Online Appendix

for "Age Set vs. Kin: Culture and Financial Ties in East Africa"

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A. Data: Sources and Variable Construction

A.1. Identifying Age Set Societies

Here we describe our coding of social organization. Information on the presence of age set organization is not available from standard ethnographic databases for Africa, including Murdock (1967)'s *Ethnographic Atlas*. Therefore, for our sample of ethnic groups in both Uganda and Kenya, we used a broad range of ethnographic work to determine whether or not age sets were the dominant form of social organization. The presence of age set organization was determined using the canonical definition from Radcliffe-Brown (1929), described in the main text.

The full list of ethnic groups in our analysis is displayed in Tables A1, A2 and A3, along with whether or not we classified each group as an age set society and the source(s) used to make the classification. Table A1 lists the ethnic groups in our sample for the analysis of the Hunger Safety Net Program (HSNP) in Northern Kenya. For 99.82% of the sample we were able to determine whether the household is a member of an age set society or not. In the HSNP data, unlike the DHS, language rather than ethnicity is reported. The only language in the sample that is not immediately straightforward to link to a particular ethnic group is Swahili, which is the home language of 0.18% of the

sample. Table A2 lists the ethnic groups in our sample from Uganda. We were able to verify whether or not age set organization was the dominant form of social organization for 85% of the sample. The majority of the remaining ethnic groups are small—each under 2% of the DHS sample—and we were not able to find sufficient information to determine whether or not age sets are present. Finally, Table A3 lists the ethnic groups in Kenya's DHS that we classified in order to construct Figure 1 of the main text and that were not included in Table A1. The Somali, Turkana, Samburu, Borana, Gabra, and Rendille are also in the DHS; the source material corresponding to those groups is in Table A1.

Here, we explain the coding of each group included in each part of our analysis. To code an ethnicity as an age-based group, we required evidence that age sets are present and a prominent form of social organization. In many cases, we also include explicit mentions of solidarity within age sets, as well as descriptions of the initiation ritual(s) that bond members of an age set together into a lifelong corporate group. To code an ethnic group as a kin-based group, we required descriptions of kin, clan, or lineage-based social organization. For many groups, the absence of age sets was mentioned explicitly; when this is the case, we make note of it. In other cases, we inferred that groups did not have age sets if an extensive description of their social organization was provided and age sets were not mentioned. Whenever we do not have enough information to determine conclusively if a group is age-based or kin-based, we exclude it from the analysis.

A.1.1 Groups Included in the Analysis of Section III (Kenya's HSNP)

Borana The Borana have a well defined system of age sets, which operate alongside the presence of broader generation-level groupings, known as "generation sets." Legesse (1973) notes that all Borana males have a position in the age-based system and "members of each class are recruited strictly on the basis of chronological age" (pp. 50-51). Tagawa (2017) also describes the age set system of the Borana; members of the same age set, who are "approximate coevals," are referred to as age mates and are initiated at the same time. Participants in each initiation are referred to as "children of kuuchu" and initiation takes place during the late teens or early twenties (pp. 19-20). Each age set is also part of a broader age grade, each of which has a unique name and is associated with a particular level of authority (pp. 16-18). While women also are members of age grades, they are not formed into narrower age sets based on their chronological age.

Burji The Burji are organized in a lineage-based system; while they have a system that divides individuals into generations ("generation sets"), there are no age sets. Hermann and Schubert (1970) describe the lineage-based system of the Burji and explicitly note the absence of age sets in Burji society, which they argue is surprising given the presence of generation sets and the fact that generation sets are often accompanied by age sets (pp. 51-59). Debelo (2012) also described the lack of age-based organization: "[A]ge itself is not significant in terms of categorization" (p. 524).

Gabra The Gabra have a well-defined system of age sets and members of individual age sets are initiated into the group at the same time. Age set membership is associated with a sense of common identity and shared allegiance. Tablino (1999) discusses the corporate unity between members of the

same age set; he writes, "A man does not take a status within the society as an isolated individual but as a member of a set of peers who assume responsibilities together" (p. 63). There are also rituals commemorating transitions between age grades: "No luba [age group] can come into being and no luba can pass from one grade to another unless the transitional ceremony is held. Therefore, the members of a luba are brought together and then held together by a ritual act" (p. 63). Shun (1984) also describes the age set system of the Gabra, and notes that it is most closely related to that of the Borana and Rendille (described above and below).

Garre The Garre have a clan-based social structure. Turton (1975, p. 253) argues that the Garre, which originated as an off-shoot of the pre-Hawiya Somali, are organized into a segmentary lineage system in which clan identity is of upmost importance. Schlee (1985, p. 19), in a broader analysis of social structure of ethnic groups in Northern Kenya, does not note any evidence of age-based organization among the Garre (despite discussing it while describing other groups that do have age-based organization) and instead argues that the Garre are a good example of strict lineage and clan-based social organization.

Rendille The Rendille have a well-defined age set system described by Beaman (1981), Spencer (1973) and Stewart (1977). Beaman (1981) describes the "intricate age-set system" of the Rendille; she explains that, despite having many unique components, the system is similar to that of the Samburu (see below) and organizes boys into discrete groups based on their chronological age that are formed during a circumcision ritual (pp. 360-376). Shun (1984) describes the circumcision ritual and the process through which age set bonding takes place: "Eligible boys are collectively circumcised together...by elders. [...] After circumcision, each initiate forms five kinds of bond friends within the first few months. [...] During this period, the initiates may exchange or share certain items and adopt reciprocal terms of address which they retain throughout life instead of their personal names" (p. 49). Handley (2009) notes that when men are asked their age they instead report the name of their age set, and that age groups gather together frequently; for example, when young men are in the warrior life stage, the elders gather each young age set together every month in order to teach and advise them.

Samburu The Samburu have a well-defined age set system. Each age set is formed with an initiation ceremony and remains a key determinant of social ties and obligations throughout an individual's life. Boys are circumcised upon becoming a moran [age-mate] and entering an age set (Spencer, 2012 p. 92). Spencer (1973) refers to the age set system as among the "purer, more extreme form[s]" of age set organization that have been documented. Individuals are most strongly bonded to members of their age set. Handly (2009) writes, "The group of morans [age mates] are the ones who have more responsibilities to each other, and they are bound more to their fellow moran than they are to their brothers or sisters."

Somali The Somali are organized in a rigid clan-based structure that is characterizes by Lewis (1961) as a segmentary lineage system. Branching lineage segments determine the set of social responsibilities and allegiances of each individual. Individuals are even quick to come to the aid of fellow

lineage members in feuds with other members of the broader Somali group, and allegiance to the lineage segment is paramount. Lewis (1991) writes that the "segmentary structure" frequently leads to the mobilization of "large swaths of the lineage system" in conflict because members of lineage segments come to the defense and aid of fellow lineage-members (p. 232). Beaman (1981, p. 367) explicitly states that age set organization is absent among the Somali and that there is no form of age-grading whatsoever.

Turkana The Turkana have a well-defined age set system in which boys are initiated during their late teenage years along with their age set group. Gulliver (1958) describes the initiation process, "Turkana youths are initiated into full formal adulthood at an average age of eighteen; the age limits vary in practice between about fourteen and twenty years. Initiation occurs by the youth spearing a male, castrated animal-ox, camel, goat, or sheep-at a communal ceremony which may last for several consecutive days or which may be renewed for a day or so at a time over a longer period" (p. 900). Gulliver (1958) further explains that the age set system determines each man's place in the social structure; he writes that " the system allocates to a man his membership in a group of coevals, gives him a placement in that group, and thus a determinate status in relation to all other men in the tribe" (p. 917). He continues, "[A]lways there will be some age-mates in [each man's] neighborhood who will combine with him in social activities. Moreover, they combine in certain essentially masculine activities such as feasting, dancing, ritual, and, formerly, warfare." Handley (2009) describes the solidarity that forms within each Turkana age set: "[T]hose who are rich and those who are poor [in the age set] come together so that they may share milk, meat, tea, sugar, etc. so it puts everyone as equal. [I]t is then that you can't differentiate between rich and poor because they are covering each other. Bonding within the age set helps because the morans [age mates] can rely on each other even if you have no money or social problems."

A.1.2 Groups Included in the Analysis of Section IV (Uganda's Pension Program)

Acholi The Acholi have a prominent age set system. Butt (2017) writes that there is a "well-defined system of age classes" in which initiation takes place "when boys are about 15 year old" (p. 86). There is a major initiation ceremony that involves a series of complex rituals and a period of isolation. Whitmire (2013) writes that "[t]he elders would escort boys ages sixteen to eighteen to the grazing grounds. The elders sang a warrior song while beating the boys. The boys would then kill a number of goats for the elders. Once they ate, the elders allowed the boys to eat. This practice continues today as well. Age-sets, then, were a crucial part of integrating young men into society" (p. 38).

Alur The Alur do not have age sets and are organized on the basis of clans; their social structure is sometimes referred to as a "segmentary state,"' a term coined by Southall (2004). Butt (2017) describes the social structure of the Alur based on clans and lineages, and age sets are not mentioned. She writes, "One particular clan seems to be associated with each tribe or tribal segment...clans are localised, each forming a geographical unit and consequently may be considered as identified with the tribe or tribal segment. As such they form the basis of the social and political organisation" (p.

