Age Sets, Accountability, and the Balance of Power: Evidence from Villages in Rural Congo*

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Abstract: There is increasing evidence of the importance of tailoring development interventions to the local context. We implement an RCT in the Democratic Republic of the Congo, where there is variation in the presence of age sets, a mode of social organization that creates cohesive groups of young men who provide a check on the power of the older political elite. We provide villages chiefs with cash to purchase health products and form oversight committees. Some villages are randomly assigned to form a diverse committee and other villages are randomly assigned to form a young male committee. We ask whether young male committees in villages with age sets are more effective due to the match between the structure of the intervention and the social structure in the village. We find that young male committees in villages with age set are more cohesive, participate in more oversight tasks, and generated a more equitable distribution of products. In particular, we find that the chiefs and those within their network received fewer products. We find no effects on graft – project funds that are not spent on health products.

Keywords: Social organization, age sets, accountability, governance.

JEL Classification: O120, Z130, Z190.

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1. Introduction

There is growing consensus that it is important to account for the local context when designing development policies and interventions. This perspective stems from the observation that societies, particularly in the developing world, exhibit rich social and cultural variation that shapes the context in which policies are embedded. This variation is potentially important for a range of policies and in ways that are not obvious a priori.

In this paper, we aim to make progress on our understanding of these issues by looking at how one particular cultural practice – age sets – is relevant for policies aimed at improving village-level governance. Age sets are groups of people (typically young men) who participate in a lengthy initiation (generally lasting many months). During the rituals, participants learn a host of skills, including house construction, farming, spirituality, genealogy, and proper social conduct. One consequence of the process is that the men who undergo the process together become highly bonded and for the rest of their life form a cohesive group (age set) that progress together through different stages of life (called age grades).

While the consequences of this horizontal social structure for redistribution have recently been documented (Moscona and Seck, 2024), within the anthropological literature, the primary consequence of age sets is not economic but political. Age sets, comprised of a cohesive group of young men, provide a counterbalance to the political power of the elites in the village, who are generally from an older generation. Although the system is generally gerontocratic, meaning power increases with age, the younger cohort, which due to age sets, is cohesive and not aligned with the older elite, provides a check on the elite of a village.

Across Africa, and in the setting of our study, the northern DRC, there is rich variation, even at a granular level, in the extent to which the age set custom is present. This variation is potentially relevant to a class of policies and interventions, which aim to improve governance across African villages. Within the social science literature, there has been concern that the gerontocratic political hierarchy with limited accountability that characterizes many villages is inefficient (Mamdani, 1996). Within economics, there have been attempts to shift power from older, and often less educated, individuals to younger more educated members of the village (Casey, Glennester, Miguel and Voors, 2023) or to improve the accountability of chiefs through village development committees (Casey, Glennester and Miguel, 2012, Humphreys, Sanchez de la Sierra and Van der

Windt, 2019).

Our study asks how the efficacy of these interventions depends on the presence of age sets in a village and whether their optimal design should depend on the presence of this practice. Across 102 isolated rural villages in Sud-Ubangi province in the Democratic Republic of the Congo, we implement an intervention that provides village chiefs with grants to purchase health products (deworming pills, chlorine tablets for water purification, and oral rehydration salts) made available at subsidized rates and transported to the village. As part of the project, village oversight committees are formed to monitor the Chief's management of the project and its resources. We randomly vary the composition of the oversight committees. In half of the sample villages, the committee is a random selection of all volunteers, and in the other half, the committees only include young men.

We are interested in whether the consequences of committee type depend on the cultural context of this village. Specifically, we test whether it is the case that in age set villages, young male committees work more effectively and provide better oversight of the village chief. In age set villages, young men belonging to the same age set tend to be bonded and highly cohesive. This may generate a more cohesive committee that is better at undertaking it's tasks, including participating in committee meetings and meeting with other committee members, organizing village meetings, communicating with villagers, and distributing the health products.

The nature of the experiment meant that the chief is in control of the finances and he had the ability to divert some of the funding from the project to himself. Since the age set custom creates a cohesive group of young men that counterbalance the power of the elders who hold political positions, it is possible that young male committees are better able to limit the discretion of the chief in villages with an age set custom.

The experiment took place in two rounds from June 2016–November 2023. We administered a baseline survey prior to both rounds and then endline surveys approximately 6 months after each round. We had separate surveys for the village chief, the village secretary, the village sage, the groupement chief, a notable from each clan of the village and 12 randomly chosen villagers.

We find that our young male committee treatment arm results in a different committee composition. Young male committees, not surprisingly, are all male and tend to be significantly younger. Diverse committees are older and comprise both genders, although about two-thirds of committee members are men.

We had enumerators record the chiefs reaction to the announcement of the committees. We find that chiefs were generally satisfied with the committees, but much less so when it is a young male committee in a village with the age set custom. This is what one would expect given ethnographic accounts.

We find that male committees in age set villages were more cohesive. They report feeling closer to the other members of the committee. Nor surprisingly, they do not report feeling closer to the chief, but they do report feeling closer to villagers. Their greater cohesion is is also reflected in the work they carried out. They performed more oversight tasks, such as organizing meetings, organizing product distribution, carrying out the distribution, and meeting with peasants to answer questions or concerns about the health products. In terms of meeting with the chief and keeping writing records, they were similar to the other groups.

We find some evidence that young male committees in age set villages did affect some of the behaviors of the chief. Specifically, chiefs were more likely to organize meetings. However, chiefs were less likely to distribute the products themselves. Thus, in villages with young male committees and age sets, the committee seems to have taken more responsibility in terms of distribution relative to the chief. We find no effect on the frequency that the chief met with villagers or the committee or the extent to which he kept written records.

We then turn to the effects on the amount of money missing. Perhaps surprisingly, we find that the level of graft from project funds by the chief was fairly low – less than 10%. This was significantly lower than the 23 percent that was anticipated by expert academic economists working in the field of development economics or political economy. We find that greater oversight and constraints on the chief in the form of a young male committee in age set villages had no effect on the amount of graft. Thus, there is no evidence that oversight was too weak and the chiefs powers were too strong.

Lastly, while we find limited evidence of our intervention and underlying variation in the age set custom affecting the amount of missing money, we do find important distributional implications. We collect data from households on the number and types of products that they receive, as well as information on whether they are connected to the village chief or committee members. We find that chiefs in age set villages with young male committees received fewer products. On average chiefs receive 45 products (relative to 19 for villagers). Chiefs in age set villages with young male committees receive 20 fewer products.

We also find important heterogeneity in how products are allocated among villagers. We partition our sample by whether or not respondents are close to the chief, wealthy, and close to committee members. In age set villages with young male committees, households that are closer to the chief and wealthier tend to receive receive fewer products. This is consistent with young male committees in age set villages being able to prevent capture of the resources by those who are close to the chief. Interestingly, we do not find evidence that these resources are captured by villagers who are close to the committee members. That is, in age set villages with young male committees, we do not see evidence of products being distributed to those more closely connected to members of the committee.

Overall, our findings show that the effects of the program we examine – which like other recent initiatives aims to give some formal power to younger individuals in the village – depend on the presence of an important local custom, age sets. This provides one of the first examples, based on an experimental design, showing that the efficacy of policy depends on the local cultural context. We show that the same interventions has very different effects depending on whether a particular practice, not commonly considered within economics but highly relevant for village governance, is present.

The paper makes a number of contributions to our existing knowledge. First, it provides an attempt to integrate local social structures into policy in a simple, yet real, way. Age sets have been noted as being important components of traditional governance, but have not been integrated into policy. A recent World Bank working paper laments this fact, writing that "Of the 78 [World Bank] assessments of legal and justice systems undertaken by the Bank since 1994, many mention the prevalence of traditional justice in the countries looked at, but *none* explore the systems in detail or examine the links between local level systems and state regimes." (Chirayath, Sage and Woolcock, 2005, p. 3) (emphasis in the original). The document then goes on to identify age sets as being an important dimension of traditional politics, for the groups in their case studies, since they "partially offset the central authority of the chief and the divisions amongst the lineages" (p. 13).

Second, we contribute to the literature on the efficacy of CDD programs. Casey (2018) provides an overview of the key findings from the literature. Despite much policy enthusiasm for community driven development and the hope that these programs improves local decision making, there is little evidence of enduring impact. As described in Casey (2018), while CDDs are able

to effectively deliver local public goods, there is little impact on institutions. Generally, in CDD interventions, the committees that are formed are designed to be diverse. Thus, our project differs slightly from this standard implementation and provides evidence on how targeting groups that traditionally hold the role of holding leaders accountable may improve outcomes. Humphreys et al. (2019) implement a large scale CDD in Eastern Congo across 1250 villages. They find no evidence that the program improves governance outcomes across a wide variety of indicators, such as whether public funds are captured and the types of governance practices employed by village leaders. Our project will speak to understanding when and how CDD type projects may be most effective. The results will also speak to how CDD programs may be tailored to better leverage existing institutions – rather than aiming to change them.

