Peaceful Co-existence?
What Role for Personal Wealth and Entitlement in Conflict Mitigation in Unfavourable Areas of Eastern Ethiopia

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Abstract

Based on an exploratory survey and data derived from interview of 146 households in eastern Ethiopia, choice of institutional arrangement among pastoralists and agro-pastoralists, namely no opinion, reciprocal, sharing milk and the right to use milk, is modelled using multinomial logit discrete choice procedure. The model chi-squared statistic is significant at the 1% level of probability. For all arrangements, there are three to five observable characteristics of household that provide statistically significant predictive power for practicing a given arrangement. The paper argues resource scarcity may enhance the bargaining position of asset-poor members of an agro-pastoral society and urges the wealthier agropastoralists to comply with a non-violent resolution of competing claims towards a resource sharing arrangement.

Introduction

Millions of poor people in Ethiopia live in semi-arid agropastoral and pastoral areas and have suffered extreme marginalization and food insecurity because of reduced access to pastureland, and in some places steadily extending croplands. The lack of institutional support for the pastoralists has further excluded their participation in decision making. Yet, community-based

land tenure institutions provide households with their means of livelihoods and also facilitate adaptation to changing environmental uncertainties. They need to be systematically studied in order to be adequately empowered, so that they best take account of multiple resource users and uses and establish institutions that recognize the rights of many users over the same resource and be able to manage and resolve conflicts.

Indeed, it is relatively recently that researchers started to focus on the dynamics and institutions of sustainability in community based natural resource management (Ostrom, 1990; Leach et al., 1999). In the new political and socio-economic context of Ethiopia, researches focused on the management of community-based natural resources are also emerging (Birhanu, et al., 2002; 2003). The finding of Birhanu et al. (2002) confirms that collective action for grazing land management is widespread in the highlands of northern Ethiopia and both formal and informal property right institutions govern the use and allocation of croplands, forestlands, and grazing lands.

Despite all the evidence and theoretical arguments aimed at refuting the Hardin's "tragedy of the commons" (Hardin 1968), his thinking has been reflected in actual natural resource policy in much of Sub-Saharan Africa (Swallow and Bromley 1995; Lawry 1990). Even though many studies have now contested the universal applicability of Hardin's prediction, policy makers and social scientists show increasing interest in cooperative means to manage common resources (Bromely, 1992; Uphoff, 1992; White and Runge, 1995). This interest is reflected in new attempts to strengthen common property system, to develop voluntary institutions to manage resources (de Janvry et al., 1993; Lawry, 1990).

This study also attempts to contribute to this argument using empirical evidence from eastern Ethiopia. The study areas, the Yerer and Daketa valleys are located in eastern Ethiopia. The valleys are characterized by sparse and irregular rainfall, and are highly drought-prone. Both the Dakata and the Yerer rivers are seasonal. They dry on the surface around the end of October. However, there seems to be plenty of sub-surface water - a well that is a few meters in depth produces water even during the driest periods. The valley bottom is fertile and suited for the production of many lowland agricultural products during favourable rain seasons. During the rainy season, there is a lush growth of grass and shrubs supporting thousands of livestock and wildlife.

Livestock, largely composed of cattle, sheep and goats, and camel, are vital sources of household welfare. Livestock have the ability to withstand fluctuations in weather patterns better than crops, and therefore, provide both food and income security. Hence, there is heavy involvement of the communities in this area in livestock production. Livestock are watered at the shallow wells and seasonal streams during the wet season and deep hand-dug wells during dry seasons. They are grazed on the densely bushed hillside during the wet season, but allowed to browse along the riverside and on croplands during the dry season. The possession of a large number of livestock has remained the ambition of agro-pastoralists in the area. Even in the years of good harvests, households tend to sell the surplus and buy cattle or goat in return.

The valleys are largely used for grazing by the Oromo and the Somali lowlanders. Even though the incumbent agro-pastoral communities have long considered the Yerer and Daketa valleys as

theirs, other pastoral groups from semi-arid areas of the Somali Regional State also access the common grazing lands, particularly during drought years. The growing number of migrant pastoralists and their large number of cattle exercise an increasing pressure upon grazing land, particularly during times when it is ecologically fragile. Thus understanding institutional arrangements between community members of the pastoral and agropastoral communities that are adjusted to conflict mitigation and that depend on complex body of rules established local communities is of critical importance.