175). Furthermore, Southall (2004, p. 166) notes, "There is no trace of any age set organization even to the extent of names for initiation sets."

Baganda The Baganda do not have age sets and are organized based on a clan structure. McClusky (2013, p. 257) writes that age organization is "absent" among the Baganda. Fallers (2017) describes the clan-based social structure of the Baganda in depth: "The Ganda were organized into patrilineal clans (bika, sing, kika), each with a major and a minor totem. A clan was known by the name of its major totem: for example, the Grasshopper clan or the Buffalo clan. Roscoe listed 36 clans; others have counted between thirty and forty, depending upon the interpretation of marginal cases. But it is clear that a relatively fixed number of clans was characteristic in Buganda [...] Observance of common taboos, knowledge of common history, remote common origin and a common ancestor and participation by the clan in political and court functions at the capital gave the clan a sense of unity, but from an individual's point of view the sub-clan (ssiga, pi. massiga) was much more immediate. This unit was further divided into lineages (mutuba, pi. mituba) and sub-lineages (lunyiri, pi. nyiriri)" (p. 52).

Bagisu The Gisu do not have age sets; instead, the lineage system is the main social form. La Fontaine (2017) notes, "[C]eremonies did not group boys into any formalized system of age-sets on which the military or political organization was based" (p. 42). Instead, the lineage system is described as an important basis for social organization: "Membership of a lineage determines the political and jural status of a Gisu man and defines the territorial unit within which he has the right to inherit or own land. Although not all political relations between villages or even between larger units were conceived of in terms of lineage relations, the lineage system formed a framework for the political organization" (p. 24). De Wolf (1980) further confirms that the Gisu "did not have" an age set system (p. 308).

Bakiga The Kiga do not have age sets and their social organization is primarily based on kinship. Taylor (2017) makes no mention of age set organization, but describes the kinship system in depth: "The individual Kiga is set in a nexus of different kinship affiliations, many of which involve important patterned attitudes and obligations. In addition to patrilineal connections, which are the most important in group organization, there are affinal ties across the divisive clan lines, close bonds with the maternal lineage and frequent pacts of pseudo-kinship or blood-brotherhood" (p. 118). There is strong solidarity between kin groups: "Groups of closely related households—for example, brothers and brothers' sons—form what Edel calls the patriarchal lineage. [...] These smaller lineages have a high degree of social integration. The members of large lineages, also called by the same name, have more formal relations, consisting primarily of required attendance at each other's ceremonial functions" (p. 117).

Banyankore The Banyankore do not have an age set system or formal initiation process, and are instead organized into groups of family households or clans. Yitzchak (1975) describes in detail the *absence* of age set societies among the Ankole. He writes that "the absence of age-sets in Ankole (an

alternative name for Banyankore) cannot be attributed to the presence there of voluntary associations, admission into and promotion within which is based on personal achievement" (p. 164). Social organization is based on clans, the structure of which he hypothesizes prevented the formation of age sets: "large lineages or clans whose members have rights to territories and whose leaders have political, administrative, or judicial functions. Where such strong particularistic sub-units existed, they made the kingdom less centralized and hindered the formation of age-sets by militating against their universalistic value." Taylor (2017) also describes the kin and clan-based social structure in depth.

Banyole The Banyole social structure is based predominately on extended family and clans. Whyte (1984) provides an extended discussion of the Banyole clan structure, and makes no mention of age sets or age-based social groupings. Lamony (2007, p. 55) notes that the Banyole social organization was "based on clans and clan leaders" and the main parts of social and political life in society consisted of "(a) the immediate family (b) the extended family (c) the elders, and (d) the clan committees."

Banyoro The Banyoro are organized on the basis of kinship, and descriptions of their social organization make no mention of age sets or age-based institutions. Clans are paramount. Taylor (2017) writes, "Clan membership provides a way of categorizing the whole universe of persons likely to be encountered by a man during his lifetime. Everyone was a member of his own clan, or of a clan to all members of which he stood in a particular kinship or affinal relation, or of a clan with a member of which he or one of his agnates had entered into a blood pact, or of a clan to which he was not related in any way" (p. 24). He continues, "Agnation and the unilineal descent principle are of great importance in the Nyoro kinship system and are implicit in all other categories of kin relationships" (p. 25).

Basamia The Samia are organized based on a system of clans and age distinctions are not important. Cattell (1989) notes that age is not an important concept among the Samia and "many people have only a vague sense of their chronological age" (p. 229). The Samia were traditionally organized into villages and the "village world was one of kinship and a very local orientation." Traditionally the Samia were organized with the "diffuse political leadership of numerous clans and shifting subtribe alignments" (p. 233). Lamony (2007) further notes that social organization was "based on clans and clan leaders"' and that the main social organizations were "(a) the immediate family (b) the extended family (c) the elders, and (d) the clan committees."

Basoga The Soga have no age sets and are organized based on clans and a lineage structure. Ochieng (2002) notes that the Soga "had apparently neither circumcision nor age groups" (p. 24). Fallers (2017) describes the clan-based structure of the Soga: "In general, kinship and local group institutions were very similar to those of Buganda [see above], but a few of the more important differences may be noted...Clans were smaller and more numerous than in Buganda; within the area of a few contiguous

villages, Fallers counted more than 150. Several clans may have the same totem, suggesting that fission has not been uncommon. Internally, Soga clans were segmented, but all segments were known by the term nda (literally "inside") together with an eponym" (p. 59).

Batoro Toro social organization is based on clans, which determine the pattern of social interaction as well as status. Taylor (2017) describes the clan system of the Toro in depth: "The principle of clanship is still important as a principle of orientation and interaction. Clan members derive a sense of status from their membership of their particular clan. They feel obliged to be hospitable to, and to aid, one another. In non-royal clans they are careful not to intermarry with any clan member, however distantly related. They feel that it is advisable for property to remain as far as possible within the clan" (p. 51).

Iteso The Iteso have a well-defined age set system. McClusky (2013) contrasts the Iteso with the Baganda: "Another element of sociopolitical organization present among the Iteso, yet absent among the Baganda, was the age-grade system" which led to "clearly demarcated" groups of people based on age (p. 257). Gulliver and Gulliver (2017) write about the prominence of the age set system in Iteso life, noting that the Iteso "divide up the whole of natural existence into categories which are related to the qualities and powers of each age set" (p. 26). Each age set was in charge of a different domain of the natural world and was responsible for it. Tesoland had a "flourishing age set system" that involved the initiation of boys "every one to four years" (p. 25).

Jie The Jie have a well-defined age set system that governs social relationships among members of the group. Foner and Kertzer (1978) list the Jie among a set of societies with prominent age set systems (p. 1088). Initiation takes place at the onset of adulthood and is divided by region. Gulliver and Gulliver (2017) describe the initiation process: "Each man is initiated in his own homestead where elders and spectators collect. The initiate spears a castrated animal in the central cattle kraal. The first brother spears an ox, the second a he-goat, and the third an ox and so on. The speared animal is opened up by the elders and the undigested stomach contents smeared on the initiate with blessings. The initiate now joins publicly in the ceremonial feast of his animal, taking his place with his age-set members at the settlement's ritual grove" (p. 46). They also describe the age set system more broadly: "A generation becomes divided into about three age-classes or sections which are again divided into three or more age-sets. The age-set is the basic group, consisting of men initiated in one to three wet seasons. The name of a new age-set is chosen and given by the most senior men of the tribe at the time" (p. 44). Classification into an age set happens to all boys at birth (p. 46).

Jonam The Jonam do not have age sets and are organized on the basis of segmented lineages. They are described by Southall (2004) as an offshoot of the larger Alur ethnic group, and their social organization closely matches that of the Alur (see above).

Kakwa The Kakwa have a system of age sets. The Minority Rights Group (2020) writes that the Kakwa social organization is very similar to the Iteso (see above) and Karamojong (see below) and is

based on age sets. Shinn and Ofcansky (2013) also note that the "Karo social organization is based on consolidated age groups" (p. 242). The Kakwa are a sub-group of the larger Karo people.

Karamojong The Karamojong have a well-defined system of age sets that govern social and political relationships, more so than any other social form. Dyson-Hudson (1963) writes, "Adult male Karamojong are recruited into named corporate groups of coevals, termed ngasapaneta or ngasapanisia, and are here spoken of as age sets. [...] An age set has members...who are equally uniformly identified by a single shared name, community of status, and a collective role" (p. 358, 376). He concludes that "the general significance of the age system for Karamojong society is, I suggest, that it establishes ranking, coordinates activity by large groups, and provides a sense of political and social continuity, all of which have great utility but none of which is effectively provided by other institutions" (p. 397). Age sets are thus the primary social grouping in Karamojong society.