The paper also complements a literature on understanding the role of social structures for development outcomes. First, there is a growing literature on understanding the importance of social structures for economic development (Greif, 1994, 2006). For example, Alesina and Giuliano (2014) examine the link between family ties and economic attitudes, and Bau (2016) demonstrates that kinship structure affects response to policies. Research also suggests kinship networks provide insurance (La Ferrara, 2003, Baland, Bonjean, Guirkinger and Ziparo, 2016), but may also affect incentives for investment (Baland, Guirkinger and Mali, 2011, Jakiela and Ozier, 2016). Schulz (2017) finds that cousin marriages affect democracy, and Akbari, Bahrami-Rad and Kimbrough (2016) look at the role of cousin marriage for corruption. Moscana, Nunn and Robinson (2017) find that segmentary lineages affect incidence of conflict in Africa. Lowes (2022) explores how matrilineal relative to patrilineal kinship affects outcomes for women. These papers all highlight the importance of social structures for understanding variation in development outcomes.

2. Evidence of the Importance of Age Sets from Ethnographic Data

2.1. Age Sets in General

While age sets have been well-studied in the anthropology literature, they have yet to be incorporated into economic research. In age set societies, politics is structured horizontally through groups of men of approximately the same age, who have been initiated into an age set. One of the most thoroughly studied age set societies is the Maasai of Kenya, where boys are initiated into the

first age set via a circumcision ritual, after which they become warriors and live together. In their mid-twenties, when the next group of young boys is ready for initiation, the warriors transition into being farmers and husbands, officially getting married. After this, they transition into being elders who make political decisions, and finally into the oldest age set where they focused on spiritual and supernatural tasks.

One consequence of this social structure, which is well recognized in the anthropological literature, is that the presence of age sets puts natural checks on the powers of the political elite in society. Because one's age grade determines one's status in society, no one family is able to accumulate power since power cannot be passed on to one's descendants. Moreover, the fact that the system creates a cohesive group of young men that belong to the same age set provides a force that naturally checks the power of the elite, who are generally a group of elders who belonging to a more senior age set (Gulliver, 1963, Bernardi, 1985).

An anecdote from a rural Nigerian village highlights how age sets can serve as a check on power (Bohannan, 1964). The village was divided about whether a young man named Yaav was involved in witchcraft. The youth instructed the elders of the village to convene a meeting, during which the Chief decided that Yaav should be punished for witchcraft. However, the Chief's son, whose name was Ilhugh, sided with the coalition that was against his father. When the Chief asked his son why he would side against his own father, Ilhugh replied that he and Yaav were age mates and this bond was stronger and more important. Ultimately, Yaav was spared punishment.

This story highlights a number of important consequences of age sets. First, because the age set was a unified cohesive group, they had political power. They were able to force the elders to convene a meeting, and they were able to prevent them from punishing Yaav for witchcraft. Second, it shows the strength of the horizontal ties within the community. In the end, Ilhugh's horizontal allegiance to his age mates was stronger than his vertical allegiance to his own father, despite the fact that his father was the chief. The story illustrates how age sets create a cohesive group of young able-bodied men, who are able to collectively balance the power of the political elders in the village. More generally, they are able to provide checks on any potential wrong doings or abuse of power that may occur by the elders.



Figure 1: Part of the age set initiation ceremony, historically (left) and today (right).

2.2. *The Setting*

The study takes place in the Sud-Ubangi province of the Democratic Republic of Congo (DRC). This location is an excellent setting to examine our questions of interest. It is large, ethnically diverse, and has significant variation in age set practices, where the practice varies from one village to the next. From surveys and focus groups conducted in the area, we have learned that approximately 50% of the villages in the area traditionally have age set practices, and except in large cities, these continue to be practiced today.

Among the Ngbaka, the majority ethnic group in this area, the age set initiation ritual is called *gazawili*. As a visual illustration of this continuity, Figure 1 provides images of young men from the Ngbaka tribe performing a traditional dance as part of the final stages of the age set initiation ritual. The image on the left is from the colonial period, while the image on the right is from the contemporary period, being taken by our enumerators in 2017.

We collected data from village leaders on how *gazawili* is implemented. The initiation rituals require several months (typically six) stay in the forest, where livelihood skills (like house building, woodworking, agriculture, and witchcraft) and the history of the tribe are taught, and

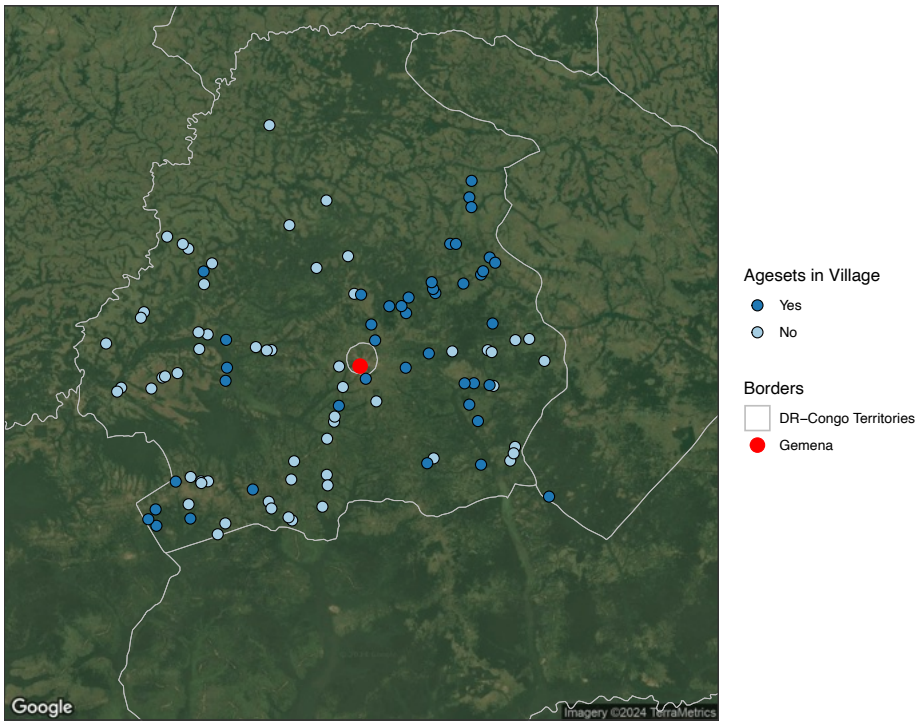


Figure 2: Location of sample villages in Gemena Territory

often circumcisions are performed. The difficult nature and the duration of the rituals naturally result in strong bonds being formed between the boys that participate in the initiation.

3. Baseline Data Collection

Our intervention sample comprises 102 randomly selected villages from Gemena territory, which is located in the northwest of the DRC. To select the villages we first compiled a census of villages in the territory from the governor's office (where a village is defined as a collection of households managed by a village chief according to records on village chiefs compiled by territory administrators). We then randomly selected 102 villages from the territory. A map of the villages in the sample is shown in Figure 2.

The first round of data collection was in the summer of 2016. We collect basic information on various political, social, and economic characteristics of the village, as well as information on its history. We implemented tailored surveys with the Village Chief, the Sage, the Secretary, one

Table 1: Village Characteristics by Age Sets

	Age Sets		No Age Sets		
Variable	**Obs.**	**Mean**	**Obs.**	**Mean**	**P-value**
Number of households (2017)	59	562.712	43	301.047	0.049
Number of households (2019)	59	369.881	43	242.767	0.105
Number of households (enum estimate) (2019)	59	281.390	43	204.837	0.115
Approx. years since village was created (2019)	57	93.386	43	81.977	0.012
Number of clans when founded (2019)	59	2.831	43	1.977	0.014
Number of clans now (2019)	59	3.949	43	3.163	0.041
More than one tribe (0/1)(2017)	59	0.831	43	0.581	0.004
Truck access by road (0/1) (2019)	59	0.915	43	0.884	0.600
Road material sand (0/1) (2019)	59	0.729	42	0.833	0.218
Has a well (0/1) (2017)	59	0.407	43	0.116	0.001
Number of wells (2017)	59	1.915	43	0.372	0.017
Land Titles (0/1) (2017)	59	0.678	43	0.698	0.834
Health center (0/1) (2017)	59	0.559	43	0.581	0.826
Primary School (0/1) (2017)	59	0.864	43	0.651	0.009
Number of primary schools (2017)	59	1.254	43	0.837	0.010
Secondary School (0/1) (2017)	59	0.559	43	0.326	0.017
Number of secondary schools (2017)	59	0.678	43	0.349	0.016
Market (0/1) (2017)	59	0.169	43	0.093	0.270
Generator (0/1) (2017)	59	0.169	43	0.140	0.684
Solar panels (0/1) (2017)	59	0.915	43	0.907	0.885
Mobile coverage (0/1) (2017)	59	0.525	43	0.302	0.023
How far have to go to get good mobile coverage (km) (2017)	59	18.644	43	24.512	0.152

Notes: All means are the average characteristics of the villages using variables from baseline data (2017) and round 1 implementation data (2019). All p-values reflect the difference in means between the groups.

notable from each clan of the village, the Groupement Chief (if present), and 12 randomly chosen citizens from the village (4 old men, 4 young men, 2 old women and 2 young women). The Groupement Chief is the chief of a collection of villages; the position is generally hereditary. In choosing the random sample of villagers, we stratified by gender and age. On average 18 villagers (peasants, chief, notables, and others) were surveyed per village. The surveys were tailored to the position of each respondent, and we collected information that allows us to gain a better baseline understanding of the nature of political, social, and economic life in the villages. In total, we surveyed over 1,800 individuals from these 102 villages.

