.05	1258	0.01	0.11	250	-0.00962* (-2.21)
Head Married	0.87	0.34	1258	0.87	0.34	250	0.000839 (0.04)
Head Widow	0.12	0.32	1258	0.11	0.32	250	0.00644 (0.29)
Head Divorced	0.01	0.10	1258	0.01	0.09	250	0.00233 (0.34)
Age (mig)	29.43	8.82	1258	30.66	8.35	250	-1.223* (-2.02)
Months away (mig)	23.54	33.51	1258	19.05	22.97	250	4.494* (2.03)
Expect Return (mig)	0.97	0.18	1258	1.00	0.00	250	-0.0331** (-2.97)
lincomepc	4.91	4.40	1258	4.89	4.37	250	0.013 (0.04)
incq-1	0.43	0.49	1258	0.43	0.50	250	-0.000 (-0.01)
incq-2	0.08	0.27	1258	0.05	0.21	250	0.032* (1.77)
incq-3	0.24	0.43	1258	0.28	0.45	250	-0.042 (-1.41)
incq-4	0.25	0.43	1258	0.24	0.43	250	0.010 (0.35)
Head Occup 1	0.03	0.18	1258	0.04	0.19	250	-0.003 (-0.27)
Head Occup 2	0.08	0.28	1258	0.09	0.28	250	-0.005 (-0.28)
Head Occup 3	0.63	0.48	1258	0.65	0.48	250	-0.017 (-0.50)
Head Occup 4	0.05	0.21	1258	0.06	0.24	250	-0.013 (-0.88)
Head Educ 1	0.49	0.50	1258	0.49	0.50	250	0.002 (0.07)
Head Educ 2	0.38	0.48	1258	0.39	0.49	250	-0.016 (-0.48)
Head Educ 3	0.10	0.30	1258	0.08	0.27	250	0.017 (0.84)
Head Educ 4	0.03	0.18	1258	0.03	0.18	250	-0.000 (-0.02)

Notes: we only include households with international migrants (mig) observed in waves 1 and 3. Migrants are defined pre-embargo and refer to overseas migrants only. We drop households with mixed migrants (i.e. those households with migrants in Qatar and other international destinations). All variables are reported for wave 1 (pre-embargo). These include at the household level: the number of members including overseas, the household's per capita income (in log), an indicator for whether the household is in the 2^{nd}, 3^{rd} or top quartiles of the sample distribution of household's per capita income; at the household head level: the age, the marital status being single, various indicators related to the highest level of education completed by the household head and the head's occupation; at the migrant level: the age of migrants and the number of months away. Migrants' variables are the average of all migrants within a given households. Remittances are reported in million Nepali Rupees. For the t-test, we report the mean and t-test of difference in parenthesis.

Appendix B Extra Figures

Figure B.1: Flow of remittances

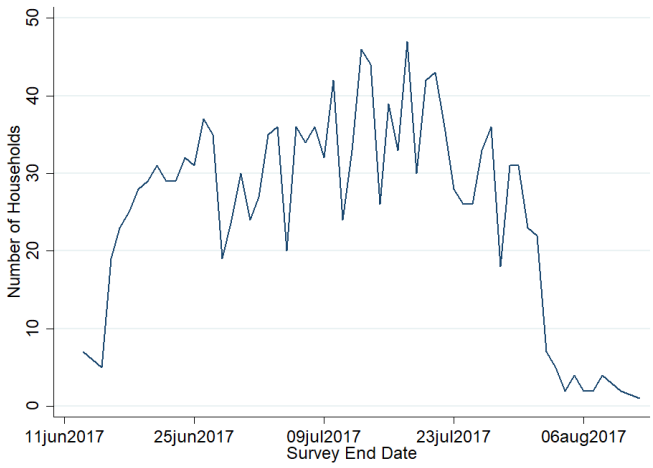


(a) Remittances to Nepal

(b) World remittances trend

Source: Nepal Labour Migration report 2020, *Government of Nepal*, page 94 for subfigure (a) and World Bank personal remittance figures in current USD for world remittances for subfigure (b).

