APPENDIX 1.
This Appendix provides additional ethnographic information, population characteristics, sampling information, predictor and response variable details, and supplemental analyses.

Palani Hills Ethnography

These villages, originally settled by the Manadiar group, retain traditional governance institutions separate from the official government panchayat system. The similarity of these institutions to those on the Tamil plains (Mosse, 2006), oral tradition, and historical evidence (Francis, 1914, Bahadur and Aiyangar, 1942) all suggest that they are a cultural legacy of the Pandiya kingdom that the Manadiar brought with them when they migrated into the hills approximately six centuries ago (Francis, 1914).

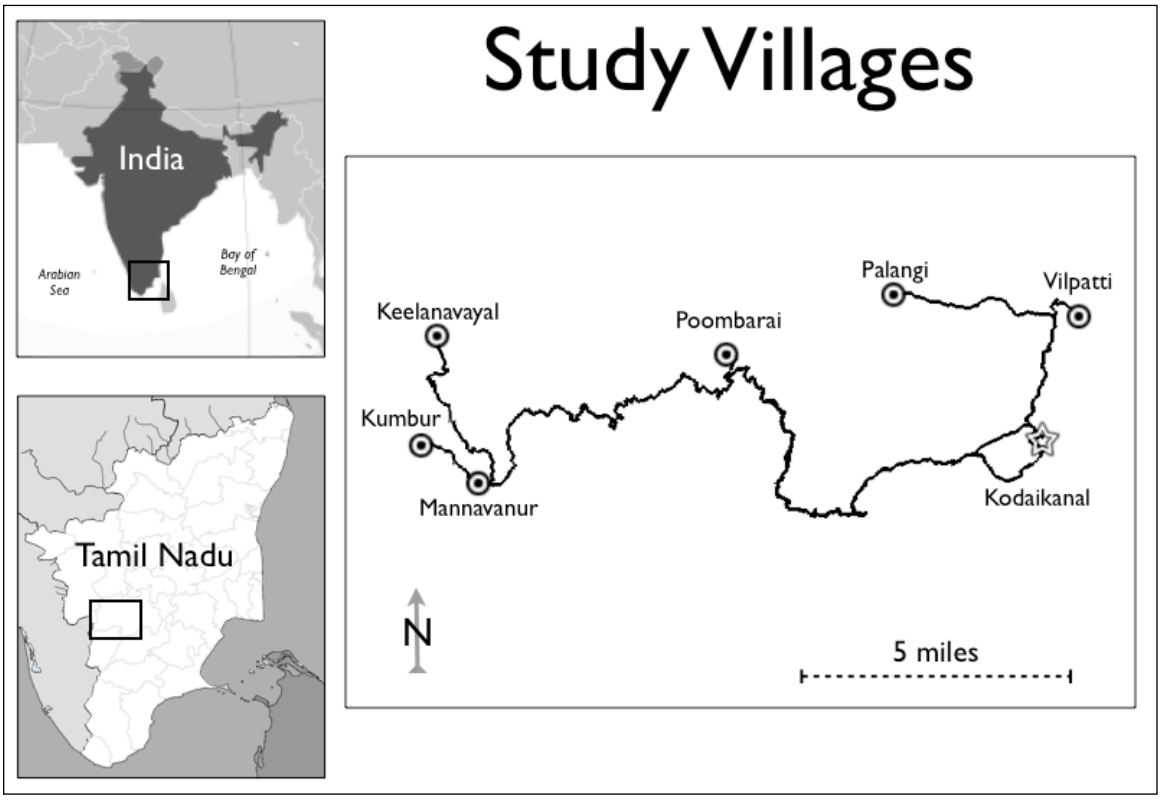

Figure A 1. Study villages in the Palani Hills, Tamil Nadu, India.

Five months of ethnographic investigation on the social identity, oral history and village organization across the Upper Palani villages form the basis by which caste relationships were classified. Villages in the Palani hills region employ a traditional village organization system. Two central traditional institutions are the *podhu kootam* (village council), and *neer nikam* (village irrigators). In these villages most official roles are ascribed to by caste.