Table 2: Chief Characteristics by Age Sets

Variable	Age Sets	No Age Sets	P-value
Chiefs in 2017			
Age	51.860	48.977	0.161
Education Years	7.228	7.140	0.890
Not in the village often = 1	0.386	0.372	0.889
Start Age	40.474	40.349	0.952
Elected chief (elected by villagers)	0.772	0.767	0.958
Wealth based on appearance (1/5)	1.842	1.767	0.595
Wealth above villager's median wealth (0/1)	0.333	0.209	0.172

Notes: All means are the average characteristics of the village chiefs. All p-values reflect the difference in means between the groups.

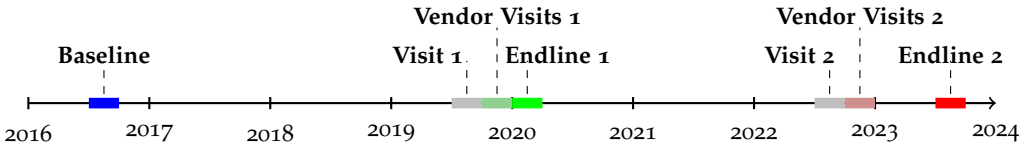
4. Experimental Design

We now describe the experimental design and implementation. We partnered with a local NGO, Congo Helping Hands (CHH), a non-profit organization that has worked in the DRC since 2004, for the design and implementation of the project.[1] The project provides the village chief with a cash grant for the purchase of health products. These health products are over-the-counter products that are generally difficult to access in rural parts of DRC, but that have been shown to be effective for improving health. The three products are: deworming pills (mbendazole), chlorine tablets (Aquatabs) that can be used to chlorinate drinking water, and oral rehydration salts (ORS) that can be used for rehydration when sick with diarrhea. To address access concerns, these products are sold by CHH vendors who visit the villages to sell the products at a subsidized rate.

As is standard in such projects, CHH formed a small committee with six villagers, referred to as village development committees (VDCs), to help administer the project. The committee members' responsibilities are: to ensure that the chief uses the funds appropriately, to ensure the products are distributed in a fair and equitable manner, to help to distribute products themselves, to help villagers to use them, and to answer any questions that may arise. Because the positions are typically volunteer positions, the committee members are not paid.

[1]The founders of CHH have been working in the DRC since 1998. CHH projects aim improve the quality of life of Congolese people through human development in health, education, agriculture, and microeconomics. CHH has conducted many projects related to water, sanitation and hygiene (commonly referred to as WASH) throughout the DRC.

Figure 3: Project Timeline



Notes: The figure shows the project timeline, including the baseline data collection and the two rounds of the project. Each project rounds includes an baseline visit, three vendor visits, and an endline visit.

The primary experimental manipulation in this project is in how committee members are selected. For this project, CHH formed the committees in a manner that is more structured than is typical for them, so that we can analyze the effects of different types of committees and how this varies depending on whether a village has age sets. For a random selection of 50% of the villages, CHH created committees that are only men between the ages of 18 and 35 (*Young Male Committee*). In the other 50% of villages, committees were diverse, reflecting the composition of those who are interested in volunteering for the committee (*Diverse Committee*). In both sets of villages, the committee members are chosen randomly (or randomly conditional on the criteria) among those who volunteered to be a part of the committee. This adjustment to the NGO's standard practice provides us with the variation in committee composition that allows us to observe whether the success of the project depends on the age and gender of committee members and whether this differs depending on whether the village traditionally has age sets or not.

4.1. Project Structure and Timeline

The project implementation involved several steps. After the baseline survey, CHH visited the villages to implement the project. This included meeting with the villagers to describe the project, forming the village development committees, and delivering the cash grant. Project vendors would then visit the villages to sell the health products. Finally, an endline survey was conducted with villagers, the committee members, and chiefs. Two rounds of the project were implemented, i.e. two rounds of delivering the cash grant and selling health products. See figure 3 for the project timeline. Below we describe each step of implementation in greater detail.

1. Baseline Survey. During this visit, baseline data are collected. A relationship with the chief is established. This occurred during June 2016 to September 2016 for Gemena territory.

2. Implementation Visits. The implementation visit involved several types of meetings, First,

Figure 4: Implementation of Village Meetings



Notes: The photos are from two village meetings. Both photos are from the initial visit and were taken by CHH staff. The photo on the left is from the initial information meeting. The photo on the right is from the meeting for individuals interested in volunteering to be on a village oversight committee.

CHH held a meeting with villagers to explain the project, the distribution of funds to the chief, the creation of a Village Development Committee (VDC) to oversee the chief, and the use of the health products.

Second, a meeting was held for those interested in becoming volunteers for the VDC to review the role and responsibilities of the committee members. From those who attend this meeting and report interested in being on the committee, we randomly select individuals. As described above, in half of villages, CHH forms committees by randomly selecting individuals among those who are interested in being volunteers. In the other half of randomly selected villages, CHH forms committees that comprise only young men (between 18 and 35 years old), who are randomly selected from those who volunteer to be on the committee. We survey all individuals who attend the committee information meeting, regardless of the treatment status of the village to collect basic demographic information.

Once the committee has been selected and committee members have been notified, CHH meets with the committee alone, with the chief alone, and then with the committee and chief together. During these meetings, CHH again explains the set up of the program. Specifically, CHH explains that the chief will receive a cash grant, that the cash grant is only for the purchase of health products from the project vendors, and that project vendors will visit the village in several weeks time to sell the health products at a subsidized price. The chief is responsible for using the funds to purchase the product and for distributing the products. The committee is responsible

Figure 5: Vendor Visit Implementation



Notes: The photos are from a vendor visit to a village. The photos were taken by the CHH's vendor of Aquatabs during one sale. At the end of each sale the vendor is asked to take a picture of the amount of products sold (left photo) and of the two receipts (right photo). One receipt goes to the chief and one receipt is kept for the CHH's records.

for overseeing the performance of the chief, for assisting with product distribution. Both the chief and the committee are responsible for communicating with each other and with villagers. Finally, at the end of the visit, CHH provides the chief with the $100 grant (in Congolese Francs) for the purchase of health products.

3. Vendor Visits. CHH hired and trained vendors that would visit the villages. After approximately 3 weeks, the first vendor visits the village. Vendor visits are staggered so that only one vendor visits each week. One vendor sells deworming pills, one vendor sells Aquatabs, and another vendor sells ORS. A vendor for each product visits every village at least once. The vendors provide access to the three health products and sell the products at highly discounted prices (50% discount) to the village chief, who can use the grant provided by CHH to purchase these products for the members of the village.

4. Endline Survey. Several months after the last vendor visit, the enumerators visit the village again. The endline for round 1 was conducted in 2019/2020 (prior to Covid-19); the endline for round 2 was conducted in 2023. Endline survey data was collected from: the committee members, the chief, and randomly selected households. The survey with the committee members and chief asks about the meetings that were held and whether there were any disagreements or problems in the implementation of the program. The surveys with the households asks about the members health experiences since the implementation of the project, access to the health products, and

Table 3: Villager Participation in CHH Meetings

	All Villages					*Age Set Villages*					*No Age Set Villages*				
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
Village Meeting Attendance Round 1	102	96.696	45.187	36	343	59	86.814	31.936	36	160	43	110.256	56.360	36	343
Village Meeting Attendance Round 2	102	58.961	43.215	11	308	59	51.186	32.091	11	203	43	69.628	53.548	18	308
Committee Meeting Attendance	97	58.258	20.665	29	142	55	54.182	17.443	29	110	42	63.595	23.403	33	142
Committee Meeting - Surveyed	98	50.133	17.599	17	110	56	47.143	15.376	26	110	42	54.119	19.676	17	99
Young Men less than or equal to 35 years old	98	13.378	5.638	3	30	56	12.446	4.928	3	29	42	14.619	6.313	4	30
Young Women less than or equal to 35 years old	98	8.500	4.568	1	27	56	8.357	4.769	1	27	42	8.690	4.336	1	19
Old Men more than 35 years old	98	18.643	7.908	4	49	56	17.750	6.487	6	36	42	19.833	9.432	4	49
Old Women more than 35 years old	99	9.515	5.985	0	31	56	8.589	5.656	1	31	43	10.721	6.250	0	28

Notes: The table displays the number of participants in the two main meetings held by CHH in each village. Statistics are provided for the full sample (*All Villages*), villages where age set rituals are practiced (*Age Set Villages*), and villages where age set rituals are not practiced (*No Age Set Villages*). *Village Meeting Attendance Round 1* and *Village Meeting Attendance Round 2* are the total audience members for the village's meetings held on the second day of implementation. The meeting in round 1 was held in 2019; the meeting in round 2 in 2022. *Committee Meeting Attendance* is the total audience at the *Committee Selection Meeting*. *Committee Meeting - Surveyed* collects demographic information on those who attend the Committee Selection Meeting and is used to produce summary statistics on men and women older or younger than 35 years old who attended the meeting.

views on the performance of the chief and village committee. Finally, after the completion of the endline surveys, the enumerators ask the chief to return any unused project funds.