Kumam The Kumam have a system of age sets. Wetherby (2012) notes that the structure of the Kumam economy was based on age sets. Gulliver and Gulliver (2017) describe the Kumam as a small tribe that is most closely related in terms of economic and social structure to the Teso, who "divide up the whole of natural existence into categories which are related to the qualities and powers of each age set" (p. 26). Each age set was in charge of a different domain of the natural world and was responsible for it. Tesoland had a "flourishing age set system" that involved the initiation of boys "every one to four years" (p. 25).

Lango The Lango have a well-defined age set structure. Eisenstadt (1954) includes the Lango in a list of acephalous tribes whose main social form is age sets. Butt (2017) describes the age set system in detail. Every boy is initiated into the age set system in a major ceremony: "The ewor festival occurs in November at three different localities, in three of the four divisions of Langoland. [...] All the young men, who have reached puberty and have not yet been initiated, gather at the assembling place for their district and with them are the old men whose group year it may be. The old men spend three days teaching the initiates their social duties, the traditions of the Lango tribe and the mysteries of rain-making - together with the rain-dances and songs appertaining to their group. The initiates are secluded from the rest of the people and during this period there is a suspension of all hostilities within Langoland. Any breaker of the peace is killed, and his village is burned. Sexual intercourse is forbidden during this period. On the fourth day the initiates return to the village after certain cleansing rites. The old men perform rituals and the ewor festival is completed. All the initiates take as their group the one which is in charge of the rain-making for that year, irrespective of their father's group" (p. 97). The initiation ceremony and period of isolation is intended to generate a sense of solidarity among members of the same age set.

Lendu The Lendu do not have an age set system and are instead organized into clans, each of which is ruled by a chief. Southall (2004) writes, "There is no trace of any age set organization even to the extent of names for initiation sets" (p. 166). Baxter and Butt (2017) note that there is no ritual marking puberty or circumcision ritual. Instead, boys are circumcised at a young age and "without

ceremony" (p. 127). Baxter and Butt (2017) also describe the clan-based social structure in depth: "Councils of elders of families, villages, sub-clans, and clans operate in their respective spheres as courts of law...There is no centralized political authority, the country being divided up into a number of autonomous chiefdoms...Chiefs are said to be hereditary in clans and sub-clans, although they can sometimes, apparently, name their own successors" (p. 127).

Lugbara The Lugbara do not have age sets and are instead organized around a set of segmentary lineages. Weeks (1973) describes the "absence of distinct culturally defined points of transition from youth to adult (such as circumcision or initiation)" and compares the Lugbara to the Baganda in this respect (p. 297). Thus there is a complete absence of any age-based ritual. Middleton (1960) describes the semgmentary lineage structure of the Lugbara, in which lineage and clan ties are paramount for determining social status and organization. For example: "The traditional pattern of settlement was of clusters of villages, the majority of which were almost always related patrilineally as members of a sub-clan of some eight to twelve generations. The group was internally differentiated into villages, each based upon a patrilineal lineage" (p. 447).

Madi The Madi do not have an age set system. Clans are paramount in their social organization. Baxter and Butt (2017) describe the social organization as based on clans and lineages, with no mention of age sets; for example: "The smallest social and political unit is the household, consisting of a man and his wives and young children, and frequently also some of the married children and younger brothers. [...] About 50 homesteads make up a kaka, or lineage, an exogamous group administered by its senior member and a number of elders (amba eidri), each of whom is responsible for a group of homesteads. The kaka is a corporate body, collectively responsible for the actions of its members. The kaka head has few coercive powers and is the voice, rather than the leader, of his lineage" (p. 117). Individuals primarily identify as members of their clan. Middleton (1955) similarly describes the clan-based structure of identification in details and does not observe any age set structure.

Pokot The Pokot have a well-defined age set structure. Eisenstadt (1954) includes the Pokot in a list of acephalous tribes whose main social form is age sets. Petistany (1951) describes the age set structure of the Pokot in depth throughout his article; the start of adulthood is marked by circumcision with members of ones age group as a form of initiation. Petistany (1951) concludes, "The age sets of the Pokot are as clearly differentiated as those of the other Nandi-speaking tribes of Kenya" (p. 189).

Sabiny The Sabiny have a system of age sets and a major initiation ceremony when individuals become adults and members of their age set. De Wolff (1980) descibes the age set system: "[T]he Sebei [Sabiny], a Kalenjin group on the northern flank of Mount Elgon, had an age-set system similar to that of other Kalenjin. Typically all boys who are circumcised during a certain period form one named age-set. [...] Members of the same age set often change their age group together" (p. 307). Goldschmidt (1967) speaks to the crucial importance of initiation and age set bonds; he writes that "the most important ritual event [is the] periodic initiation of young men and women...culminating in

a highly secret rite in which the neophytes are given instruction in the magical practices of everyday life and are admitted into their age-set" (p. 28). The initiation ritual "also has the function of placing the individual, as a member of a particular age set, in an affiliation that remains throughout life."

So (Tepeth) Foner and Kertzer (1978) list the So in a table of ethnic groups with developed age set systems (p. 1088). They note that the So system is most closely related to the Jie, which is described in detail above.

A.1.3 Groups Included Only to Construct Figure 1

Embu Saberwal (1970) describes the age set system of the Embu in detail. Men are organized into age-based social groups that are initiated together after a circumcision ritual. For example, he notes, "Some weeks or months after his circumcision a warrior learned the name of his age set. For a new and inexperienced member, his age-set was probably important and largely determined his interactional patterns" (p. 30). Solidarity was encouraged within the age set to generate a "corporate mentality" and several practices reinforced the solidarity; for example, Saberwal writes, "Presumably to strengthen age-set solidarity, men were prohibited from dancing with or marrying age-mates' daughters. [...] [I]f a man did in fact marry an age-mate's daughter, the penalty was probably variable, separation being required in some of the cases" (p. 33). The age set structure of the Embu is also described by Middleton and Kershaw (2017), who write that it is similar in nature to that of the Kikuyu, which is described in detail below.

Kalenjin De Wolff (1980) describes the age set structure of the Kalenjin in detail; age sets formed following a circumcision ritual and men proceeded through phases of life with their age group. Age groups were also used to organize men in battle. In particular, De Wolff (1980, p. 307) writes, "Typically all boys who are circumcised during a certain period form one named age-set. [...] Members of the same age set change their age group together." Moreover, the age set system of the Kalenjin even spread to other smaller groups in the region because it was known to be a "good organization for warfare and raiding." Daniels (1982) describes the age set system of the Kalenjin in an extended article describing coordination, solidarity, and exchange between members of Kalenjin age sets.

Kamba The Kamba age system is described by Middleton and Kershaw (2017) as a key social form that determines how men move through the lifecycle and their role at each stage of life. For example, they write, "There are institutionalized age-grades among the Kamba, the more senior of which have political and ritual functions. [...] A male child is known as kaana...kivisi denotes an uncircumcised boy who can herd goats; kamwana, a circumcised boy who is old enough to dance but has not yet reached puberty. After puberty he may become mmanake, a warrior; he may marry and have children, but may not drink beer. Later he becomes nthele, a married man with children who no longer dances, and pays a fee of one to three goats to the anthele on being promoted. There are various types of warrior, differentiated by the role played in warfare."

Kikuyu The Kikuyu have a rigid age set system that begins following a circumcision ritual and period of isolation of adolescent boys. Age sets are described as the key source of social cohesion. Each age set has its own name and sense of group identity, and boys (and girls) initiated into the same age set move through the phases of life together. Middleton and Kershaw (2017) write that "The Kikuyu have two important institutions. [...] They are the age-sets and the generation-sets, both called marika. The component parts of the age-sets, the circumcision years, are also called marika. It is probable that the marika are the most effective forms of tribal cohesion. [...] The age-sets are named, corporate groups, with leaders and fixed membership recruited between defined times and for a specific period and purpose. [...] Each group of boys (and/or girls) circumcised together acquires their own name; during the years following they meet other such named groups in competitive dancing displays; the name of the group which acquires most honour becomes the name of the set as a whole, and after some time the initial names of the smaller groups are forgotten" (p. 35).

Kisii The Kisii do not have age sets and their dominant form of organization are segmented lineage and clan groups, which determine patterns of allegiance as well as residence. Middleton and Tait (2013) describe the Kisii as a "segmentary lineage society," in which kin networks and the lineage structure are the key components of social structure. Age-based social organizations are not mentioned. Similarly, Levine (2013) describes the clan structure as the main form of social organization and does not mention age sets; he writes, "Each clan was divided and subdivided into segmentary lineages which were, for the most part, highly localized and governed by informal councils of elders" (p. 63). Clans and lineages were localized and formed the "framework of community organization."