Therefore, the objectives of this study is to elucidate how institutions at various level influence the access to natural resource of diverse groups of people and how these in turn help to shape household asset, and identify major factors that determine involvement in various institutional arrangements to get access to common grazing lands.

Methodology

Survey Design and Data Collection

In order to have a clear understanding of the problems associated with voluntary collective action in which natural resource management fall into the responsibility of a group of users, it is necessary to be able to trace the interdependence through effective methodologies of acquiring reliable information. In this regard, the first task performed in data collection phase was to identify major issues in the management of grazing land and other resources in the study area through literature review, examination of secondary data, and informal exploratory surveys.

Selection of appropriate communities for intensive household survey was based on the intermediate results of the exploratory survey. One criterion was to ensure representation of communities with contrasting characteristics in terms of wealth. The sample size considered the complexity of the issue and accuracy and coverage of data necessary for the statistical analysis to be used. A total of 150 households were covered during the intensive survey, but only 146 responses were complete to be used for further analysis. The households were selected randomly proportionate to size from a complete list of members of the Peasant Associations. Using a structured questionnaire data were collected on demographic characteristics, inventory of assets, history of acquisition of assets, current production and non-labour input use, property rights, history of institutional arrangement with pastoralist, among others.

Econometric estimation

This research has investigated factors associated with choice of institutional arrangements to facilitate mobility of pastoralists for the use of common grazing lands for mutual benefit. To explore the relationships between the explanatory variables and the most preferred institutional arrangement categories as left-hand side variables, a multinomial logit (MNL) specification was applied. MNL models estimate the direction and intensity of the explanatory variables on the categorical dependent variable by predicting a probability outcome associated with each category of the dependent variable based on the assumption that the probabilities are independent of other outcomes. In this study, the preference for specific institutional arrangement was viewed as an optimization problem faced by a household. The following mathematical model has been used to explain the effect on institutional arrangement in the study area:

Institutional arrangement = f(household demographic characteristics, distance and access to services, wealth, etc.).

In the study area, we can distinguish among three major categories of institutional arrangements that agropastoralists seek for practice in managing accommodation and facilitate the mobility of the pastoralists, namely reciprocity, sharing calves, and the right to use milk. Given the multinomial nature of these institutional arrangements, a nominal logit econometric technique can be used in the empirical investigation.

Therefore, a multinomial logit model from Greene (2003) was adopted for the analysis. Let Y_{ij} be the indicator variable, so that:

$$(1) \qquad P(Y_{ij} = j) = \frac{\exp(b_j X_i)}{\sum_{k=1}^{J} \exp(b_j X_i)}$$

where P(.) is the probability that the *i*-th household prefers and practices the *j*-th arrangement (j = 0, 1,…, J). Respondents are asked whether they have hosted pastoralist during the last five years and if yes which institutional arrangement they practiced and preferred most. Then the model is estimated with four alternatives, namely: j=0 if the respondent indicated s/he did not host any pastoralist or do not have any opinion regarding the best arrangement; j=1 if the respondent indicated s/he has hosted pastoralist on reciprocity. That is, the head of household recognizes that agropastoralists livelihoods are also subject to ecological uncertainty and therefore they can be

faced with adverse conditions forcing them to migrate to areas normally inhabited by pastoralist. In this case, these communities will accommodate them in response to their good treatment in adverse conditions. j=2 if the respondent indicated s/he has hosted pastoralists in exchange for sharing the new born animals within the herd during the entire stay of the pastoralist with the agropastoralists household. That is, if the herd gave for six young animals (calves), then the agropastoralists is entitled to take three. j=3 if the respondent indicated s/he used the milk from the herd during its stay. The first arrangement, j=0, which is that the respondent indicated s/he did not host any pastoralist, is used as the reference choice. X_i represents a vector of demographic, economic and spatial characteristics for the observed individual households. β_js are a vector of estimated parameters.