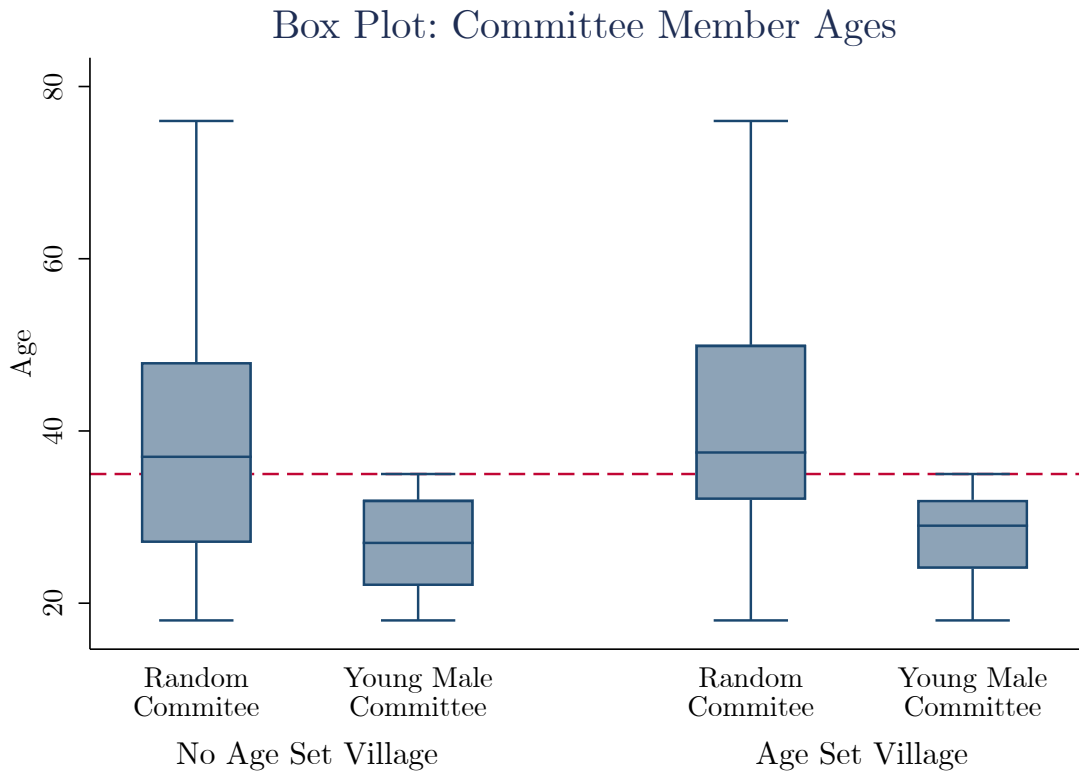
4.2. Validating Implementation

We find that in all 102 villages, the CHH project was well-received by the villagers and the village meetings were well attended. Figure 4 presents photos from two meetings. Table 3 reports statistics on average participation in the villages. Average total attendance during the implementation meetings was just under 100 individuals. The mean was slightly higher in non-age set villages (110 versus 87). The average attendance during the committee selection meeting was 50 individuals, and this was also slightly higher in non-age set villages (54 versus 48). Overall, we find that the number of individuals from each gender by age category group is pretty similar across the categories.

We also examine whether the committees were formed in accordance with the treatment status – i.e. only including young men or a diverse committee. Figure 6 reports information on the age distribution of the selected committee members by treatment status and whether or not their village was an age set village. The figure suggests that the manipulation of the age composition of committees was successful. Young male committees are on average much younger than the random committees. Note, in one village assigned to receive a young male committee, a man of 53 years old got selected to be on the committee because there were not enough young men who volunteered. Figure 7 provides information on the gender break down. In all but one case, where the number of necessary volunteers was low, the young male committees are comprised of just men. Note, two women were selected as committee members in the young male committee treatment because only four men below the age of 35 volunteered at the committee selection

meeting in one village.

Figure 6: Age of the selected committee members by treatment status and age set practices

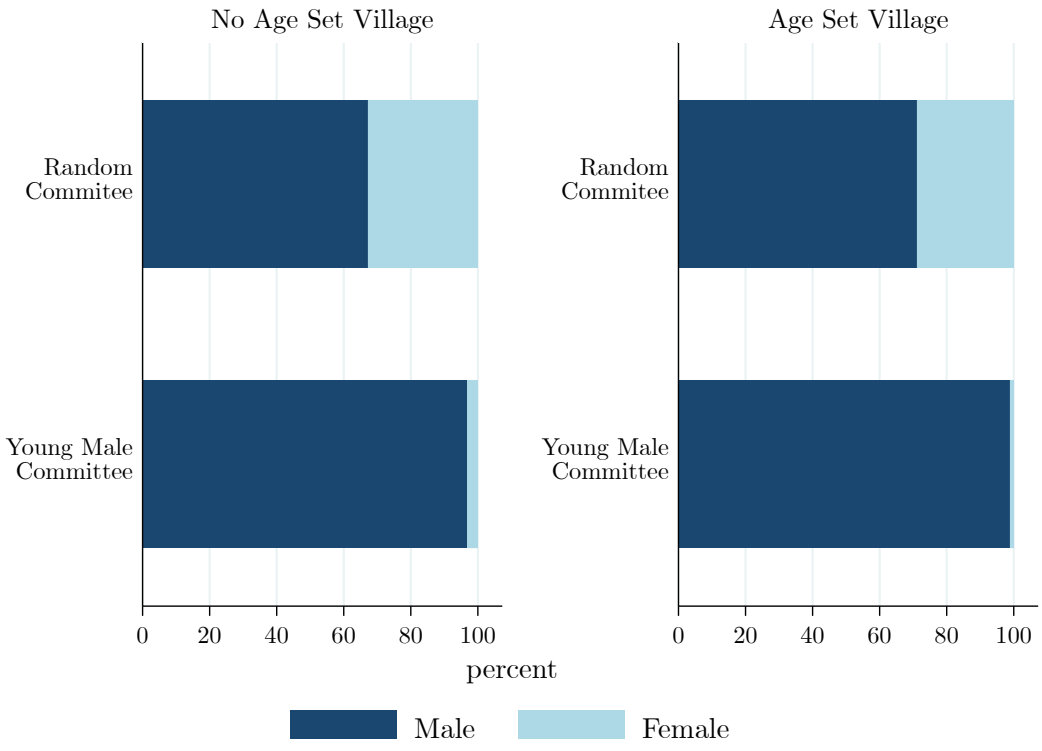


Notes: The figure displays the age composition of the committees by treatment status and age set practices. The left part of the plot presents the age composition for villages where age sets are not practiced (*No Age Set Village*). The right hand side of the plot presents the result for villages where age sets are practiced (*Age Set Village*). Within each category of villages *Random Committee* stands for committees selected randomly among all volunteers. *Committee Young* are committees made only of young male volunteers.

Finally, Table 4 presents summary statistics of the committee member characteristics by treatment group. As expected, in the young male committee treatment groups (columns 2 and 4), almost all committee members are male. In the diverse committees, between 64 and 71 percent of the committee members are male. Among the young male committees, the average age is also much lower – between 28.9 years and 30.8 years relative to 40 years. Another significant difference across the committee types is that the members of the young committees tend to be better educated. Additionally, in age set villages, committee members report feeling closer to the chief.

Finally, when the committee composition was reported to the chief, our enumerators were asked to record how satisfied the chief appeared. When notifying the chief of the list of selected committee members the enumerator is instructed to "Pay attention to how the chief reacts to

Figure 7: Gender composition of the committees by treatment status and Age set practices.