Luhya The Luhya have a structured age set system. Simiyu (1991) describes this system in detail, which involves "mass circumcision" rituals during initiation periods (p. 134); Simiyu (1991) also lists the names of each age set at the time of study (p. 135), reinforcing the fact that the age system was well defined. Mayende (2022) studies the origins of the Babukusu age set system (a sub-group of the Luhya); he writes that the circumcision ritual, which initiates age set members, has been "practiced for ages" and "contains a myriad of rituals constituting coded significant values and norms both to the initiates and the community" (p. 206). Each circumcision group is given a separate name and unique identity based on the events that occurred during the year of the initiation ceremony (p. 208)

Luo The Luo do not have age sets and are instead organized around clans. Butt (1952) writes about the Luo that "[t]here are no indigenous age classes" (p. 169). Instead, she describes that the main social structure is based on clans formed from segmented lineages: "Each Luo tribe has a dominant clan or lineage. The clan has a lineage structure and lineages are differentiated by adding to the name of the clan or larger lineage name and the individual name of the smaller branch. [...] The relationship between kinship and territorial units seems to follow closely the pattern found in other Nilote tribal groups" (p. 110).

Maasai Maasai social organization is based on an age set system. Some discussion of Maasai age sets is provided in the main text in Section D. Huntingford (2017) also describes the Maasai age structure, which he argues was initially designed for armed conflict, in depth: "The main function of the age-sets was to provide a permanent source of man-power for fighting. [...] An attitude of respect is required of junior to senior age-sets, while between members of the same set there is a relationship of equality and a sense of solidarity in their relations with other sets. Membership of a set also involves restrictions on both pre-marital and marital relations, of which mention has already been made (p. 119). There is an initiation period in which individuals entering the same age set are excluded from the group for an extended period of time. During the initiation period, members of Maasai age sets "cultivate and parade an ethos of sharing," which is characterized by "an excessive display of 'group indulgence,' opposed to any suggestion of self interest" (Spencer, 2014, p. 45).

Meru Middleton and Kershaw (2017) describe the Meru as having a similar organization structure, including age system, to the Kikuyu, who are described in detail above. Holding (1942) discusses the Meru age set system in depth, including solidarity among age sets and the existence of initiation rituals. He writes, "The most significant feature of the Meru tribal organization is the intricate system of age grades which cuts across family and clan loyalties, and which originally provided both the group of warriors who were responsible for the defense of the country and the group of elders who had administrative power. [...] Men who were circumcised within a certain period of time are considered to belong to the same generation," each of which has its own name and specific identity (p. 59)

Taita/Taveta The Taita/Taveta have a well-documented age set structure for both men and women, involving an initiation ceremony and a period of isolation to facilitate bonding among members of each age set (Prins, 2017). Prins (2017) writes, "The system of age sets is known by the Bantu word irika [which refers to] any one of the successive age sets or groups of boys initiated together. [...] Boys who enter the bachelors' hut (garo) at the same time constitute one body, called wagaro. Entry into the garo follows an initiation ceremony (mwari) which takes place at the onset of adolescence and lasts about a week" (p. 124).

Pokomo The Pokomo have a conserved system of age sets, involving an initiation ceremony and a period of isolation to encourage bonding among the age set members. Members of Pokomo age sets even live together for extended periods of time between initiation and the age of marriage. Prins (2017) writes, "The tribal organization is similar to that of the Nyika...the system of age sets being known by the Gaua name luva...Boys who enter the young men's house (gane; nyumba ya worani) at the same time constitute a luva. From their entrance into the gane until they leave it on marriage, i.e. between the ages of c.14 or 15 and c.25-30 they are known as worani" (p. 24).

Iteso The Iteso have an age set system McClusky (2013) contrasts the Iteso with the Baganda: "Another element of sociopolitical organization present among the Iteso, yet absent among the Baganda, was the age-grade system" which led to "clearly demarcated" groups of people based on age (p. 257).

Gulliverand Gulliver (2017) write about the prominence of the age set system in Iteso life, noting that the Teso "divide up the whole of natural existence into categories which are related to the qualities and powers of each age set" (p. 26). Each age set was in charge of a different domain of the natural world and was responsible for it. Tesoland had a "flourishing age set system" that involved the initiation of boys "every one to four years" (p. 25).

Additional Groups The Somali, Turkana, Samburu, Borana, Gabra, and Rendille are also included in the Kenya's DHS survey. The source material corresponding to those groups is in Table A1 and the groups are described in Section A.1.1.

Table A1: Identifying Age Set Societies: Kenya's Hunger Safety Net Program

Ethnic Group	Share of HSNP Sample	Agesets	References
Borana	12.26	Yes	Legesse, Asmarom. *Gada: Three approaches to the study of African society.* New York: Free Press, 1973.; Tagawa, Gen. "The Logic of a generation-set system and age-set system: Reconsidering the structural problem of the Gadaa System of the Borana-Oromo." Nilo-Ethiopian Studies 2017.22 (2017): 15-25.
Burji	1.78	No	Amborn, Hermann, and Ruth Schubert. "The contemporary significance of what has been. Three approaches to remembering the past: Lineage, gada, and oral tradition." History in Africa 33 (2006): 53-84.; Debelo. (2012). Emerging Ethnic Identities and Inter-Ethnic Conflict: The Guji-Burji Conflict in South Ethiopia. Studies in Ethnicity and Nationalism, 12(3), 517?533.
Gabra	5.49	Yes	Tablino, Paolo. *The Gabra: camel nomads of northern Kenya.* No. 4. Paulines Publications Africa, 1999.; Shun, S. A. T. O. "The Rendille subsistence groups based on age-system." African study monographs, supplementary issue 3 (1984): 45-57.
Garre	7.31	No	Beaman, Anne W. The Rendille age set system in ethnographic context: adaptation and integration in a nomadic society. Diss. 1981; Lewis, Ioan M. "Force and fission in northern Somali lineage structure." American Anthropologist (1961): 94-112.; Lewis, Ioan Myrddin. A Pastoral Democracy: a study of pastoralism and politics among the northern Somali of the Horn of Africa. James Currey Publishers, 1999.
Rendille	8.56	Yes	Spencer, Paul. Nomads in alliance: symbiosis and growth among the Rendille and Samburu of Kenya. Oxford University Press, 2012.; Stewart, Frank Henderson. "Fundamentals of Age-Group Systems." (1977).; Beaman, Anne W. The Rendille age set system in ethnographic context: adaptation and integration in a nomadic society. Diss. 1981.; Handley, Carla S., "Notes and Interview Transcripts from Northern Kenya," 2009. Field Notes.; Shun, S. A. T. O. "The Rendille subsistence groups based on age-system." African study monographs, supplementary issue 3 (1984): 45-57.
Samburu	2.87	Yes	Spencer, Paul. Nomads in alliance: symbiosis and growth among the Rendille and Samburu of Kenya. Oxford University Press, 2012.; Handley, Carla S., "Notes and Interview Transcripts from Northern Kenya," 2009. Field Notes.

Table A1 Continued: Identifying Age Set Societies: Kenya's Hunger Safety Net Program

Ethnic Group	Share of Sample	Agesets	References
Somali	35	No	Beaman, Anne W. The Rendille age set system in ethnographic context: adaptation and integration in a nomadic society. Diss. 1981.; Lewis, Ioan M. "Force and fission in northern Somali lineage structure." American Anthropologist (1961): 94-112.; Lewis, Ioan Myrddin. A Pastoral Democracy: a study of pastoralism and politics among the northern Somali of the Horn of Africa. James Currey Publishers, 1999.
Turkana	26.54	Yes	Gulliver, Philip H. "The Turkana age organization." American Anthropologist 60.5 (1958): 900-922.; Handley, Carla S., "Notes and Interview Transcripts from Northern Kenya," 2009. Field Notes.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.

Table A2: Identifying Age Set Societies: Uganda's DHS

Ethnic Group	Share of Sample	Agesets	References
Acholi	5.84	Yes	Butt, Audrey. The Nilotes of the Sudan and Uganda: East Central Africa Part IV. Routledge, 2017.; Whitmire, Leslie. The creation and evolution of the Acholi ethnic identity. Clemson University, 2013.
Alur	2.95	No	Southall, Aidan William. Alur Society: A Study in Processes and Types of Domination. LIT Verlag MÃŒnster, 2004.; Butt, Audrey. The Nilotes of the Sudan and Uganda: East Central Africa Part IV. Routledge, 2017.
Baganda	13.16	No	McCluskey, Kathleen A. Life-Span Developmental Psychology: Historical and Generational Effects. Elsevier, 2013.; Fallers, Margaret Chave. The Eastern Lacustrine Bantu (Ganda, Soga): East Central Africa Part XI. Routledge, 2017.; Ochieng, William Robert. Historical Studies and Social Change in Western Kenya: Essays in Memory of Professor Gideon S. Were. East African Publishers, 2002.
Bagisu	5.36	No	De Wolf, J. J. âThe Diffusion of Age-Group Organization in East Africa: A Reconsideration.â Africa: Journal of the International African Institute 50, no. 3 (1980): 305â10. https://doi.org/10.2307/1159121.; La Fontaine, Jean Sybil. The Gisu of Uganda: East Central Africa Part X. Routledge, 2017.
Bakiga	7.67	No	Taylor, Brian K. The Western Lacustrine Bantu (Nyoro, Toro, Nyankore, Kiga, Haya and Zinza with Sections on the Amba and Konjo): East Central Africa Part XIII. Routledge, 2017.
Banyankore	9.12	No	Elam, Yitzchak. âFamily and Polity in Ankole: The Hima Household and the Absence of Age Sets.â Ethnology 14, no. 2 (1975): 163â71. https://doi.org/10.2307/3773087.; Taylor, Brian K. The Western Lacustrine Bantu (Nyoro, Toro, Nyankore, Kiga, Haya and Zinza with Sections on the Amba and Konjo): East Central Africa Part XIII. Routledge, 2017.
Banyole	1.69	No	Lamony, Stephen Arthur. âApproaching National Reconciliation in Uganda: Perspectives on Applicable Justice Systems.â Ugandan Coalition of the International Criminal Court, 2007; Banyole also described as similar in structure to the Basamia, who do not have age sets (see Samia); Whyte, Michael A., and Susan Reynolds Whyte. "Peasants and Workers: The Legacy of Partition Among the Luyia-Speaking Nyole and Marachi." Journal of the Historical Society of Nigeria 12.3/4 (1984): 139-158.
Banyoro	3.29	No	Taylor, Brian K. The Western Lacustrine Bantu (Nyoro, Toro, Nyankore, Kiga, Haya and Zinza with Sections on the Amba and Konjo): East Central Africa Part XIII. Routledge, 2017.