Figure B.2: Number of surveyed households over time (wave 2)



Source: Authors' computations using wave 2 of the Household Risk and Vulnerability Survey in Nepal.

Appendix C Extra Results

Table C.1: Main Results

	(1)	(2)	(3)
	Coefficient	SE	Clustered SE
Dependent variable: D.lremit			
Panel A:			
No controls	-0.834*	(0.451)	(0.453)
Panel B:			
All Controls	-0.760*	(0.454)	(0.459)
Observations		1,508	
Panel C:			
All Controls	-0.879*	(0.471)	(0.477)
Dropping blockading countries			
Observations		1,184	
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Notes: coefficient estimates reported are of the $QatMig_J$ variable, a dummy that equals one if the household has at least one migrant in Qatar pre-embargo. All controls are as defined in Table (2). SE are Robust standard errors, and Clustered SE are standard errors clustered at VDC (village development committee) level, which is the PSU in the survey. There are 371 VDC in our estimated sample.

Table C.2: Main estimation with all control variables

	(1)	(2)	(3)
	Coefficient	SE	Clustered SE
Dependent variable: D.lremit			
$QatMig_J$	-0.760*	(0.454)	(0.459)
pre-size	0.078	(0.085)	(0.086)
pre-Head-age	-0.000	(0.014)	(0.013)
pre-Head-single	0.489	(3.474)	(3.501)
pre-mig-age	-0.071***	(0.020)	(0.021)
pre-mig-month-away	-0.017***	(0.006)	(0.007)
pre-ltotal-incpc	-0.426	(0.308)	(0.305)
incq-2	3.040	(1.931)	(1.937)
incq-3	2.835	(2.491)	(2.441)
incq-4	4.062	(3.072)	(3.057)
pre-Head-emp-1	-2.322**	(0.906)	(0.930)
pre-Head-emp-2	-0.732	(0.688)	(0.680)
pre-Head-emp-3	-0.842*	(0.444)	(0.442)
pre-Head-emp-4	-0.546	(0.892)	(0.924)
pre-Head-educ-2	0.057	(0.367)	(0.374)
pre-Head-educ-3	0.185	(0.650)	(0.656)
pre-Head-educ-4	0.447	(0.912)	(0.940)
Observations		1,508	1,508

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: coefficient estimates from Equation (1) are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. All controls are as defined in Table (2). SE are Robust standard errors, and Clustered SE are standard errors clustered at VDC (village development committee) level, which is the PSU in the survey. There are 371 VDC in our estimated sample.

Appendix D Robustness Checks

Appendix D.1 IHS Transformation

The Inverse Hyperbolic Sine transformation is an approximate of the log transformation but has the advantage of retaining zero observations (Bellemare and Wichman, 2020). Specifically, IHS transforms our variable y into:

$$\tilde{y} = arcsinh = ln(y + (\sqrt{(y^2 + 1)}$$

The estimated coefficients reported in Table D.1 confirm our main results. Given that we are dealing with a dummy independent variable, the transformation to obtain the elasticity of remittances for a switch of our interaction dummy variable (DID) from 0 to 1 is very similar to our main coefficient estimates (Bellemare and Wichman, 2020). Therefore, there is no substantial difference in coefficient estimates between using the log or IHS transformation.

Table D.1: Main Results using IHS instead of log transformation

	(1)	(2)	(3)
	Coefficient	SE	Clustered SE
Dependent variable:			
Panel A:			
No controls	-0.882*	(0.477)	(0.479)
Panel B:			
All Controls	-0.804*	(0.479)	(0.485)
Observations		1,508	
Panel C:			
All Controls			
Dropping blockading countries	-0.927*	(0.498)	(0.505)
Observations		1,184	

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Notes: coefficient estimates from Equation (1) are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. All controls are as defined in Table (2). SE are Robust standard errors, and Clustered SE are standard errors clustered at VDC (village development committee) level, which is the PSU in the survey. There are 371 VDC in our estimated sample.