Notes: The left panel of the figure presents the gender composition of committees for villages without age sets (*No Age Set Village*). The right panel of the figure presents the result for villages with age sets (*Age Set Village*). The top panel presents the gender composition for villages assigned to the random selection of committee members (*Random Committee*), and the bottom panel presents the gender composition for villages assigned to young male committees (*Young Male Committee*).

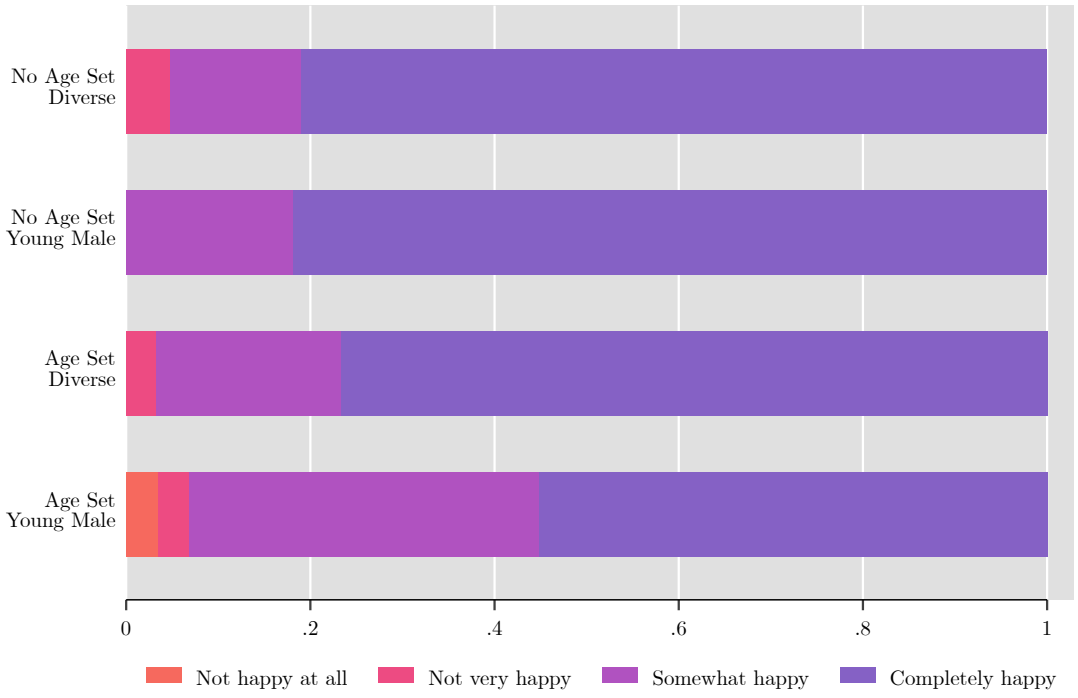
Table 4: Committee Members Characteristics by Treatment Group

	No Age Set Diverse		**No Age Set Young**			**Age Set Diverse**			**Age Set Young**		
	Mean	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs
Male	0.643	115	0.967	0.000	123	0.706	0.363	170	0.981	0.000	156
Age	40.417	115	28.878	0.000	123	41.782	0.390	170	30.782	0.000	156
Married	0.843	115	0.878	0.465	123	0.876	0.398	169	0.923	0.052	156
Number of children 0 to 5	3.052	115	2.691	0.248	123	2.600	0.147	170	3.058	0.986	156
Number of children 6 to 17	3.174	115	2.675	0.112	123	3.582	0.209	170	3.154	0.947	156
Number of adults	4.165	115	3.854	0.186	123	4.147	0.944	170	4.173	0.974	156
Years of education	**6.426**	115	**8.000**	0.007	123	**6.541**	0.841	170	**8.981**	0.000	156
Catholic (0/1)	0.322	115	0.374	0.616	123	0.456	0.142	169	0.468	0.131	156
Protestant (0/1)	0.557	115	0.553	0.971	123	0.533	0.794	169	0.494	0.519	156
Petecostal (0/1)	0.104	115	0.065	0.435	123	0.006	0.026	169	0.013	0.041	156
Notable (0/1)	0.035	115	0.057	0.352	123	0.053	0.461	170	0.026	0.642	156
Wealth (1/5)	1.504	115	1.593	0.502	123	1.604	0.404	169	1.667	0.131	156
Wealth index	–0.071	110	–0.237	0.226	115	–0.002	0.638	164	0.018	0.606	153
Closeness to chief (0/5)	3.217	115	3.366	0.433	123	3.756	0.000	168	3.859	0.000	156
Chief satisfaction with committee (0-4)	**3.762**	21	**3.818**	0.697	22	**3.733**	0.850	30	**3.448**	0.082	29

Notes: All means are the average characteristics of the committee members using Round 1 of implementation data (2019), when the committees are first constructed. All p-values are clustered at the village level and reflect the difference in means between the control group (No Age Sets and Diverse Committee) and the other groups.

the list of selected volunteers". The enumerator is then asked "Did the chief seem completely satisfied, somewhat satisfied, not very satisfied, or not satisfied at all with the list of chosen volunteers?". The distribution of responses are reported in Figure 8. We find that when the committee was comprised of young men, the chief was less satisfied with the composition of the committee. The average satisfaction of the chief is lowest for the age set villages assigned to the young male committees.

Figure 8: The chief's reaction to the selected committee members.



Notes: This figure presents the chief's satisfaction with the committee when it is formed in 2019. Chief's were presented with the selected committee members; enumerators were asked to observe how satisfied they thought the chief was with the selected committee members, where (1) is not at all satisfied and (4) is very satisfied.

5. Empirical Strategy

For the village level analysis, our baseline estimating equation takes the following form:

$$y_v = \beta_1 \mathbb{1}_v^{\textit{Young Male Committee}} + \beta_2 \mathbb{1}_v^{\textit{Age Set}} + \beta_3 \mathbb{1}_v^{\textit{Age Set}} \times \mathbb{1}_v^{\textit{Young Male Committee}} + \mathbf{X'}_v \mathbf{\Phi} + \delta_r + \varepsilon_v, \quad (1)$$

where v indexes villages and the sample comprises our randomly chosen villages from Gemena territory. The variable $\mathbb{1}_i^{\textit{Age Set}}$ is an indicator that equals one if the village traditionally had age sets. The variable $\mathbb{1}_v^{\textit{Young Male Committee}}$ is an indicator that equals one if village v was randomly chosen to have a village committee that comprises only young men, where young is age 18 to 35. Because two rounds of the project were implemented, we include round fixed effects, δ_r. This means there are two observations per village. Standard errors are clustered at the village level for the village-level analysis. $\mathbf{X'}_v$ denotes a vector of control variables, including distance to Gemena, the major urban area, and the estimated number of households in the village at baseline. For the individual level outcomes (e.g, for our random sample of villagers), we estimate an equation analogous to equation (1) but at the individual level and with an additional vector of individual level covariates that includes respondent age, age squared, and gender.

The variable y_v denotes our outcomes of interest. These outcomes include various proxies for the functioning of the project including: tasks performed by committee members and chiefs; project money that is unaccounted for (i.e. not spent on health products or returned to the project at the end of the round); distribution of health products; health outcomes.

We are interested in all coefficients in equation (1). The sign of β_2 tells us whether villages with age sets have more or less successful projects, based on our measures, when the committee is diverse. The sign of β_1 tells us whether villages with committees that comprise young men have more or less successful projects, based on our measures, when the village does not have age set practices. β_3 tells us whether there is a differential effect of young male committees in villages that have age sets.

5.1. Baseline Balance

We present balance on baseline characteristics at the village and chief level in Tables 5 and 6. We find that chiefs are fairly similar across our treatment groups. We do find that age set villages have different characteristics – for example, they tend to be older and have more clans.

Table 5: Chiefs Characteristics by Treatment Group

	No Age Set Diverse		**No Age Set Young**			**Age Set Diverse**			**Age Set Young**		
	Mean	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs
Male	1.000	1.000	.	22	21	1.000	.	28	1.000	.	30
Age	50.952	47.091	0.240	22	21	53.107	0.358	28	50.400	0.841	30
Married	1.000	1.000	.	22	21	1.000	.	28	1.000	.	30
Years of education	8.048	8.091	0.970	22	21	8.107	0.953	28	8.467	0.669	30
Catholic (0/1)	0.476	0.318	0.295	22	21	0.286	0.172	28	0.400	0.595	30
Protestant (0/1)	0.429	0.636	0.173	22	21	0.714	0.039	28	0.533	0.468	30
Petecostal (0/1)	0.048	0.045	0.974	22	21	0.000	0.247	28	0.067	0.780	30
Notable (0/1)	0.048	0.045	0.974	22	21	0.143	0.280	28	0.033	0.800	30
Wealth based on appearance (1/5)	1.762	1.773	0.957	22	21	1.679	0.672	28	2.000	0.173	29
Wealth index	0.035	0.009	0.932	22	20	–0.035	0.789	28	0.672	0.247	30
Chief's wealth above villagers' median (0/1)	0.333	0.091	0.046	22	21	0.321	0.931	28	0.367	0.810	30

Notes: All means are the average characteristics of the chiefs using baseline data (2016). All p-values reflect the difference in means between the control group (No Age Sets and Diverse Committee) and the other groups.