Caste structure in the Palani Hills region is centered on two focal caste groups at opposite ends of the power spectrum, which share a long history. The Manadiar caste are

in the center of village power; in most villages the Manadiar hold some or all of the hereditary leadership positions called *thalaivarhal* (literally, 'headmen'), and their influence within the village justice system or Podhu Kootam ('common crowd'). By contrast, the Sakkliyar, a Dalit group which shares a deep history with the Manadiar, having arrived around the same time as the Manadiar, have no formal power. For instance, women and Sakkliyar individuals are excluded from the semi-sacred village commons called the *manthai* where village meetings are held, and thereby physically blocking access to the space of village justice.

Leadership positions in the Palani Hills villages called *thalaivar*, or 'headman' are individually named, with multiple thalaivarhal per village. Common thalaivar titles include Manadiar (named for the founding caste), Manthiriar (sacred), and Periyathanam ('large wealth'). For instance, in Poombari (one of the six study villages) the Manadiar position is occupied eponymously, while two further *thalaivar* positions are occupied by the Thevar (*Periyathanam*) and the Mudhaliar (*Manthiriar*) elders. The Sakkliyar also bear traditional village servant positions, including the village crier (*thandalkarar*), the water controller (*neer-nikam*), and the festival celebrant (*vettiyan*). No middle castes hold any high-status or low-status traditional roles. These formal roles betray the historical caste-driven power asymmetry, and are summarized in Table 1.

In Palani Hills villages the traditional village leaders or *thalaivar* (literally, headmen) positions are occupied by the Manadiar, a historically dominant jathi, and secondary *thalaivar* positions (such as *Periyathanam, Manthiriar, Maniyakarar, Kariyamanadi, and Pattakarar*) are occupied by men from other powerful jathis.

	Poombarai	**Mannavanur**	**Kumbur**	**Keelanavayal**	**Vilpatti**	**Pallangi**
Thalaivarhal (leadership positions, inherited)						
Manadiar	1 Manadi	3 Manadi	5 Asari	3 Asari	4 Manadi	1 Manadi
Manthiriar	1 Mudali	1 Pillai	1 Chetti	1 Mudali	2 Pillai	1 Mudali
*Other**	1 Thevar	1 Manadi	1 Chetti	1 Reddi	1 Retti	
Servant (servant positions, selected)						
Thandalkarar	3 Dalit	1 Dalit	1 Dalit	1 Dalit	1 Dalit	1 Dalit
Neer Nikam	4 Panchayat	5 Dalit	3 Dalit	2 any	3 any	0 Thandal
Vettiyan	20 Dalit	13 Dalit	15 Dalit	8 Dalit	16 Dalit	10 Dalit

Table A 1. Traditional village positions in the six study villages, by caste occupancy. Sakkliyar is the major Dalit caste in the Palani hills region. Servant positions are selected by the thalaivar ('headmen') for 1-3 yr terms *Other = Village specific thalaivar postions, including Periyathanam (wealthy leader), Maniyakarar, Kariyamanadi, Pattakarar, and Mem-, Chola-, Shantha-, Karu-manadi.

Population characteristics

Of the surveyed heads of households, the average age was 46.7 with the youngest 19, and the oldest 87. The mean household size was 4.5 and the average years of education of the household head was 4.9, but over one quarter reported zero years of education, while one person reported 17 years. Of all household heads, four were women, and only 2% reported any additional occupation to farming.