Appendix D.2 Propensity Score Matching

We apply a matching procedure that matches individuals in the treatment group to those in the control group based on observable covariates to ensure the only difference between the two is whether they have a migrant in Qatar or not (Ferraresi et al., 2018). The advantage of matching before implementing the difference-in-difference estimator (DID) is to have a treatment and a control group that are similar not only in trends but also in levels at the pre-treatment level (Mckenzie, 2021).

There are different matching estimators, but we limit our analysis to non-parametric DID Kernel estimator as it addresses not only differences between treatment and control groups but also potential differences in the distributions within each group (Ferraresi et al., 2018). The Kernel matching estimator matches each individual treated unit to all control units, down-weighting the distant observations (Heckman et al., 1998). We estimate the following equation on the common support:[1]

$$\gamma^{DID} = \sum_{i \in QA} \{[Y_{it1} - Y_{it0}] - \sum_{j \in NQA} W_{ij}[Y_{jt1} - Y_{jt0}]\} w_i \tag{1}$$

Where t_0 and t_1 are time periods before and after the embargo, QA are households with migrants in Qatar that will be affected post-embargo and NQA are households with migrants in other international destinations that will not be affected post embargo. W_{ij} is the weight assigned to the counterfactual control unit j for a given treated unit i. Y is the remittances of households and w_i is the reweighting that is used to reconstruct the distribution of remittances in the treated group to match the control group's distribution. We start by estimating a propensity score p(x), which is the probability of an individual being assigned into the treatment group given their observed covariates X (Caliendo and Kopeinig, 2008). The variables used for the calculation of p(x) must influence both the participation decision and outcome but should not be affected by the participation or its anticipation, so they should be either measured before intervention or fixed over time (Caliendo and Kopeinig, 2008). Having identified our variables on this basis in the main regression, we then want to identify how different they are between the treated and control groups. We have already done this in the summary statistics and complemented it with a t-test in Table A.3. However, one issue is that we do not know the units in which these variables are measured in, so we are unable to identify which variables have a major difference between treated and control groups (Lunt, 2014). In addition to that, Lunt (2014) mentions that significance tests are dependent on the sample size and are not indicative of the extent of difference between treated and control groups. To deal with this, he recommends looking at the difference in standard deviation, i.e. standardized differences that are shown in Table D.2. The smaller the standardized difference between treated and untreated units for a given variable indicates that this variable is more similar across the two groups compared to other variables. A serious issue of imbalance is indicated by more than 20% difference (Rosenbaum and Rubin, 1985). All of our variables are different by less than 20% except for migrants' return. We check the standardized difference after the matching procedure in

[1] Heckman et al. (1998) cited from Ferraresi et al. (2018).

Table D.2: Standardized differences for unmatched sample

Var.	Mean in Treated	Mean in Untreated	Standardized diff.
pre-size	5.58	5.82	-0.119
pre-Head-age	48.05	49.22	-0.083
pre-Head-single	0.01	0	0.114
pre-mig-age	30.66	29.43	0.143
pre-mig-month-away	19.05	23.54	-0.156
pre-ltotal-incpc	4.89	4.91	-0.003
incq-2	0.05	0.08	-0.132
incq-3	0.28	0.24	0.096
incq-4	0.24	0.25	-0.024
pre-Head-emp-1	0.04	0.03	0.019
pre-Head-emp-2	0.09	0.08	0.019
pre-Head-emp-3	0.65	0.63	0.035
pre-Head-emp-4	0.06	0.05	0.058
pre-Head-educ-2	0.39	0.38	0.033
pre-Head-educ-3	0.08	0.1	-0.06
pre-Head-educ-4	0.03	0.03	0.001

Notes: we only include households with international migrants (mig) observed in waves 1 and 3. Migrants are defined pre-embargo and includes overseas migrants only, we drop households with mixed migrants (i.e. Qatar and other international destinations). All variables are reported for wave 1 (pre-embargo). We include household level and household head variables. Migrant variables are the average of all migrants within a given household.

Table D.3, in which all variables have a standardized difference below 20%.