Table 6: Village Characteristics by Treatment Group

	No Age Set Diverse		**No Age Set Young**			**Age Set Diverse**			**Age Set Young**		
	Mean	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs.	Mean	P-value	Obs
Number of households (2017)	336.571	21	267.136	0.296	22	693.733	0.127	30	427.172	0.487	29
Number of households (2019)	350.905	21	139.545	0.023	22	389.067	0.738	30	350.034	0.995	29
Number of households (enum estimate) (2019)	277.524	21	135.455	0.023	22	306.600	0.711	30	255.310	0.757	29
Approx. years since village was created (2019)	83.905	21	80.136	0.641	22	95.967	0.057	30	90.519	0.317	27
Number of clans when founded (2019)	2.048	21	1.909	0.768	22	3.000	0.092	30	2.655	0.172	29
Number of clans now (2019)	3.238	21	3.091	0.798	22	4.467	0.046	30	3.414	0.708	29
More than one tribe (0/1)(2017)	0.714	21	0.455	0.081	22	0.867	0.178	30	0.793	0.526	29
Truck access by road (0/1) (2019)	0.952	21	0.818	0.171	22	0.900	0.500	30	0.931	0.758	29
Road material sand (0/1) (2019)	0.750	20	0.909	0.168	22	0.733	0.897	30	0.724	0.843	29
Has a well (0/1) (2017)	0.143	21	0.091	0.603	22	0.333	0.123	30	0.483	0.009	29
Number of wells (2017)	0.429	21	0.318	0.752	22	0.867	0.322	30	3.000	0.035	29
Land Titles (0/1) (2017)	0.714	21	0.682	0.821	22	0.667	0.723	30	0.690	0.854	29
Health center (0/1) (2017)	0.524	21	0.636	0.462	22	0.600	0.595	30	0.517	0.964	29
Primary School (0/1) (2017)	0.762	21	0.545	0.136	22	0.833	0.534	30	0.897	0.202	29
Number of primary schools (2017)	1.048	21	0.636	0.054	22	1.333	0.264	30	1.172	0.547	29
Secondary School (0/1) (2017)	0.381	21	0.273	0.457	22	0.633	0.072	30	0.483	0.481	29
Number of secondary schools (2017)	0.429	21	0.273	0.335	22	0.700	0.110	30	0.655	0.330	29
Market (0/1) (2017)	0.048	21	0.136	0.322	22	0.200	0.118	30	0.138	0.298	29
Generator (0/1) (2017)	0.190	21	0.091	0.353	22	0.133	0.587	30	0.207	0.888	29
Solar panels (0/1) (2017)	0.952	21	0.864	0.322	22	0.933	0.780	30	0.897	0.479	29
Mobile coverage (0/1) (2017)	0.429	21	0.182	0.074	22	0.567	0.337	30	0.483	0.710	29
How far for good mobile coverage (km) (2017)	32.615	13	31.500	0.876	20	31.412	0.867	17	29.789	0.645	19

Notes: All means are the average characteristics of the villages using variables from baseline data (2016) and round 1 implementation data (2019). All p-values reflect the difference in means between the groups.

6. Effects on Committee Performance

6.1. Tasks Performed by Committee Members

We examine various measures of committee performance. First, we examine the types of project tasks performed by committee members. These tasks include organizing meetings, organizing product distribution, distributing products, meeting with villagers, meeting with the chief, and keeping records. We construct an index of all of these tasks, which is the sum of each task a committee member reports doing.

These results are presented in Columns 1 and 2 of Table 7. We find evidence that young male committees in villages with age sets engage in more overall tasks for the project. We can also look at different types of tasks that committee members complete in Table 8. Specifically, young male committees in age set villages are more likely to organize a meeting, organize product distribution, distribute products, and hold meetings with the villagers. They are no more likely to keep records or hold meetings with the chief.

6.2. Committee Member Closeness

We also ask committee members how close they feel to each other, the chiefs, and to villagers. These results are presented in Table 9. Young Male Committees in age set villages report feeling closer to each other (columns 1 and 2) and to villagers (columns 5 and 6). Interestingly, and as was present in the summary statistics, committee members also report feeling closer to chiefs in age set villages, but this is not differential by committee type.

7. Effects on Chief Behavior

7.1. Oversight Tasks Performed by Chiefs

We also explore the effects of treatment on the tasks that chiefs perform. These is presented in columns 3 and 4 of Table 7. In this overall index we find no evidence that chiefs perform more project tasks in age set villages when there is a young male committee. As we did for committee members, we can also examine effects by the type of task in Table 10. We find evidence that chiefs in age set villages with young male committees report having more meetings. Interesting, we find evidence they are less likely to organize product distribution and less likely to distribute

Table 7: Oversight Tasks Performed by Committee Members and Chiefs

	Dep. Var.: Committee and Chief tasks			
	(1)	(2)	(3)	(4)
	Task index [0-6]			
	Committee Members		*Chiefs*	
Age Set × Young Male Committee	0.772**	0.696**	0.261	0.316
	(0.295)	(0.292)	(0.398)	(0.377)
Age Set	−0.028	0.002	0.109	0.205
	(0.216)	(0.207)	(0.309)	(0.294)
Young Male Committee	−0.257	−0.150	−0.216	−0.328
	(0.257)	(0.260)	(0.310)	(0.284)
Observations	1,110	1,110	202	202
Villages	102	102	102	102
Mean Dep. Var.	3.068	3.068	4.411	4.411
Total effect	0.488	0.548	0.154	0.193
SE	0.208	0.202	0.335	0.309
Village Controls	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Committee Tasks Index* is the sum of indicators for each committee task's indicator (organize meeting, organize distribution, distribute products, meet peasants, meet committee and keep records) and it takes values [0-6]. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee*, *Age Set* and *Young Male Committee*) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: Oversight Tasks Performed by Committee Members

	Dep. Var.: Committee tasks					
	(1)	(2)	(3)	(4)	(5)	(6)
	Organize meeting [0/1]		*Organize distribution [0/1]*		*Distribute products [0/1]*	
Age Set × Young Male Committee	0.155**	0.157**	0.194*	0.165	0.241**	0.213*
	(0.061)	(0.062)	(0.103)	(0.102)	(0.110)	(0.110)
Age Set	0.013	0.022	0.019	0.048	0.028	0.049
	(0.040)	(0.040)	(0.073)	(0.074)	(0.081)	(0.080)
Young Male Committee	−0.045	−0.049	−0.090	−0.055	−0.159	−0.123
	(0.041)	(0.042)	(0.086)	(0.087)	(0.097)	(0.099)
Observations	1,110	1,110	1,110	1,110	1,110	1,110
Villages	102	102	102	102	102	102
Mean Dep. Var.	0.150	0.150	0.595	0.595	0.748	0.748
Total effect	0.123	0.129	0.123	0.158	0.110	0.139
SE	0.053	0.052	0.076	0.077	0.073	0.073
	Meet peasants [0/1]		*Meet chief [0/1]*		*Keep records [0/1]*	
Age Set × Young Male Committee	0.114*	0.108*	0.036	0.025	0.032	0.028
	(0.062)	(0.062)	(0.070)	(0.070)	(0.093)	(0.094)
Age Set	−0.001	−0.010	0.001	−0.009	−0.087	−0.097
	(0.047)	(0.047)	(0.053)	(0.055)	(0.067)	(0.068)
Young Male Committee	−0.011	0.001	0.040	0.059	0.007	0.016
	(0.049)	(0.049)	(0.055)	(0.056)	(0.071)	(0.071)
Observations	1,110	1,110	1,110	1,110	1,110	1,110
Villages	102	102	102	102	102	102
Mean Dep. Var.	0.529	0.529	0.595	0.595	0.452	0.452
Total effect	0.103	0.099	0.077	0.075	-0.048	-0.053
SE	0.043	0.043	0.056	0.058	0.066	0.066
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Total effect is the sum of the three coefficients (*Age Set* × *Young Male Committee*, *Age Set* and *Young Male Committee*) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Committee member closeness to other committee members, chief, and villagers

	Dep. Var.: Committee member closeness to [...]:					
	(1)	(2)	(3)	(4)	(5)	(6)
	Other committee members [0-5]		*Chief [0-5]*		*Villagers [0-5]*	
Age Set × Young Male Committee	0.234**	0.245**	0.037	0.046	0.178*	0.202**
	(0.099)	(0.096)	(0.150)	(0.152)	(0.105)	(0.102)
Age Set	-0.123	-0.101	0.300***	0.292***	-0.055	-0.053
	(0.076)	(0.072)	(0.096)	(0.101)	(0.081)	(0.078)
Young Male Committee	-0.012	-0.035	0.058	0.045	-0.067	-0.104
	(0.077)	(0.074)	(0.127)	(0.128)	(0.081)	(0.078)
Observations	1,108	1,108	1,111	1,111	1,111	1,111
Villages	102	102	102	102	102	102
Mean Dep. Var.	3.918	3.918	3.680	3.680	3.701	3.701
Total Effect	.099	.109	.394	.383	.055	.046
SE	.075	.074	.09	.093	.079	.075
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: Estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets (baseline measure). *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors are clustered at the village level. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee*, *Age Set* and *Young Male Committee*) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

products (though this coefficient is not significant). We find no significant differential effects for the other project tasks.