Table A2 Continued: Identifying Age Set Societies: Uganda's DHS

Ethnic Group	Share of Sample	Agesets	References
Basamia	1.5	No	Sokolovsky, Jay. The Cultural Context of Aging: Worldwide Perspectives. Praeger, 2009.; Lamony, Stephen Arthur. "Approaching National Reconciliation in Uganda: Perspectives on Applicable Justice Systems." Ugandan Coalition of the International Criminal Court, 2007; Cattell, Maria G. "Knowledge and social change in Samia, Western Kenya." Journal of Cross-Cultural Gerontology 4.3 (1989): 225-244.
Basoga	6.27	No	Ochienga, William Robert. Historical Studies and Social Change in Western Kenya: Essays in Memory of Professor Gideon S. Were. East African Publishers, 2002.; Fallers, Margaret Chave. The Eastern Lacustrine Bantu (Ganda, Soga): East Central Africa Part XI. Routledge, 2017.
Batoro	2.7	No	Taylor, Brian K. The Western Lacustrine Bantu (Nyoro, Toro, Nyankore, Kiga, Haya and Zinza with Sections on the Amba and Konjo): East Central Africa Part XIII. Routledge, 2017.
Iteso	8.85	Yes	McCluskey, Kathleen A. Life-Span Developmental Psychology: Historical and Generational Effects. Elsevier, 2013.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.
Jie	0.66	Yes	Foner, Anne, and David Kertzer. "Transitions Over the Life Course: Lessons from Age Set Societies." American Journal of Sociology 83, no. 5 (1978): 1081-1104.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.
Jonam	0.26	No	Southall, Aidan William. Alur Society: A Study in Processes and Types of Domination. LIT Verlag MÃŒnster, 2004; Also, sub-division of Alur, which do not have age sets (see Alur)
Kakwa	0.37	Yes	Minority Rights Group. âUganda.â Accessed November 10, 2020. https://minorityrights.org/country/uganda/.; Shinn, David H., and Thomas P. Ofcansky. Historical dictionary of Ethiopia. Scarecrow Press, 2013.
Karimojong	1.53	Yes	Dyson-Hudson, Neville. âThe Karimojong Age System.â Ethnology 2, no. 3 (1963): 353â401. https://doi.org/10.2307/3772867.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.
Kumam	0.87	Yes	Weatherby, John M. The Sor Or Tepes of Karamoja (Uganda): Aspects of Their History and Culture. Ediciones Universidad de Salamanca, 2012; Also described as closely related socials structure to Karimojong, who have age sets.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.

Table A2 Continued: Identifying Age Set Societies: Uganda's DHS

Ethnic Group	Share of Sample	Agesets	References
Lango	7.01	Yes	Adt, S. N. Eisenst. âAfrican Age Groups: A Comparative Study.â Africa: Journal of the International African Institute 24, no. 2 (1954): 100â113. https://doi.org/10.2307/1156134.; Butt, Audrey. The Nilotes of the Sudan and Uganda: East Central Africa Part IV. Routledge, 2017.
Lendu	0.04	No	Southall, Aidan William. Alur Society: A Study in Processes and Types of Domination. LIT Verlag MÃŒnster, 2004.; Baxter, Paul Trevor William, and Audrey Butt. The Azande and Related Peoples of the Anglo-Egyptian Sudan and Belgian Congo: East Central Africa Part IX. Routledge, 2017.
Lugbara	2.91	No	Weeks, Sheldon G. âYouth and the Transition to Adult Status: Uganda.â Journal of Youth and Adolescence 2, no. 3 (September 1, 1973): 259â70. https://doi.org/10.1007/BF02213861.; Middleton, John. "Social Change among the Lugbara of Uganda." Civilisations (1960): 446-456.
Madi	1.08	No	Mtodleton, John. âNotes on the Political Organization of the Madi of Uganda.â African Studies 14, no. 1 (1955): 29â36.; Baxter, Paul Trevor William, and Audrey Butt. The Azande and Related Peoples of the Anglo-Egyptian Sudan and Belgian Congo: East Central Africa Part IX. Routledge, 2017.
Pokot	0.36	Yes	Adt, S. N. Eisenst. âAfrican Age Groups: A Comparative Study.â Africa: Journal of the International African Institute 24, no. 2 (1954): 100â113. https://doi.org/10.2307/1156134.; Peristiany, Jean George. "The age-set system of the pastoral Pokot: the Sapana initiation ceremony." Africa 21.3 (1951): 188-206.
Sabiny	0.61	Yes	Goldschmidt, Walter. Sebei Law. University of California Press, 1967.; De Wolf, J. J. ?The Diffusion of Age-Group Organization in East Africa: A Reconsideration.? Africa: Journal of the International African Institute 50, no. 3 (1980): 305?10. https://doi.org/10.2307/1159121.
So (tepeth)	0.03	Yes	Foner, Anne, and David Kertzer. âTransitions Over the Life Course: Lessons from Age Set Societies.â American Journal of Sociology 83, no. 5 (1978): 1081â1104.

Table A3: Identifying Age Set Societies: Kenya's DHS (Groups Not Covered in Table A1, Only Used for Map)

Ethnic Group	Agesets	References
Embu	Yes	Saberwal, Satish. "The traditional political system of the Embu of central Kenya." (1970).; Middleton, John, and Greet Kershaw. The Kikuyu and Kamba of Kenya: East Central Africa Part V. Routledge, 2017.
Kalenjin	Yes	De Wolf, J. J. "The Diffusion of Age-Group Organization in East Africa: A Reconsideration." Africa: Journal of the International African Institute 50, no. 3 (1980): 305-10.; Daniels, Robert E. "The extent of age-set coordination among the Kalenjin." 25eme conference annuelle de l'African Studies Association, 1982.
Kamba	Yes	Middleton, John, and Greet Kershaw. The Kikuyu and Kamba of Kenya: East Central Africa Part V. Routledge, 2017.
Kikuyu	Yes	Middleton, John, and Greet Kershaw. The Kikuyu and Kamba of Kenya: East Central Africa Part V. Routledge, 2017.
Kisii	No	Middleton, John, and David Tait. Tribes without rulers: Studies in African segmentary systems. Routledge, 2013.; LeVine, Robert A. "The Gusii Family." The Family Estate in Africa: Studies in the Role of Property in Family Structure and Lineage Continuity 6 (2013): 63.
Luhya	Yes	Simiyu, Vincent G. "The Emergence of A Sub-Nation: A History of Babukusu to 1990." Transafrican Journal of History (1991): 125-144.; Mayende, Godfrey Banda. "Age-Set Systems Among the Babukusu of Western Kenya." EPRA International Journal of Multidisciplinary Research (IJMR): 206.
Luo	No	Butt, Audrey. "The Nilotes of the Anglo-Egyptian Sudan and Uganda." (1952).
Maasai	Yes	Huntingford, George Wynn Brereton. The Southern Nilo-Hamites: East Central Africa Part VIII. Routledge, 2017.
Meru	Yes	Middleton, John, and Greet Kershaw. The Kikuyu and Kamba of Kenya: East Central Africa Part V. Routledge, 2017.; Holding, E. Mary. "Some Preliminary Notes on Meru Age Grades." Man 42 (1942): 58-65.
Taita/Taveta	Yes	Prins, Adriaan Hendrik Johan. The Coastal Tribes of the North-Eastern Bantu (Pokomo, Nyika, Teita): East Central Africa Part III. Routledge, 2017.
Pokomo	Yes	Prins, Adriaan Hendrik Johan. The Coastal Tribes of the North-Eastern Bantu (Pokomo, Nyika, Teita): East Central Africa Part III. Routledge, 2017.
Iteso	Yes	McCluskey, Kathleen A. Life-Span Developmental Psychology: Historical and Generational Effects. Elsevier, 2013.; Gulliver, Pamela, and Philip Hugh Gulliver. The Central Nilo-Hamites: East Central Africa Part VII. Routledge, 2017.