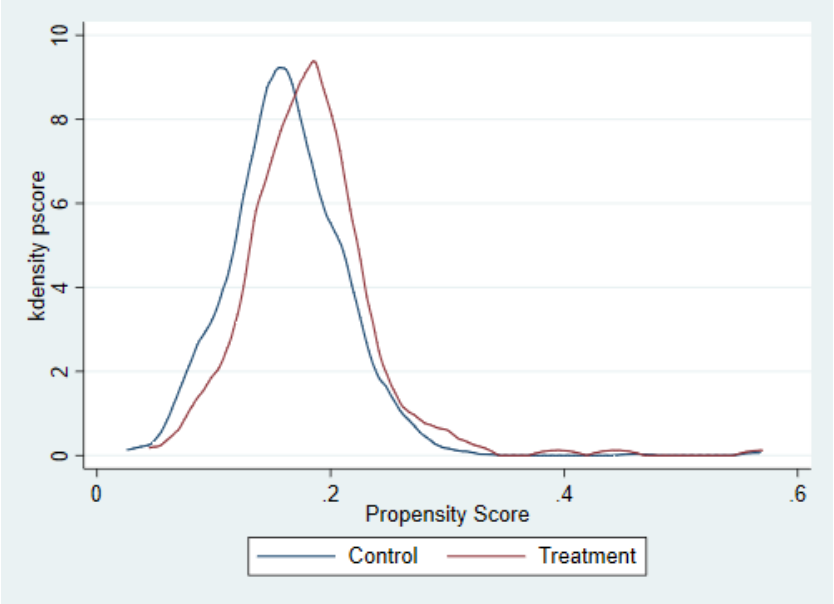
We estimate the propensity score using a logit model where we regress the dependent variable that indicates the presence of a migrant in Qatar on the variables specified in Table D.2, for the same sample of overseas, non-mixed migrant households in the main analysis. We look at the distributions of propensity score in the treated and control groups in Figure D.1. This step is to check the overlap assumption of the propensity score (Cameron and Trivedi, 2005):

$$0 < pr(D = 1|X) < 1$$

It ensures that people with the same X values have a positive probability of being both in treated and control groups (Caliendo and Kopeinig, 2008). If the assumption fails then there is no overlap between treatment and control groups and we have individuals with a given X who are all in the treatment group and individuals with another X who are all in the control group (Cameron and Trivedi, 2005).

Unfortunately, there is no way to check whether included variables are correct or whether some important variables are omitted. However, we can check if the functional form of our regression equation is wrong. To do that we use the Hosmer-Lemeshow test where the null hypothesis is that the model fits the data. We obtain a Hosmer-Lemeshow Ch2(8) of 6.71 with a p-value of 0.569. Therefore, we fail to reject the null hypothesis and conclude that our functional form is not misspecified and the logit model fits the data well. We use the computed propensity score in our non-parametric Kernel weighted DID and find a coefficient estimate of -0.938 (clustered SE: 0.461) that is statistically significant at the 5% significance level. It is very close to estimates found in our main analysis using a simple difference-in-difference

Figure D.1: Density of propensity score of treated and control groups



technique. This gives us further evidence that the observed negative effect on remittances for households with migrants in Qatar is due to the shock.

Table D.3: Standardized differences for matched sample

Var.	Mean in Treated	Mean in Untreated	Standardized diff.
pre-size	5.58	5.81	-0.116
pre-Head-age	48.18	49.22	-0.074
pre-Head-single	0.01	0	0.079
pre-mig-age	30.52	29.38	0.134
pre-mig-month-away	18.11	22.51	-0.181
pre-ltotal-incpc	4.93	4.92	0.003
incq-2	0.05	0.08	-0.131
incq-3	0.29	0.24	0.099
incq-4	0.24	0.25	-0.02
pre-Head-emp-1	0.04	0.03	0.02
pre-Head-emp-2	0.08	0.08	0.006
pre-Head-emp-3	0.65	0.63	0.046
pre-Head-emp-4	0.06	0.05	0.059
pre-Head-educ-2	0.39	0.38	0.021
pre-Head-educ-3	0.08	0.1	-0.059
pre-Head-educ-4	0.03	0.03	0.002

Notes: we only include households with international migrants (mig) observed in waves 1 and 3. Migrants are defined pre-embargo and includes overseas migrants only, we drop households with mixed migrants (i.e. Qatar and other international destinations). All variables are reported for wave 1 (pre-embargo). We include household level and household head variables. Migrant variables are the average of all migrants within a given household.