Finally, we also ask if the share of money missing at the village level predicts what villagers guess about the money missing. We find a positive and significant relationship between how much money is actually missing and what villagers think is missing.

Table 10: Tasks Performed by Chiefs

	Dep. Var.: Chief tasks					
	(1)	(2)	(3)	(4)	(5)	(6)
	Organize meeting [0/1]		*Organize distribution [0/1]*		*Distribute products [0/1]*	
Age Set × Young Male Committee	0.307**	0.317**	−0.058*	−0.051*	−0.119	−0.079
	(0.138)	(0.137)	(0.034)	(0.029)	(0.134)	(0.131)
Age Set	−0.046	−0.014	0.024	0.023	0.019	0.037
	(0.101)	(0.096)	(0.024)	(0.021)	(0.102)	(0.105)
Young Male Committee	−0.146	−0.171*	0.023	0.014	0.098	0.032
	(0.101)	(0.100)	(0.023)	(0.019)	(0.100)	(0.099)
Observations	202	202	202	202	202	202
Villages	102	102	102	102	102	102
Mean Dep. Var.	0.322	0.322	0.985	0.985	0.787	0.787
Total effect	0.115	0.133	-0.011	-0.015	-0.003	-0.010
SE	0.107	0.100	0.034	0.031	0.103	0.103
	Meet peasants [0/1]		*Meet committee [0/1]*		*Keep records [0/1]*	
Age Set × Young Male Committee	0.090	0.051	0.077	0.103	−0.036	−0.024
	(0.142)	(0.140)	(0.136)	(0.132)	(0.056)	(0.053)
Age Set	0.024	0.056	0.058	0.072	0.031	0.031
	(0.103)	(0.100)	(0.096)	(0.095)	(0.037)	(0.037)
Young Male Committee	−0.129	−0.081	−0.063	−0.106	0.001	−0.017
	(0.112)	(0.114)	(0.109)	(0.106)	(0.045)	(0.040)
Observations	202	202	202	202	202	202
Villages	102	102	102	102	102	102
Mean Dep. Var.	0.594	0.594	0.762	0.762	0.960	0.960
Total effect	-0.016	0.025	0.072	0.069	-0.004	-0.010
SE	0.104	0.105	0.102	0.097	0.043	0.041
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee*, *Age Set* and *Young Male Committee*) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11: Villager Guess of Money Missing and Actual Money Missing

	Dep. Var.: Share Money Missing Guessed				
	(1)	(2)	(3)	(4)	(5)
	Share Money Missing Guessed				
Share Money Missing	0.264***	0.260***	0.253***	0.250***	0.274***
	(0.071)	(0.071)	(0.075)	(0.075)	(0.073)
Age Set × Young Male Committee					-0.026
					(0.028)
Age Set					0.042*
					(0.023)
Young Male Committee					0.000
					(0.016)
Observations	1,625	1,625	1,625	1,625	1,625
Villages	102	102	102	102	102
Mean Dep. Var.	0.069	0.069	0.069	0.069	0.069
SE	0.176	0.176	0.176	0.176	0.176
Village Controls	N	N	Y	Y	N
Individual Controls	N	Y	N	Y	N
Age Set and Young Male Controls	N	N	N	N	Y

Notes: Village Controls include: estimated number of households in village at baseline and distance to Gemena. *Individual Controls* include: an indicator variable equal to 1 if villager is a male, age, and age squared. *Age Set* is an indicator variable equal to 1 if a village has age sets. *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

7.2. Money Missing and Health Product Purchase

Table 12 presents the results of our equation 1, where the outcomes are share of money missing and amount of money missing. We find no evidence of significant differences across treatment groups.

We also look at how the money is spent across the various health products in Table 13. Age set villages spend slightly more on deworming pills. Otherwise, we find little evidence of significant differences in allocation choices across treatment arms.

In summary, we find evidence that tailoring the intervention to the local context seems to have improved how committees function. Young male committees in age set villages perform more tasks and feel closer to each other. This does not crowd out chief effort – though chiefs are less likely to be involved in product distribution in age set villages with young male committees. However, tailoring the intervention to the local context did not effect overall efficiency in the sense it did not reduce the amount of money missing – which was overall quite low. Given no effects on efficiency, we now turn to the distributional consequences of the intervention

Table 12: Money missing (share and amount)

	Dep. Var.: Money missing (share and amount)			
	(1)	(2)	(3)	(4)
	Share money missing [0/1]		*Money missing (CF) [0-165,000]*	
Age Set × Young Male Committee	0.02	0.02	3278.47	3303.90
	(0.05)	(0.05)	(7984.88)	(7941.84)
Age Set	-0.02	-0.03	-3376.43	-4263.32
	(0.03)	(0.03)	(4759.54)	(4955.23)
Young Male Committee	0.01	0.02	2255.84	2483.88
	(0.04)	(0.04)	(6608.77)	(6407.06)
Observations	204	204	204	204
Villages	102	102	102	102
Mean Dep. Var.	0.09	0.09	14578.43	14578.43
Total effect	0.01	0.01	2157.88	1524.46
SE	0.03	0.03	4931.43	4978.10
Village Controls	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets. *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors clustered at the village level. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee, Age Set* and *Young Male Committee*) (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 13: Money Spent on Chlorine, Deworming, and ORS (Share and Amount)

	Dep. Var.: Money spent on:					
	(1)	(2)	(3)	(4)	(5)	(6)
	Chlorine		*Deworming*		*ORS*	
	Share [0-1]					
Age Set × Young Male Committee	0.01	0.00	-0.02	-0.02	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Age Set	0.00	0.01	0.05**	0.04**	-0.02	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Young Male Committee	0.01	0.01	-0.02	-0.02	-0.01	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Observations	204	204	204	204	204	204
Villages	102	102	102	102	102	102
Mean Dep. Var.	0.32	0.32	0.26	0.26	0.31	0.31
Total effect	0.01	0.02	0.01	0.01	-0.03	-0.03
SE	0.02	0.02	0.02	0.02	0.03	0.02
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets. *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors clustered at village level. Total effect is the sum of the three coefficients (*Age Set* × *Young Male Committee*, *Age Set* and *Young Male Committee*) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

8. Effects on the Allocation of Health Products

The next line of inquiry investigates the distribution of these health products. We construct an indicator variable for whether a household received any type of tablet and estimate equation 1. We estimate separately for villagers and committee members. We cannot estimate this outcome for chiefs because all chiefs in all villages report receiving at least one product. On average, most households across both villagers and committee members receive at least one product – between 95% and 99%. There is no differential effect across treatment group.

Table 14 presents the number of tablets received by a household, estimated separately for villagers, committee members, and chiefs. First, villagers receive on average the fewest number of tablets – around 20, while committee members receive close to 30 and chiefs receive 45.

In columns 1 and 2, we find some evidence that households report receiving fewer tablets in villages with age sets and young male committees; however, the coefficient is no longer significant once we include village level controls. Columns 5 and 6 suggest that chiefs receive fewer twenty fewer tablets in age set villages with young male committees.

Table 14: Number of Products Received by Villagers, Committee Members, and Chiefs

	Dep. Var.: Number of Products Received by...							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Villagers		*Committee Members*		*Chiefs*		*Share of Products Accounted For*	
Age Set × Young Male Committee	−6.756*	−4.658	−5.345	−3.151	−20.689**	−18.003**	−0.030	−0.005
	(3.752)	(3.103)	(5.073)	(4.506)	(9.633)	(8.996)	(0.051)	(0.046)
Age Set	1.265	1.164	1.597	2.023	9.217*	11.649**	0.040	0.035
	(2.812)	(2.315)	(3.149)	(2.752)	(4.788)	(4.523)	(0.030)	(0.026)
Young Male Committee	5.527*	2.401	7.837*	4.408	21.875***	17.139**	0.080***	0.043*
	(2.857)	(2.504)	(4.258)	(3.853)	(8.198)	(7.794)	(0.028)	(0.025)
Observations	3,121	3,121	1,112	1,112	202	202	204	204
Villages	102	102	102	102	102	102	102	102
Mean Dep. Var.	19.985	19.985	29.411	29.411	45.312	45.312	0.217	0.217
Total effect	0.036	−1.094	4.090	3.280	10.403	10.785	0.089	0.074
Village Controls	N	Y	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

8.1. Heterogeneity in Product Distribution

Thus far we have found evidence that young male committees in age set villages work together better. They feel closer to each other and perform more project tasks. This, however, does not seem to have a measurable effect on the amount of products that villagers report receiving. The primary exception is the chiefs, who report receiving fewer products in villages with age sets and young male committees. This suggests that perhaps chiefs are less able to "capture" the allocation of products in these villages.