A.2. Other Ethnicity-Level Characteristics

This section describes data on the ethnicity-level characteristics introduced in Section C and used as controls in our sensitivity analyses in Sections B.1 and B.3. Most of the variables are constructed from Murdock (1967)'s *Ethnographic Atlas*, a standard source of ethnicity-level ethnographic information. The data are publicly available and we downloaded the data set from Giuliano and Nunn (2018). We matched the full set of ethnic groups in our samples from both Kenya and Uganda (Tables A1 and A2) to the *Ethnographic Atlas* by hand and with the assistance of a cross-walk between ethnicity names in the DHS and *Ethnographic Atlas* provided by (Teso, 2019).

- **Election of Local Headman.** Coded from variable v72 in Murdock (1967)'s Ethnographic Atlas. We construct an indicator variable that equals 1 if v72=6 (that is, if succession to the office of local headman is determined by "election or other formal consensus, nonhereditary"). We also construct an indicator variable that equals 1 if v72=1 or v72=2 (that is, if the local headman is the "patrilineal heir" or "matrilineal heir")

- **Bride Price.** Coded from variable v6 and v7 in Murdock (1967)'s Ethnographic Atlas. All groups in the sample have bride price as the primary mode of marriage (v6 = 1 indicating 'bride price or bride wealth' is the primary source of marraige). Some groups have a secondary mode of marriage as well, indicated by v7!= 8 ('no alternate mode'). Therefore, we coded groups as having bride price as the only mode of marriage if v6 = 1 and v7!= 8.

- **Polygyny.** Coded from variable v9 in Murdock (1967)'s Ethnographic Atlas as an indicator variable that equals one if v9>2

- **Single Inheritor of Land.** Coded from variable v75 in Murdock (1967)'s Ethnographic Atlas as an indicator variable that equals 1 if v75 is equal to 2, 3, or 4 (exclusive, ultimogeniture, or primogeniture).

- **Women Do Not Inherit Land.** Coded from variable v74 in Murdock (1967)'s Ethnographic Atlas as an indicator variable that equals 1 if v74 is not equal to 4 or 5.

- **Patrilineality and Matrilineality.** Coded from variable v43 in Murdock (1967)'s Ethnographic Atlas as indicator variables that equals 1 when v43 = 1 ('patrilineal') or 3 ('matrilineal'), respectively.

- **Patrilocality and Matrilocality.** Coded from variable v12 in Murdock's Ethnographic Atlas as indicator variables that equals one when v12 = 8 ('patrilocal') or 5 ('matrilocal') respectively.

- **Cousin Marriage.** Coded from variable v24 in Murdock (1967)'s Ethnographic Atlas as indicator variables that equals one when v24 is not equal to 8 ('no first or second cousin marriages').

- **Plow Used.** Coded from variable v39 in Murdock (1967)'s Ethnographic Atlas as indicator variables that equals one when v39 is not equal to one.

- **Female Participation in Agriculture.** Coded from variable v54 in Murdock (1967)'s Ethnographic Atlas. We construct from v54 an indicator variable that equals one if women participate less than men in agricultural production.

- **Levels of Jurisdictional Hierarchy of the Local Community.** Variable v32 from Murdock (1967)'s Ethnographic Atlas. This variable takes integer values from 1–3.

- **Levels of Jurisdictional Hierarchy Beyond the Local Community.** Variable v33 from Murdock (1967)'s Ethnographic Atlas. This variable takes integer values from 1–5.

- **Settlement Complexity.** Variable v30 from Murdock (1967)'s Ethnographic Atlas. This variable takes integer values from 1–8 increasing in pre-colonial settlement complexity. The categories range from 'nomadic or fully migratory' (1) to 'complex settlements' (8).

- **Pre-colonial conflict.** We use historical conflict data from Besley and Reynal-Querol (2014) to construct an indicator that equals one for ethnic groups that experienced conflict between 1400 and 1700AD. Conflicts were linked to ethnic groups using the location of each conflict as mapped by Murdock (1959).

- **Pastoralism.** Constructed as in Becker (2019) as an interaction between the ethnic group's dependence on agriculture and an indicator that equals one if the group's predominant animal is a herding animal. Dependence on agriculture (measured as a share of total subsistence, between 0 and 1) is computed from v4 in Murdock's Ethnographic Atlas using the midpoint of each bin. The herding animal indicator is also constructed from Murdock's Ethnographic Atlas as an indicator that equals one if v40>2. The final variable ranges from 0–1.

- **Conflict.** Our primary source of conflict data is the *Armed Conflict Location and Event Data Project* (ACLED): `https://www.acleddata.com`. The data are coded from a variety of sources, including "reports from developing countries and local media, humanitarian agencies, and research publications" (`http://www.acleddata.com/about-acled/`). The database includes information on the location (latitude and longitude), date, and other characteristics of all known conflict events in Africa since 1997. We link each conflict to an ethnic group using the latitude and longitude of each conflict along with the ethnic group map from Murdock (1959). As an additional source of data, we also measure conflict using the *Uppsala Conflict Data Program* (UCDP): `http://ucdp.uu.se/#/exploratory`. The UCDP data also record the location of each conflict, which we link to ethnic groups in the sample using the same strategy. We accessed these data from (Michalopoulos and Papaioannou, 2016b) and are part of the replication package from (Michalopoulos and Papaioannou, 2016a).

A.3. Ethnicity-Level Correlates of Age Set Organization

Here, we examine the extent to which hypotheses about the origins and correlates of age set organization are born out in our sample of ethnicities from Uganda and Kenya, using the data set of ethnicity

level characteristics described in Section A.2. In particular, we investigate whether age set organization is correlated with characteristics designed to capture the several existing hypotheses about the origin and functions of age set organization, including: (A) conflict and herding, (B) political succession, (C) marriage and the role of women (see Section C). Additionally, we explore whether the existence of the age set practice correlates with pre-colonial economic and political development.

We report the estimates in Table A4 for the set of ethnic groups of our sample that we were able to match to the Murdock (1967) *Ethnographic Atlas*. We do not find evidence of systematic differences between societies with and without age set in our sample of ethnic groups from Uganda and Kenya. Panel (A) reports the relationship between age set organization and conflict, including conflict measured in the present day from two separate sources (the Armed Conflict Location & Event Data Project and the Uppsala Conflict Data Program) and pre-colonial conflict. We also find no evidence of a relationship with dependence on pastoralism.

Similarly, we find no relationship between in our sample between age set organization and political succession, measured as indicators for whether the local leader is elected or whether the local leader is a hereditary position (Panel B). We also find no relationship between age set organization and a range of potential measures of and proxies for features of marriage and the role of women in society (Panel C), including the presence of polygamy, bride price, female inheritance, cousin marriage, plow use, patrilocality, and female participation in agriculture. A range of potential covariates were *not* included in the table because there is no variation in our sample, further evidence that our sample consists of a comparable set of ethnic groups. Potentially relevant characteristics with no in-sample variation include: matrolocality, sex differences in animal husbandry, sex differences in the inheritance rule for moveable property, matrilineality, and patrilineality.

The one significant relationship that we find is between age set organization and political centralization, measured as the number of levels of jurisdictional hierarchy beyond the local community (Panel D). We find that age set societies are significantly less centralized; on average, there are 0.8 fewer levels of jurisdictional hierarchy on a scale of 1-5. This finding is possibly consistent with work on the role of cross-cutting ties in limiting political centralization, since the age sets serve as a check on the accumulation of political power (e.g. Bohannan, 1964). It is unclear *ex ante* why this relationship would bias our main estimates, and moreover this significant difference could be due to random chance; nevertheless, we are careful to control for the role of pre-colonial state centralization in our main analysis. All of our findings are robust to accounting for ethnicity-level variation in pre-colonial development.

The lack of major observable differences between societies with and without age sets is also consistent with a more recent view in anthropology that social structure diffuses in idiosyncratic ways and without an obvious set of causal determinants (e.g. Beckingham and Huntingford, 1954; Kelly, 1983; Hinew, 2012).[37] It is also consistent with recent hypotheses about "cultural mismatch," or the idea that particular cultural organizations formed historically to serve specific functions or in response to specific historical conditions, and then persist despite the fact that they no longer serve the same purpose and initial conditions have changed (Nunn, 2021)

[37] This evolutionary model is also consistent with recent evidence presented in Moscona et al. (2020).

A.4. Hunger Safety Net Program (HSNP) Evaluation

We use the full set of data from the baseline and first follow-up surveys from the randomized impact evaluation of Kenya's HSNP. The data are publicly available. A detailed description of the baseline survey, along with all data available for download, can be accessed here: https://datacatalog.worldbank.org/dataset/kenya-hunger-safety-net-programme-impact-evaluation-2009-2010. The same for the first follow up survey can be accessed here: https://datacatalog.worldbank.org/dataset/kenya-hunger-safety-net-programme-impact-evaluation-2010-2011.