Normalization of the alternatives by one of the categories ($\beta_k = 0$) yields the multinomial logit model as:

$$(2) \qquad P(Y_{ij} = j) = \frac{\exp(b_j X_i)}{1 + \sum_{k=1}^{J} \exp(b_j X_i)} \qquad\qquad \text{for } j = 1, 2, \ldots, J.$$

The probability of omitted (j-th) alternative can be derived from the formula:

$$(3) \qquad P(Y_{ij} = j) = \frac{1}{1 + \sum_{k=1}^{J} \exp(b_j X_i)}$$

Since the coefficients of such models are not directly interpreted in contrast to OLS results, marginal effects were estimated to express the probability of change alternative arrangement in accommodating pastoralists with respect to each independent variable, measured from the mean of the variable.

$$(4) \qquad \frac{\partial P_{ij}}{\partial X_{ij}} = (b_{jx} - \sum_{k=1}^{J} P_{ij} b_{jx})P_{ij} \qquad\qquad \text{for } j = 0, 1,\ldots, J.$$

where β_{jx} is the coefficient of X for alternative j. The marginal effect on the redundant category is obvious as the sum of the marginal effects of all alternatives equal to zero. The data are analyzed employing LimDep version 7.0 econometric software. More over, descriptive analysis will be used to provide detailed description of the rules and institutions that govern resource entitlement, use and system performance.

Results and discussion

Descriptive characteristics of the sample households

Household demographic profile of the 146 respondents surveyed indicates that the average number of persons per household was 6.70. The adult female members of the household, who constitute on average 24%, shoulder great pressure and responsibility in the household affairs of the community we surveyed. Their responsibility include, among other things, cooking, gathering firewood, caring for children and the elderly. They are also responsible for caring for sheep and goats, the breeding stock, including milking cows and young animals, as well as for marketing animal products, particularly milk. Fetching water for human consumption, among other responsibilities of women, was raised as the most time consuming and labour demanding task. Not only does the distance to water sources increase during dry seasons, but the water level in the wells also drop thus making the task even more difficult for women.

The respondents were also asked in the household survey: "How wealthy do you consider yourself?" and the answers were coded 1, lower than most; 2, same as most; and 3, higher than most. Even though such a subjective measure of poverty is advantageous in terms of simplicity for collecting information, the response may be influenced by considerations that do not reflect the actual welfare of the household. Particularly, some household-heads may be unwilling to admit that they are poor as it may imply low status in the community. Whereas, others may claim that they are poor if they anticipate that the survey results will bring them some assistance, which may arise as a result of failure to understand the purpose of the research. Table 1 shows some descriptive statistics of the variables under consideration.

(Table 1 about here)

For agropastoralist societies in the study area livestock and livestock products are the main source of livelihoods. Therefore, data was gathered on livestock ownership of each respondent household. The results reveal that agro-pastoralist households in the study area had an average of 11.79 TLU per household. The results also show that cattle (cow, ox/bull, and young animals) constitute large proportion of the livestock population. The cattle herd was also female dominated with a cow to ox/bull ratio of 5.64:1. A more female-dominated herd structure is, of course, a common feature of pastoralist communities. Small ruminants are also valuable assets to the households particularly in terms of their contribution to food security, especially during the onset of drought. It is this category of the livestock that households prefer to dispose of in order to get food in exchange. They are also considered to contribute towards "efficient" utilization of

household labour as they employ young children's labour that would have remained idle otherwise.

Various types of water sources are used in the study area, including hand dug wells, digging stream beds, ponds, hand pump and reservoirs. The deep hand-dug wells, locally known as *ella,* are of particular importance in shaping social organizations in Daketa valley where surface water is relatively scarce. The deep hand-dug wells are mostly used during dry seasons to supply water both for people and livestock. The wells, which can be up to 8 meters deep, require an enormous amount of labour both for lifting water and excavating and removing the soil after each rainy season that in turn requires a continuous and coordinated supply of labour. Those relatively wealthier members of the community with larger herds obviously need more labour to lift water and members of poorer households may supply such labour in exchange for food or promises of a future calf.

Agropastoralists in Daketa and Yerer valleys are largely governed by the customary land tenure system where land nominally belongs to the state but the council of the peasant association, in collaboration with concerned government offices, allocates cultivation rights to individual households, while pasture land remains under the management and control of the community. Individual households may gain more exclusive use right by investing their labour into the development or maintenance of water points. Therefore, one can observe a mix of private, common, and state property and sometimes open access resources as mediated by local institutions.

The variability of boundaries between grazing and cultivated lands always required the mediation of traditional institutions in granting access to different users. Moreover, poorer community members may be negatively affected in the process because land encroachment prevents them from directly accessing common resources, and precludes them from extracting wood for charcoal making and fuel wood for sale. Therefore, they tend to engage in negotiations with wealthier pastoralist from nearby semi-arid areas to facilitate mobility and encroachment. Table 2 shows that 87.6 percent of households who consider themselves "lower than most" in terms of personal wealth accommodated pastoralists in return for either the right to use milk or sharing calves, whereas 57.10 percent of the wealthier groups looked for reciprocal arrangement.