Table D.4: Descriptive Statistics on returned migration

Origin			Migrant in ...			Other HH members	
	Wave 1	Wave 3	Return to Nepal	Stay in dest	Move else	Stay in Nepal	Move out
India	589	482	18.85	79.63	1.53	66.41	33.59
Hongkong	10	10	0	100	0	66.67	33.33
Malaysia	359	265	25.63	71.03	3.34	78.95	21.05
Japan	45	41	8.89	91.11	0.00	75	25
Saudi Arabia	242	187	22.73	73.14	4.13	77.95	22.05
Qatar	244	193	18.85	75.00	6.15	62.96	37.04
UAE	100	104	12	87	1	88.10	11.90
United Kingdom	5	4	20	80	0	66.67	33.33
United States	18	18	5.56	94.44	0	N.A.	N.A.
South Korea	26	25	11.54	88.46	0	92.59	7.41
Australia	13	13	0	92.31	7.69	75	25
Israel	2	1	50	50	0	100	0
Other	98	63	19.39	59.18	21.43	62.71	37.29

Table D.5: Children outcomes

	All	Male	Female
Panel A: Educational outcomes			
School dummy	-0.046	-0.057	-0.027
	(0.032)	(0.044)	(0.047)
	903	481	422
Days missing	-0.198	-0.580	0.137
	(0.488)	(0.598)	(0.852)
	501	269	232
Educational expenses	0.024	0.032	0.021
	(0.015)	(0.021)	(0.024)
	773	417	356
Observations	709	386	323
Panel B: Child work			
Hours spent working	-0.052	0.087	-0.196*
	(0.090)	(0.155)	(0.109)
Observations	903	481	422

Notes: coefficient estimates from Equation (1) for different outcome variables, as denoted across rows, are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. The dependent variables correspond to children educational and job related outcomes. All controls are as defined in Table (2).

Table D.6: Returned migration

	No controls	All controls
Panel A		
Share of returned migration	0.010	0.007
	(0.030)	(0.031)
Observations	1,316	
LRemit, HH without migrants returning	-0.649*	-0.614*
	(0.379)	(0.371)
Observations	1,081	
Panel B: Outcomes in pc terms		
(a) Remittances		
Remittance receipts	-0.839*	-0.766*
	(0.454)	(0.455)
(b) Income and consumption		
Total income	0.159	0.164
	(0.387)	(0.303)
Agricultural income	0.145	0.086
	(0.255)	(0.249)
Non Agricultural income	0.176	0.211
	(0.405)	(0.347)
Total expenditure	0.056	0.035
	(0.071)	(0.071)
Food expenditure	0.035	0.033
	(0.035)	(0.035)
Frequent non-food exp	0.070	0.050
	(0.044)	(0.043)
Infrequent non-food exp	0.033	0.011
	(0.096)	(0.098)
(c) Non-consumption disbursements		
Educational expenditure	0.152	0.134
	(0.096)	(0.096)
Health expenditure	0.252	0.263
	(0.183)	(0.196)
Repayments of loans	-0.328	-0.327
	(0.337)	(0.343)
Loan amount	-0.255	-0.274
	(0.280)	(0.283)
Observations	1,508	

Notes: coefficient estimates from Equation (1) for different outcome variables, as denoted across rows, are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. All controls are as defined in Table (2).