In order to evaluate the HSNP, the government of Kenya, together with Oxford Policy Management, selected 48 sub-locations to conduct a randomized evaluation (a sub-location is a superset of villages). Each sub-location was assigned to either the treatment or control group. In the treatment group, transfer-eligible households were immediately given 2,500 KSh ($\sim$ 25 USD) every two months, corresponding to roughly 25% of average household income in the region. In control sub-locations, transfer eligibility was also determined but the actual transfers were withheld for two years.

Transfer eligibility in both the treatment and control groups was determined via one of three targeting mechanisms. The targeting mechanisms were community based targeting, in which the community selected households to get the transfers; dependency ratio targeting, in which households were selected based on characteristics of household health and nutrition; and a social pension program, in which households were selected on the basis of the number of household members over the age of 55. In our analysis of cohort spillover effects, we abstract from the targeting mechanisms and flexibly control for ethnicity-by-targeting mechanism fixed effects in our baseline specification. In our analysis of inter-generational transfers, we exploit the pension program targeting mechanism directly since it affected exclusively older individuals.

The HSNP baseline survey contains all the information necessary in order to construct the age cohort treatment variable, including the ethnicity (language group) of each household, the age of each household member, the treatment status of the sub-location, and the eligibility status of the household. In the analysis of within-cohort spillovers, we use total consumption and food consumption, both reported at the household level, as the dependent variables. In the analysis of inter-generational transfers, we use spending on education—reported at the household level—and measures of child-level nutrition—reported for all children under age five—as the dependent variables.

A.5. Uganda's Demographic and Health Surveys (DHS)

Our main source of data for the analysis of Uganda's pension program is the Demographic and Health Surveys (DHS). For our primary analysis, we use the 2016 round. We also use the 2006 round of the survey, which was collected prior to the introduction of the pension program, for our placebo analysis. The DHS surveys are publicly available. The data and all corresponding materials for the 2016 round can be found here: https://dhsprogram.com/methodology/survey/survey-display-504.cfm. The data and all corresponding materials for the 2016 round can be found here: https://microdata.worldbank.org/index.php/catalog/1514.

A.6. The Population of Age Set Societies

In this section, we describe our estimate of the number of people who are members of ethnic groups in which age sets are traditionally the dominant form of social organization. As discussed above, information on the presence or prominence of age sets is not available from existing ethnographic databases of Africa, including the Murdock (1967)'s *Ethnographic Atlas*. Therefore, in order to identify age set societies in sub-Saharan Africa as comprehensively as possible, we turn to the *Ethnographic Survey of Africa*, which is a series of qualitative studies edited by Daryll Forde and published between the 1940s and the 1970s by the International African Institute in London.

The *Survey* is comprised of fifty individual volumes, divided by region (Central Africa, East Central Africa, North Eastern Africa, Southern Africa, West Africa, and West Central Africa) and by ethnic group. Each entry contains detailed information about the social and political organization, religious beliefs, economic activity of the ethnic group, as well as the geography and ecology of the area they inhabit. The surveys were collected during the middle of the 20th century and therefore reflect how social and political organization functioned at the time. Therefore, we view the data collected from these volumes as measures of the *historical* characteristics of ethnic groups. The extent to which age set organization has persisted to the present is an empirical question, and we discuss this question at length in Section II.

In order to estimate the population of people who were traditionally members of age set organizations we followed a four steps process.

First, we went through all *Survey* volumes and developed a hierarchical list of ethnic groups. That is, we listed all ethnic groups, ethnic sub-groups (i.e. subdivisions of ethnic groups), ethnic sub-sub-groups, etc., that are covered by the *Survey*. We refer to the broadest category as the "Level 1" group and we refer to increasingly detailed sub-divisions as Level 2, Level 3, etc. This hierarchical structure is important to make sure that we do not double-count the population of ethnic groups that are, for example, sub-groups or super-groups of other groups discussed in the *Survey*.

Second, we determined whether or not age set organization was the dominant form of social organization for all ethnic groups in the list. We began with the most detailed ethnic sub-divisions from each book and then moved to larger sub-divisions if the information was too sparse at the most detailed level. In order to include a group in the list of age set societies, we required positive evidence that are sets were prevalent and that individuals feel a strong sense of obligation and allegiance to the age set, or that age sets (as opposed to the extended family) shaped local social structure and political organization. At the most detailed level of our hierarchical list of ethnic groups, this yielded 429 ethnic groups in which age sets were the dominant form of social organization, out of 1736 ethnic groups in our sample.

Third, we constructed the population estimate for the ethnic group in our sample using two different methodologies. For each ethnic group, we first scraped the population information contained in *The Joshua Project*, which reports ethnicity-level population for a broad set of African ethnicities. We then went through all un-matched groups and attempted to link each to modern census population estimates by hand. In total, we were able to find the population for at least one level of the group hierarchy for 62% of the groups in the sample. The full list of ethnic groups, along with the source of

population data for each group, is available upon request.

Fourth, we estimated the total population of all age set societies using an iterative process. We began with the Level 4 groups. If we had linked the Level 4 group to a population estimate, we defined that as the population of that Level 4 group; if not, we imputed the group population as the sum of the population of all Level 5 groups within the Level 4 group, knowing that this is likely to be an under-estimate. Next we turned to the Level 3 groups and (analogously) defined the population as the matched population if we had linked the group to a population estimate and, if not, imputed it as the sum of the population of all Level 4 groups within the Level 3 group for which we have population data. We repeated the same process for Levels 1 and 2. This process makes it possible to build as accurate a population estimate as possible, given the missing data at each level, while making sure that we do not double count groups that are sub-sets or super-sets of each other.

At the end of this process, we estimate that 209,568,576 individuals are members of societies in which age sets were the traditionally dominant form of social organization. While this estimate is likely imperfect, it underscores that age sets are a common feature of social organization in sub-Saharan Africa and are a dominant force in the lives and histories of a large population. Moreover, it is likely to be (if anything) an under-estimate, since the *Survey* has sparse coverage in some parts of the continent and since there were several age set societies that we were unable to match with reliable population estimates.

B. Detailed Description of Supplementary Results

B.1. Kenya's HSNP: Additional Controls

We document that the baseline finding of substantially larger within-cohort spillovers in age set societies is robust to controlling for a range of additional ethnicity-level characteristics. These results suggest that the distinction we find between age-based and kin-based organization is not driven by some other ethnicity-level characteristic. In particular, for ethnicity-level characteristic Z_e, we control directly for $\text{SCE}_{haev} \cdot \mathbb{I}_v^{\text{Treat}} \cdot Z_e$, as well as all of its components and double-interactions. If the effects on within-cohort spillovers were instead driven by variation in ethnicity-level characteristic Z_e, the finding would not be robust to the inclusion of these controls. Figure A4 reproduces our main estimates of $\gamma_1 - \gamma_2$ after accounting for several ethnicity level controls. First, we control in this way for language sub-family fixed effects (leftmost bar); this restricts our analysis of age-based and kin-based group to comparisons within a given language family, and also fully absorbs any differences across broader ethnic distinctions. Second, we control for fixed effects in state centralization (measured as levels of jurisdictional hierarchy beyond the local community) and development (measured as historical settlement pattern complexity) (middle column).[38] Finally, we include all ethnicity-level controls along with the full set of baseline household-level controls (rightmost column).

There is a range of ethnicity-level covariates that we do *not* control for because there is no variation within our sample after accounting for the baseline set of fixed effects. These include matrilo-

[38] In order to have as large a sample as possible, we also include a fixed effect for each variable that indicates when the value is missing in the *Ethnographic Atlas*.

cality, patrilocality, matrilineality, patrilineality, bride price customs, cousin marriage customs, and inheritance customs. Despite their potential importance for economic analysis (La Ferrara, 2007; La Ferrara and Milazzo, 2017; Lowes, 2018b,a; Schulz et al., 2019; Schulz, 2020; Bau, 2021), these features of society are constant in our sample.

Our measurement of each ethnicity-level characteristic is described in Appendix Section A.2.

B.2. Uganda's Senior Citizen Grant: Alternative Pension Exposure Measures

One possible shortcoming of our baseline measure is that it uses the 2016 household age distribution to retroactively estimate pension receipt during preceding years. To document that this feature of variable construction does not drive the results, we estimate a second exposure measure that only relies on the age distribution in 2016. We define:

$$\text{PPE}_h^{2016} = \sum_{i \in h} \mathbb{I}_{ih,2016}^{\text{Age65+}} \tag{6}$$

Our baseline estimates using this variable, reported in Table A13, capture only the impact of pension exposure in 2016, which we can measure directly. The results are very similar.

Another potential shortcoming of the baseline pension program exposure measure—which is likely to bias our main estimates downward—is that, for simplicity, our baseline exposure measure does not exploit variation in child age. We estimate a separate exposure measure that does take variation in child age into account; in particular, we define:

$$\text{PPE}_h^{\text{ChildAge}} = \sum_{t=2011}^{2016} \left[\left(\sum_{i \in h} \mathbb{I}_{iht}^{\text{Age65+}} \right) \left(\sum_{i \in h; i \text{ under } 5} \mathbb{I}_{iht}^{\text{Born After } t} \right) \right] \tag{7}$$

Our baseline estimates using this alternative pension exposure measure are also reported in Table A13 and again, the results are very similar.