Under such circumstances when resource scarcity and pressure is felt by pastoralists due to ecological uncertainties, then the main strategies of the poorer members of the community is to assist pastoralists to encroach into the common resource when approached so as guarantee their own welfare at the expense of other community members who are considered to be relatively better off. But one can also note that accommodating is not the exclusive behaviour of the poor, as the medium and wealthier households also accept the pastoralists, though the terms of negotiation and contract may vary.

(Table 2 about here)

The results of the survey reveal that the poorer a household is, the more it is involved in an arrangement that enables it to share calves.

The reciprocal arrangement is found to be largely a risk-management strategy by relatively wealthier community members. Wealthier members of the agro-pastoral communities accommodate pastoralists and extend their resources particularly the rangelands and water points for the major reason that they expect the same treatment from pastoralists in case members of the agro-pastoral communities face drought and are forced to migrate to areas under the control of pastoralists. The survey results reveal that those respondents who hosted pastoralists based on reciprocity arrangements had an average of 17.06 TLU per household. Reciprocity also plays an important role in enhancing livelihoods of the pastoral and agro-pastoral communities by extending resource availability through institutional arrangements between community members and others, and so creating greater security.

Empirical results

The multinomial logit analysis was performed using the LimDep 7.0 discrete choice logit procedure. Table 3 reports the results for estimation, marginal effects and standard error of each of the variables in each of the models. The model chi-squared statistic (111.38 with 36 degrees of freedom) is significant at the 1% level of probability. In addition, the predicted shares for each institutional arrangement are relatively consistent with the actual shares. For all arrangements, there are three to five observable characteristics of household under consideration that provide statistically significant predictive power for practicing a given arrangement.

The coefficients of such models are difficult to interpret directly. Instead the marginal effects are the only means to effectively interpret the effect of explanatory variables on the distribution of

proportion of dependent variables. Marginal effects are the probability of change in favour of a specific arrangement with respect to each independent variable, measured from the mean of that variable. A positive or negative sign of marginal effects, the only reliable indicator in such models, indicates an increase or decrease in the probability of engaging in the arrangement under consideration.

There are some statistically significant variables that provide predictive information on the engagement of households in institutional arrangement. Overall, variables including the sex of household head, dependency ratio and personal wealth ranking provide the most predictive power whether or not the household engage in reciprocal arrangement, where as number of household members, distance from home to the nearest market centre and personal wealth ranking were found to be more relevant in determining to engage sharing calves. On the other hand, sex of household head, number of household members, distance to watering point and distance to primary grazing land were found to be statistically significant in determining the likelihood that a household engage in the use of milk.

Although the marginal effects of sex of household in reciprocal arrangement was negative and statistically significant, they were negative for both sharing calves but not statistically significant and using milk which is statistically significant. More specifically, if a household is headed by a man, it is 30.2 percent more likely that it will engage in reciprocal arrangement and 27.9 percent less likely to engage in using milk. Theoretical expectation was that as age of the household head increases, it would be more likely that the household engage itself in reciprocal arrangement. Because in such agropastoral societies traditional institutions play great role in mitigating

environmental uncertainties through mutual arrangements, mediated by elders, in which the immediate and material benefit is not much of importance. It is, therefore, unclear why the marginal effects of age of household head are not statistically significant for any of the arrangements.

If a household increases household size by one person, he/she is 9.2 percent more likely to fall in using milk, and 6.8 percent less likely to engage in sharing calves. While the remaining coefficient on the household size is not statistically significant, it indicates that a household is 1.6 percent less likely to practice reciprocal arrangement. The marginal effect for dependency ratio, however, indicates that if dependency ratio increases, a household is 21.9 percent more likely to engage in reciprocal arrangement. The expectation was that an increase in dependency ratio implies addition of more children as household members which largely depend on milk for their daily nutrition.

Hence, other things being equal, an increase in dependency ratio would have a positive and significant effect on using milk. Even though the sign of the marginal effect for dependency ratio is positive as expected, it is not statistically significant. An explanation for this may be sought in terms of the consumption pattern of the pastoral and agropastoral communities. In such communities, animal products particularly milk constitute an important component in the daily consumption. Therefore, what matters is the household size as it determines the aggregate demand for milk as compared to the share of children which is relatively low.