Table D.7: Shock on other outcomes by quartile of wealth index

	Average	Q1	Q2	Q3	Q4
(a) Income and consumption					
Total income	0.204	0.830	-0.458	0.679	-0.437
	(0.357)	(0.848)	(0.985)	(0.833)	(0.638)
Agricultural income	0.118	-0.474	-0.139	1.264	0.161
	(0.305)	(0.817)	(0.928)	(0.829)	(0.600)
Non-agricultural income	0.268	1.401	-0.973	0.907	-0.766
	(0.412)	(1.051)	(1.127)	(0.940)	(0.761)
Sell land	0.001	-0.004	-0.003	0.022	-0.017
	(0.007)	(0.012)	(0.011)	(0.019)	(0.020)
Total expenditure	0.042	0.368*	0.069	-0.171	-0.012
	(0.070)	(0.204)	(0.195)	(0.155)	(0.122)
Food expenditure	0.040	0.087	-0.045	-0.044	0.004
	(0.035)	(0.076)	(0.098)	(0.075)	(0.072)
Frequent non-food exp	0.056	0.267***	-0.122	-0.104	-0.026
	(0.043)	(0.102)	(0.096)	(0.118)	(0.079)
Infrequent non-food exp	0.009	0.329	0.180	-0.295	0.117
	(0.104)	(0.258)	(0.363)	(0.202)	(0.196)
(b) Non-consumption disbursements					
Educational expenditure	0.646**	-0.810	1.588**	0.558	0.590
	(0.293)	(0.711)	(0.780)	(0.718)	(0.499)
Health expenditure	-0.219	1.183	-0.752	0.677	-1.484**
	(0.353)	(0.906)	(1.048)	(0.895)	(0.679)
Buy land	-0.025**	-0.006	-0.015	-0.062*	-0.004
	(0.012)	(0.018)	(0.040)	(0.035)	(0.020)
Has loans	-0.024	-0.064	0.057	0.014	-0.082*
	(0.028)	(0.067)	(0.093)	(0.063)	(0.048)
Repayments of loans	-0.385	-0.179	-0.156	0.830	-1.560**
	(0.404)	(1.148)	(1.323)	(0.844)	(0.683)
Loan amount	-0.314	-0.784	0.740	0.140	-1.107*
	(0.331)	(0.743)	(1.140)	(0.719)	(0.571)
(c) Other outcomes					
Asset index	-0.119	0.143	0.004	-0.211	-0.120
	(0.088)	(0.180)	(0.205)	(0.219)	(0.153)
Food security	0.007	-0.041	-0.056	0.066**	-0.018
	(0.017)	(0.062)	(0.053)	(0.027)	(0.021)
Observations	1,508	315	314	314	314

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Notes: coefficient estimates from Equation (1) for different outcome variables, as denoted across rows, are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. All controls are as defined in Table (2). Results are reported on average and by quartile of wealth index across columns.

Table D.8: Shock on remittances by quartile of wealth index

	Average	Q1	Q2	Q3	Q4
All controls	-0.798*	-3.457***	-1.721	-1.342	0.078
	(0.456)	(1.104)	(1.660)	(1.175)	(0.790)
Natural disaster w1	-0.428	-0.435	-1.918**	0.764	0.315
	(0.340)	(0.746)	(0.821)	(0.827)	(0.765)
Econ. Shock w1	0.195	-0.679	0.743	-0.841	0.178
	(0.372)	(1.121)	(1.142)	(0.802)	(0.843)
Health Shock w1	-0.437	-0.819	-0.515	0.943	-1.837
	(0.467)	(1.084)	(1.210)	(0.995)	(1.372)
Other Shock w1	0.861	2.005*	2.745	0.479	-0.852
	(0.826)	(1.212)	(2.248)	(1.666)	(2.091)
Observations	1,508	315	314	314	314
R-squared	0.031	0.106	0.111	0.081	0.094

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Notes: coefficient estimates from Equation (1) are reported for the $QatMig_J$ variable, a dummy of having a migrant in Qatar present in a household pre-embargo. All controls are defined in Table (**??**). Different types of pre-embargo shocks are controlled for as denoted across rows. Results are reported on average and by quartile of wealth index across columns.

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