The cost and availability of transport makes these villages very isolated. As a result many factors decline with the distance from Kodaikanal, including the mean years of household education. Mean household education starts from 6.7 yrs on average in Vilpatti, and declines by approximately one month per kilometer over the 44 miles to Keelanavayal, where the mean is 3 yrs lower on average (single correlation, $R^2 = 0.16$). Similarly, yearly exposures to external culture (see Table 3 for variable description) shows a similar pattern starting from ~1500 yearly exposures in Vilpatti and Pallangi and effectively dropping nearly 16 exposures per mile to reach a yearly 803 exposures in Keelanavayal. Such a difference in exposure likely has a strong influence on the social norms of the people living in these villages. Agricultural income also declines with distance from Kodaikanal, dropping 66 Rs. from Vilpatti to Keelanavayal, a 30% reduction in daily pay.

In this region, aside from plowing with oxen, the agricultural enterprise is exclusively manual. Out of necessity, this splits individuals on any given day into the land owners and workers, or 'coolies'. All individuals work on their own fields, if they own any, and 76% work on others fields as well. 94% of Dalits work as coolies, in comparison to 77% of Manadiar. On the hiring side, only 51% of Dalits hire others to work on their fields, while 92% of Manadair hire our their work. As a result, Dalits on average earn 7,660 Rs per year from coolie labor, while Manadiar average only 4,900 Rs. On average, dalits hire 194 worker-days of labor per year, while Manadiars hire 480 worker-days, well over double the Dalit figure. These caste-correlated inequalities are also born out in land ownership and wealth.

Villagers owned an average of 2.3 acres, with 1.31 acres of irrigated land. Mean Dalit land holding was 0.46 acres, while Manadiars owned 4.45 acres on average. Of the 45 households owning no land, 58% were Dalit. Of the 14 individuals owning five 5 or more acres all are middle and high castes. A comprehensive wealth estimation was calculated based upon items such as house, land, livestock and vehicle ownership (see table 3). Mean wealth was 398,790 Rs. for Dalits and 1,270,730 Rs. for Manadiar.

Each farmer was asked to rank the importance of six factors in determining their social identity. These factors were family, caste, religion, political parties, hometown, and occupation. There was a very clear trend in preferences within the entire sample. Out of a total of 6 points, family averaged 5.9, followed by occupation (5.0). The remaining categories had overlapping confidence regions but were as follows hometown (3.5), caste (2.6), religion (2.4), political (2.1). The clear, sample wide preference for family and occupation is relevant to the current study because caste was not even close to being a highly ranked component of reported social identity factors.

Village	*population*	*households*	*castes*	*10+ house hold castes*	*n*	*average caste-wise household sample*
Mannavanur	5029	762	8	4	43	33%
Poombarai	4456	1262	11	8	69	14%
Vilpatti	2032	508	10	6	58	13%
Kumbur	1051	208	5	3	33	18%
Keelanavayal	700	104	8	2	30	44%
Pallangi	700	133	3	3	26	33%

Table A 2. Sampling strategy.

	Keelanavayal	*Kumbur*	*Mannavanur*	*Pallangi*	*Poombarai*	*Vilpatti*	*Sample*
workdays	4.10	1.39	5.88	1.58	2.49	2.86	2.68
	(11.66)	(2.22)	(8.33)	(1.30)	(1.59)	(1.78)	(2.86)
adequacy	2.23	1.06	2.16	1.92	2.11	2.00	1.97
	(1.61)	(1.03)	(1.38)	(1.72)	(1.52)	(1.51)	(1.50)
fairness	3.40	2.35	3.60	0.65	2.56	2.69	2.64
	(1.75)	(2.22)	(1.76)	(1.50)	(2.17)	(1.98)	(2.10)

Table A 3. Response variable summary statistics.

	Workdays	*Adequacy*
Workdays		
Adequacy	*0.02*	
Fairness	*0.17*	*0.25*

Table A 4. Response variable correlations calculated using restricted maximum likelihood.

	Population (households)	*Distance (km)*	*Castes (>10 hh)*	*Wealth Gini*
Keelanavayal	104	44	2	0.39
Kumbur	208	39	3	0.46
Mannavanur	762	36	4	0.45
Pallangi	133	10	3	0.66
Poombarai	1262	18	8	0.49
Vilpatti	508	5	6	0.43

Table A 5. Village-level predictor and control variables.