(Table 3 about here)

A household nearer to the market centre is 10.7 percent more likely to share calves, but 4.8 percent less likely and 2.2 percent more likely to engage in reciprocal and using milk, even though the marginal effects are not statistically significant.

The order in which the household head places his personal wealth against other members of the community has also relatively strong predictive power regarding the probability of engaging in a certain institutional arrangement. The positive and statistically significant estimated marginal effect for whether or not the household consider itself better than most, average and lower than most supports the study's theoretical expectations that if a household is better off it will prefer reciprocal arrangement. Households who consider themselves better off in terms of wealth are 49.1 percent more likely to engage in reciprocal arrangement and 60.7 percent less likely to engage in sharing calves. They are also 8.5 percent more likely to engage in sharing milk, but this is not statistically significant. The statistically significant results indicate that there is sufficient evidence to believe that wealthier households are more likely to engage in reciprocal arrangement and less likely in sharing calves, implying that the poor should seek the other way round. Meaning, the poorer a household is, the less likely that it prefers reciprocal arrangement and the more likely it will engage in sharing calves.

Conclusions

The Daketa and Yerer valleys with their relatively better quality rangelands and availability of water points create good conditions for grazing during dry seasons, which, in turn, attract a

number of pastoralists, thereby necessitating the creation of institutional arrangements to get access. Such institutional arrangements can reduce the vulnerability of poor community members who traditionally depend on common property resources. They take advantage of the stock of goodwill and social networks among community members to facilitate access for the pastoralists that enables poor community members to build livestock asset.

Even though recent research findings cautioned against assuming that common property regimes guarantee equitable distribution of benefits (Agrawal and Gibson, 1997), our finding is that such institutional arrangements enhance the capability of resource poor community members to make the most from the common grazing land. The paper has tried to elucidate some of the complexities in the linkages between status of wealth and engaging in strategic choice to facilitate herd mobility of pastoralists. The case study revealed that poor members of the agro-pastoral community transform their endowments (right of access and use) of common grazing land and social capital to actual entitlements of economic value of livestock through institutional arrangements. Therefore, it is necessary to recognize that thoughtful policies should give due emphasis to the complexities of such arrangements.

The results indicate that resource competition in times of natural scarcity may enhance the bargaining position of asset-poor members of an agro-pastoral society and, in turn, enable them to improve their asset stock and relative socio-economic status by forming an alliance with external players. Hence, it is a kind of paradox that times of scarcity may offer opportunities for asset-poor players to improve their overall and relative position within a society. The findings also suggests that the bargaining position of relatively resource poor agropastoralists can create a

changing balance in the incremental costs and benefits for pastoralists and better off agropastoralists that may determine whether there will be a peaceful or violent solution to the competing resource claims. Furthermore; the alliance of asset-poor agro-pastoralists with outsider pastoralist encroachers changes the relative power assets of pastoralists vis-à-vis agro-pastoralists and urges the latter to comply with a non-violent resolution of competing claims towards a resource sharing arrangement. Hence, it is important to recognize that agropastoralist households are heterogeneous in terms of resource entitlement which has strong policy implications for conflict resolution.

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Table 1. Frequency distribution for personal wealth ranking (% of respondents)

Personal wealth ranking	Location		Overall sample (n = 146)
	Daketa (n = 92)	Yerer (n = 54)	
Lower than most	33.7	16.7	27.4
Same as most	50.0	72.2	58.2
Higher than most	16.3	11.1	14.4

Table 2. Percentage of respondents who hosted pastoralists by wealth and institutional arrangement

Personal wealth ranking	Institutional arrangement				Total (n = 146)
	Not practiced (n = 21)	Reciprocal (n = 44)	Share calves (n = 44)	Use milk (n = 37)	
Lower than most	3.42	---	13.7	10.3	27.4
Same as most	10.96	21.92	13.02	12.3	58.2
Higher than most	---	8.22	3.42	2.74	14.4
Total	14.38	30.14	30.14	25.34	100.0