We explore three forms of heterogeneity: heterogeneity by respondent closeness to chief, by closeness to committee members, and finally by respondent wealth. Respondents report how close they feel to the chief and committee members. The variable ranges from 0 to 5, increasing in perceived closeness. For the analysis by closeness to the chief and committee members we partition the samples by above and below median closeness.

The results of this heterogeneity analysis are presented in Tables 15, 16, and 17. We find evidence that respondents who identify as being close to the chief receive fewer products in age set villages with young male committees, though on average, these respondents receive more products than those not close to the chief in Table 15. This is consistent with the results where chiefs also receive fewer products, and it suggests that in age set villages with young male committees, chiefs are less able to capture the product allocation. We also present p-values testing the equality of the $AgeSet \times Young\,Male\,Committee$ coefficient across those close to the chief or not close to the chief.

We then turn to examining heterogeneity by those who report being close to the committee members relative to those who report not being close in Table 16. In contrast to the chief, most respondents report feeling close to committee members. Thus, even though we split at the median value, the partition is unbalanced. In contrast to the analysis by proximity to the chief, we don't find significant differences in allocations. The coefficient for $AgeSet \times Young\,Male\,Committee$ is not significantly different across those who are close to or not close to the committee members.

Table 15: Heterogeneity in Number of Health Products Received by Close to Chief

	Dep. Var.: Number of [...] tablets					
	(1)	(2)	(3)	(4)	(5)	(6)
	All Respondents		Respondents Not close to Chief		Respondents Close to Chief	
	All products					
Age Set × Young Male Committee	-6.756*	-4.658	-4.381	-1.988	-9.740**	-7.739**
	(3.752)	(3.103)	(3.280)	(2.674)	(4.487)	(3.755)
Age Set	1.265	1.164	0.808	-0.014	2.088	2.473
	(2.812)	(2.315)	(2.510)	(2.154)	(3.427)	(2.766)
Young Male Committee	5.527*	2.401	3.406	-0.114	7.820**	5.187*
	(2.857)	(2.504)	(2.512)	(2.157)	(3.344)	(3.035)
P-value: Equality of Age Set x Young Male Committee coefficients	.	.	0.096	0.033	.	.
Observations	3,121	3,121	1,455	1,455	1,661	1,661
Villages	102	102	102	102	102	102
Mean Dep. Var.	19.985	19.985	17.489	17.489	22.188	22.188
Total effect	0.036	-1.094	-0.167	-2.116	0.168	-0.079
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. Villagers close to chief report being close in a level 3 or above from a [1-5] scale. *Individual Controls* include: an indicator variable equal to 1 if villager is a male, age, and age squared. *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors are clustered at village level. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee*, *Age Set* and *Young Male Committee*). The p-value is from a test of equality of the *Age Set × Young Male Committee* coefficients across sub-groups. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 16: Heterogeneity in Number of Health Products Received by Close to Committee

	Dep. Var.: Number of [...] tablets					
	(1)	(2)	(3)	(4)	(5)	(6)
	All Respondents		Respondents Not Close to Committee		Respondents Close to Committee	
	All products					
Age Set × Young Male Committee	-6.756*	-4.658	-4.179	-2.598	-10.465**	-7.303*
	(3.752)	(3.103)	(3.310)	(2.806)	(5.089)	(4.136)
Age Set	1.265	1.164	-0.067	-0.116	3.792	3.134
	(2.812)	(2.315)	(2.378)	(2.130)	(4.120)	(3.216)
Young Male Committee	5.527*	2.401	4.019	1.057	6.952**	3.825
	(2.857)	(2.504)	(2.585)	(2.264)	(3.456)	(3.173)
P-value: Equality of Age Set x Young Male Committee coefficients	.	.	0.165	0.193	.	.
Observations	3,121	3,121	1,705	1,705	1,380	1,380
Villages	102	102	102	102	101	101
Mean Dep. Var.	19.985	19.985	17.597	17.597	23.173	23.173
Total effect	0.036	-1.094	-0.227	-1.657	0.278	-0.344
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Individual Controls* include: an indicator variable equal to 1 if villager is a male, age variable and age^2 *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors clustered at village level. Villagers close to committee members report being close in a level 3 or above from a [1-5] scale. Total effect is the sum of the three coefficients (*Age Set* × *Young Male Committee*, *Age Set* and *Young Male Committee*). The p-value is from a test of equality of the *Age Set* × *Young Male Committee* coefficients across sub-groups. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Finally, we also explore heterogeneity by respondent wealth. Wealth is proxied by the enumerator, who rates all respondents from 1 to 5 based on the respondent's house and appearance. Again, we partition the sample by above and below median wealth – but given that many respondents are quite poor, this results a smaller sample of those who are identified as wealthy. These results are presented in Table 17. Again we find evidence, that the distribution of products differs in age set villages with young male committees. Wealthy individuals receive fewer products in age set villages with young male committees. These results are significantly different from those who are not wealthy.

8.2. Health Outcomes

One potential measure of project success is reduction in symptoms related to the types of diseases that the health products address. For example, use of chlorine tablets could potentially reduce incidence of diarrhea. Deworming pills could affect stomach pain or vomiting.

Table 17: Heterogeneity in Number of Health Products Received by Wealth

	Dep. Var.: Number of [...] tablets					
	(1)	(2)	(3)	(4)	(5)	(6)
	All Respondents		Respondents Wealth <=2		Respondents Wealth >2	
	All products					
Age Set × Young Male Committee	-6.756*	-4.658	-4.813	-3.235	-18.648***	-12.655**
	(3.752)	(3.103)	(3.418)	(2.915)	(6.330)	(5.306)
Age Set	1.265	1.164	-0.038	0.112	7.769	5.819
	(2.812)	(2.315)	(2.534)	(2.220)	(4.701)	(3.528)
Young Male Committee	5.527*	2.401	4.324	1.643	12.884***	7.049
	(2.857)	(2.504)	(2.745)	(2.439)	(4.512)	(4.382)
P-value: Equality of Age Set x Young Male Committee coefficients	.	.	0.012	0.049	.	.
Observations	3,121	3,121	2,596	2,596	525	525
Villages	102	102	102	102	97	97
Mean Dep. Var.	19.985	19.985	18.780	18.780	25.939	25.939
Total effect	0.036	-1.094	-0.527	-1.480	2.005	0.213
Village Controls	N	Y	N	Y	N	Y

Notes: All analyses include a year fixed effect. *Individual Controls* include: an indicator variable equal to 1 if villager is a male, age variable and age^2 *Village Controls* include: estimated number of households in village at baseline and distance to Gemena. *Age Set* is an indicator variable equal to 1 if a village has age sets, *Young Male Committee* is an indicator equal to 1 if the village was randomly assigned to have a committee of young men. Standard errors clustered at village level. Wealth is measured on a scale from [1-5] based on respondents appearance. Total effect is the sum of the three coefficients (*Age Set × Young Male Committee*, *Age Set* and *Young Male Committee*). The p-value is from a test of equality of the *Age Set × Young Male Committee* coefficients across sub-groups. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

We construct household level measures of share of household members that have been sick in the last four weeks with diarrhea, vomiting,or stomach pains. We examine the average effect on health outcomes with the same samples as in the previous analyses. We find little evidence of effects on health outcomes. We also construct measures of share of children under five who have been sick. Similarly, we find no effects on health. These tables are presented in Appendix Tables C8–C13.

9. Conclusions

The aim of this study was to better understand the importance of social and political structures for economic development. We considered a potentially important, yet unstudied, characteristic of many Africa societies: the presence of age sets, which are groups of men who move through life together collectively. Men who belong to the same age set overtime pass through different age grades, or phases of life. Groups of young men at approximately the same age are initiated into the age grade together and from then on form an age set. The initiation rituals are typically elaborate, lasting 6 months or longer, and occur outside of the village in remote secret locations.

A potential consequence of age sets, which has been documented only descriptively, is that the presence of age sets creates a group of young men who are cohesive and strongly allied with one another. In the cases studied, these young men serve as a check on the power of the elders in the community, who are generally the political elite. Thus, age sets may serve as a check on the political authority of the elite of a society, increasing de facto political accountability.

We test whether social structures can be leveraged in the design of development policy. We find that young male committees in age set villages have important implications for the committee's ability to work together as well as distributional consequences. Overall, our work highlights the importance of understanding the local cultural context for governance, accountability, and the implementation of policy.

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