	Wealth Gini	*Distance*	*Population*	*Castes >10*	*Castes All*
Wealth Gini					
Distance	-0.35				
Population	0.01	-0.24			
Castes >10	0.02	-0.60	0.89		
Castes All	-0.52	-0.30	0.75	0.81	
Diversity H'	***-0.49***	***-0.45***	***0.68***	***0.82***	***0.90***

Table A 6. Village-level predictor variable correlations. Population and caste numbers are highly correlated. This is an inescapable feature of population structure in the study region. Larger villages are not necessarily more diverse, but more diverse villages are always larger. Diversity H' represents the Shannon index calculated for caste diversity, included here for reference.

	Workdays	*Adequacy*	*Fairness*
Family	*neg. binom.*	*binomial*	*binomial*
coefficient	***-1.53***	***0.10***	0.22
p value	***0.01***	***0.09***	0.01
Adjusted R^2	***0.02***	***0.01***	0.03

Table A 7. Population-adjusted response correlations. Single linear regressions of each population-adjusted response variable against the population-adjusted caste diversity variable produce a simple measure of the population-adjusted effect of caste diversity on each response variable. The presence of additional caste information is evident in each case. *Italics* indicate that the direction of the diversity effect agrees with the corresponding multiple regression in the text. Boldface indicates which multiple regression found caste diversity to be a significant effect.

(a) Inequality-Adjusted Workdays Model						(b) Non-adjusted Workdays Model					
	Estimate	**SE**	**z**	**p**			**Estimate**	**SE**	**z**	**p**	
(Intercept)	-1.41	0.83	-1.70	0.088	.	(Intercept)	-1.58	0.83	-1.90	0.057	.
LNPOP	0.80	0.15	5.22	0.000	***	LNPOP	0.77	0.15	5.03	0.000	***
DISTANCE	-0.01	0.01	-2.19	0.028	*	DISTANCE	-0.01	0.01	-2.15	0.032	*
CASTES10	-0.27	0.08	-3.59	0.000	***	CASTES10	-0.26	0.08	-3.44	0.001	***
WEALTHGINI	-0.03	0.01	-2.89	0.004	**	WEALTHGINI	-0.03	0.01	-2.38	0.017	*
AGE	0.00	0.00	-0.29	0.776		AGE	0.00	0.00	-0.30	0.765	
EDUYRS	-0.01	0.02	-0.38	0.704		EDUYRS	-0.01	0.02	-0.34	0.737	
HHSIZE	0.06	0.04	1.28	0.201		HHSIZE	0.06	0.04	1.32	0.187	
LNWEALTH	0.03	0.03	0.79	0.429		LNWEALTH	-0.01	0.04	-0.38	0.705	
FRAC	1.19	0.44	2.70	0.007	**	FRAC	1.14	0.44	2.58	0.010	**
DALIT	-0.08	0.16	-0.51	0.609		DALIT	-0.03	0.23	-0.15	0.885	
CHANFIX	0.16	0.07	2.28	0.022	*	CHANNEL	0.38	0.17	2.17	0.030	*
DALIT:CHANFIX	0.01	0.14	0.06	0.953		DALIT:CHANNEL	0.12	0.31	0.38	0.703	
Residual deviance: 310 on 241 degrees of freedom						Residual deviance: 310 on 241 degrees of freedom					
AIC: 1060.4						AIC: 1060.0					

Table A 8. CHANNEL-inequality-adjusted workdays regression comparison. Workdays negative binomial regression replicated with (a) and without (b) adjusted channel variable. CHANFIX is the inequality-adjusted version of the CHANNEL variable, ie the residuals of the AIC best fit model explaining CHANNEL distribution. Note that the changes in estimates and probabilities are small, and that CHANFIX remains and important explanatory factor, even when the embedded aspects of social inequality are removed. Other CHANNEL-inequality-adjusted regressions showed similar patterns.