Table 3. Mean and standard deviation of major attributes by practiced institutional arrangement

| | Institutional arrangement | | | | | | | | | |
| | Overall | | No preference | | Reciprocal | | Share calves | | Use milk | |
Attributes	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age of household head (HAGE)	39.66	13.21	39.95	14.95	38.41	13.47	39.30	12.03	41.43	13.57
Children less than 6 years old (CLD6)	1.73	1.42	1.29	1.31	1.59	1.53	1.86	1.41	1.97	1.32
No. of adults (ADLT)	3.16	1.78	3.00	1.41	3.14	1.34	2.91	1.25	3.59	2.70
Household size (HHS)	6.70	3.15	5.62	3.26	6.61	2.88	6.45	2.61	7.70	3.78
Adult equivalent unit (AEU)	5.42	2.62	4.60	2.68	5.35	2.36	5.21	2.06	6.23	3.27
Dependency ratio (DEP)	1.28	0.91	0.84	0.87	1.23	0.83	1.35	0.91	1.50	0.95
Dist. to road (DistRD)	1.02	0.69	1.28	0.94	0.90	0.63	0.96	0.60	1.10	0.67
Dist. to town (DistTWN)	2.94	2.63	2.48	1.05	2.31	0.67	3.73	3.69	3.01	2.99
Distance to development agent (DistEXTN)	0.66	0.52	0.47	0.47	0.75	0.52	0.62	0.47	0.72	0.59
Tropical livestock (TLU)	11.80	11.10	9.25	5.88	17.06	12.19	10.67	11.19	8.34	9.92
No. of cows (COW)	5.47	4.86	4.24	2.68	7.75	5.20	5.11	5.17	3.89	4.10
No. of oxen owned (OX)	0.97	1.19	0.62	0.74	1.61	1.40	0.77	1.05	0.65	0.98
Distance to watering point (DistWTR)	2.97	1.07	3.05	1.08	3.00	0.92	2.93	1.10	2.96	1.22
Distance to grazing land (DistGRZ)	2.05	3.71	1.25	1.61	3.05	4.83	1.93	3.26	1.44	3.38

Discrete variables	Percent of households who responded "yes"				
	146	21	44	44	37
Household head is male	89	95	93	89	81
Use hand dug wells	70	86	66	59	78
Use stream bed	76	81	68	77	81
Use pond	10	10	11	2	19
Use hand pump	26	29	34	27	14
Use reservoir	8	14	00	2	19

Table 4. Multinomial logit model predicting institutional arrangement, marginal effects, and standard errors in parentheses.

Variable	Reciprocal		Share calves		Right to use milk	
	Coeff.	Marginal effect	Coeff.	Marginal effect	Coeff.	Marginal effect
Constant	-7.18	-0.802	-2.235	0.830	-5.268	-0.258
		(0.4504)		(0.459)		(0.380)
COMM	1.13	-0.035	1.508	0.100	1.267	0.002
		(0.1760)		(0.183)		(0.161)
HSEX	0.44	0.302	-0.781	-0.056	-1.690	-0.279
		(0.1761)*		(0.198)		(0.144)**
HAGE	-0.07	-0.004	-0.038	0.008	-0.081	-0.007
		(0.0061)		(0.006)		(0.0053)
HHS	0.09	-0.016	-0.024	-0.068	0.492	0.092
		(0.0304)		(0.033)**		(0.027)***
DEP	2.47	0.219	1.337	-0.141	1.733	0.012
		(0.1124)**		(0.118)		(0.0951)
PWR	1.19	0.491	-2.077	-0.607	-0.246	0.085
		(0.183)***		(0.18)***		(0.145)
TLU	-0.13	0.007	-0.197	-0.017	-0.147	0.002
		(0.028)		(0.031)		(0.031)
DistRD	-2.03	-0.054	-2.006	-0.068	-1.748	0.024
		(0.1242)		(0.1038)		(0.085)
DistTWN	1.36	-0.048	1.794	0.107	1.611	0.022
		(0.0562)		(0.04)***		(0.029)
DistEXTN	1.88	0.128	1.185	-0.094	1.577	0.042
		(0.1369)		(0.155)		(0.139)
DistWTR	0.56	-0.013	0.439	-0.068	1.036	0.114
		(0.060)		0.0634		(0.054)**
DistGRZ	0.004	0.015	-0.022	0.011	-0.156	-0.028
		(0.014)		0.0187		(0.016)*

*, **, and *** represent 0.10, 0.05, and 0.01 levels of statistical significance, respectively.

Note: redundant category is "not practiced" any institutional arrangement.