B.3. Uganda's Senior Citizen Grant: Additional Controls

Here, we explore the robustness of our findings to the inclusion of a broad range of controls. These results are presented in Table A14. In column 1 we include fixed effects for the number of children under five in each household and the results remain the same. It is possible that differences in wealth between societies with and without age sets might affect the extent to which they invest financial windfalls in children. In column 2, we therefore control directly for a wide set of measures of household asset holding. These controls include indicators for the presence of electricity, radio, television, a refrigerator, a bicycle, a motorcycle, and a car or truck, as well as fixed effects for main floor material, main roof material, main wall material, the type of toilet facility, and the number of rooms used for sleeping. As an alternative strategy, in column 3 we control for fixed effects of the 5-point wealth index computed by the DHS. In both cases, the results are again very similar.

While in Table A4 we found little evidence of systematic differences between societies with and without age sets across a range of observable characteristics, we next show that the results are robust

to controlling for other important features of social and political organization. To account for an ethnicity-level characteristic Z_e, we include controls of the form $\text{PPE}_h \cdot \mathbb{I}_d^{\text{Pilot}} \cdot Z_e$; we also include all relevant double interactions and direct effects. In column 4 we control flexibly in this way for fixed effects in the number of levels of jurisdictional hierarchy beyond the local community and settlement pattern complexity, both measured from the *Ethnographic Atlas*; these are frequently used measures of historical political and economic development, respectively.[39] In column 5, we add controls for language group fixed effects, thus flexibly absorbing differences in each household's coarser language category. The estimates remain very similar.

An additional possibility is that the results are driven in part by the fact that different interviewers surveyed different ethnic groups, and that this introduces bias in survey measurement. Ideally, we would include interviewer fixed effects and show that the estimates are not sensitive to this additional control. Unfortunately, the Uganda DHS does not include a unique identifier for the interviewer, but we have information on the date of the interview. Hence, we address this concern, in column 6 by including a full set of interview month fixed effects and the estimates are again similar. Finally, in column 7 we include all controls from columns 1-6 in a single specification. Together, these results build confidence that our findings are driven by the effect of age set organization on inter-generational transfers, and not some omitted household or ethnicity-level characteristic.

B.4. Uganda's Senior Citizen Grant: Estimates that do Not Exploit Household Exposure

Our main analysis exploits differences across extended households in the number of pension recipients. Our triple-difference estimates allow for the inclusion of ethnicity-by-district fixed effects, which we view as important for isolating the effect of pension exposure on households with and without age sets. However, a potential shortcoming of our baseline specification (Equation 5) is that it could be potentially biased if the introduction of the pension program induces differential endogenous changes in household composition between members of societies with and without age sets.

There are several reasons why this should not be a major concern. First, we find that households with and without age sets are balanced across a range of observable measures of household composition in non-pilot districts, including the number and ages of older household members, the number of children, and the ratio between older household members to children (see Table A12, Panel A). These findings are consistent with the fact that even in age set societies, many families live in a series of linked compounds (*manyatta*) and as a result, multiple generations often reside in the same extended household. Second, in our main specification, we control for pension-exposure-by-age-set-organization fixed effects in order to directly and flexibly control for any differences in household composition across ethnic groups. Finally, based on ethnographic accounts, it seems unlikely *ex ante* that the pattern of selection biases the results in the direction of our finding; if anything, the opposite seems more likely. For our estimates to be driven by selection, it would have to be that the pilot program induces grandparents who feel *less* attached to their grandchildren in age set societies compared to societies without age sets to begin co-residing with grandchildren. If anything, since the

[39] In order to have as large a sample as possible, we also include a fixed effect for each variable that indicates when the value is missing in the *Ethnographic Atlas*. Our measurement of each ethnicity-level characteristic is described in Appendix Section A.2.

default in age set societies is that inter-generational ties are weaker, we would expect the pattern of selection to be the opposite.

Nevertheless, to investigate whether our findings are driven by our measured variation in household composition, we present estimates from an alternative specification that only exploits district and ethnicity-level variation, and hence does not depend on household composition. The estimating equation is:

$$y_{ih} = \beta \cdot \left(\mathbb{I}_d^{\text{Pilot}} \cdot \mathbb{I}_e^{\text{NoAgeSet}} \right) + \gamma \cdot \mathbb{I}_d^{\text{Pilot}} + \alpha_e + \mathbf{X}'\Gamma + \epsilon_{ih} \tag{8}$$

where i indexes individuals, h indexes households, and d and e represent the district of residence and ethnicity of household h. The coefficient β captures the effect of being in a pilot district (compared to non-pilot) district, in a kin-based society (compared to an age set society). Our hypothesis now is simply that in districts that receive the pension pilot, children from kin-based societies should be relatively better off on average. Our estimates of β are reported in Figure A9 and are qualitatively very similar to our baseline estimates, whether child nutrition is measured as the weight-for-height percentile or as an indicator that equals one if the child is below the fifth percentile. While these estimates are necessarily less precise since we rely on coarser variation, we estimate that $p < 0.1$ in all of the specifications and $p < 0.05$ in two thirds of the specifications. These estimates suggest that the baseline findings are not driven by endogenous shifts in household composition that differs between societies with and without age sets.

B.5. Uganda's Senior Citizen Grant: Older Children

This section investigates the impact of Uganda's pension program on outcomes for older children, separately in societies with and without age sets. We estimate versions of Equation 5 in which the dependent variable is either secondary school attendance or marriage status of children aged 15-18. Regression estimates are reported in Table A19 and tripe-difference estimates ($\beta_1 - \beta_2$), capturing the difference in the effect of the pension program in kin-based versus age-based societies, are reported in Figure A11. Figure A11 is structured in the same way as Figure 11 from the main text.

Mirroring our findings on primary school attendance, we estimate a positive effect on school attendance for boys in kin based societies and zero effect in age set societies (Table A19, column 1). The triple difference estimate, however, is less precise in this older sample and not statistically distinguishable from zero (Figure A11a, middle column).

Strikingly, we also find a significant *negative* effect of the pension program on school attendance for girls in kin-based societies (Table A19, column 3). The decline in girls' *schooling* can largely be accounted for by an increase in *marriage*—girls from households that receive pension grants are more likely to be married in kin-based compared to age-based societies (column 4). We find no effect on girls' education or marriage in age set societies, consistent with our findings throughout that children are unaffected by pension grants in age set societies. In the case of girls' education and marriage, the triple-difference estimates are highly statistically significant (Figure A11).

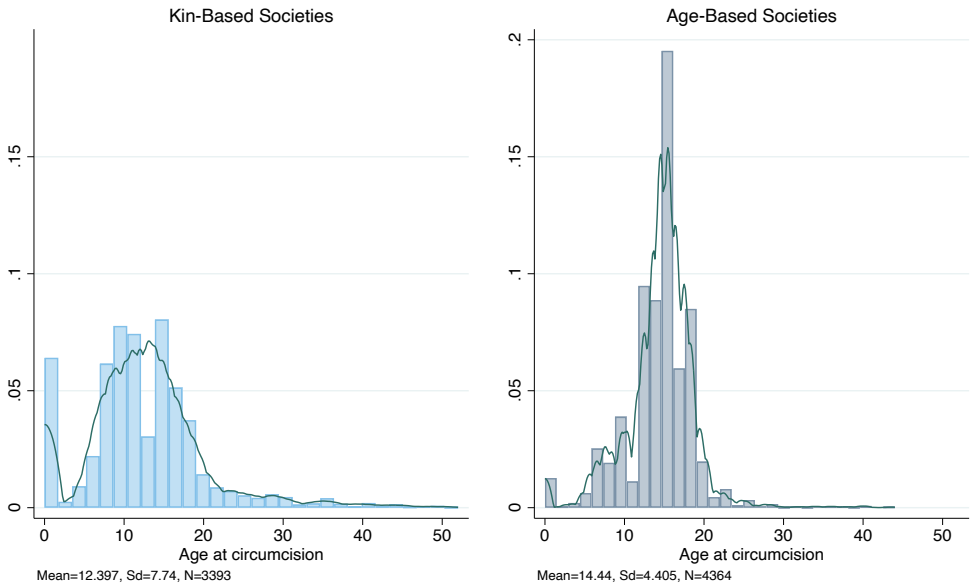
Marriage in rural Uganda is often arranged by a girl's household and extended family (Green et al., 2009, p. 5), and having married daughters is of substantial social importance. This is driven in part by the fact that early marriage prevents any stigma associated with a potential pre-marital

pregnancy and, according to many parents, limits the likelihood of HIV exposure (Green et al., 2009, pp. v, 12).[40] For the family, therefore, there is a trade off between the social value of having married daughters and the potential economic costs of losing household labor (Bantebya et al., 2014). Thus, it appears that when older members of households in kin-based societies receive pension grants, the influx of resources frees the family to marry daughters living in the household. This increases the likelihood that girls will be married (Figure A11b) and reduces the likelihood that they will be in school (Figure A11a).

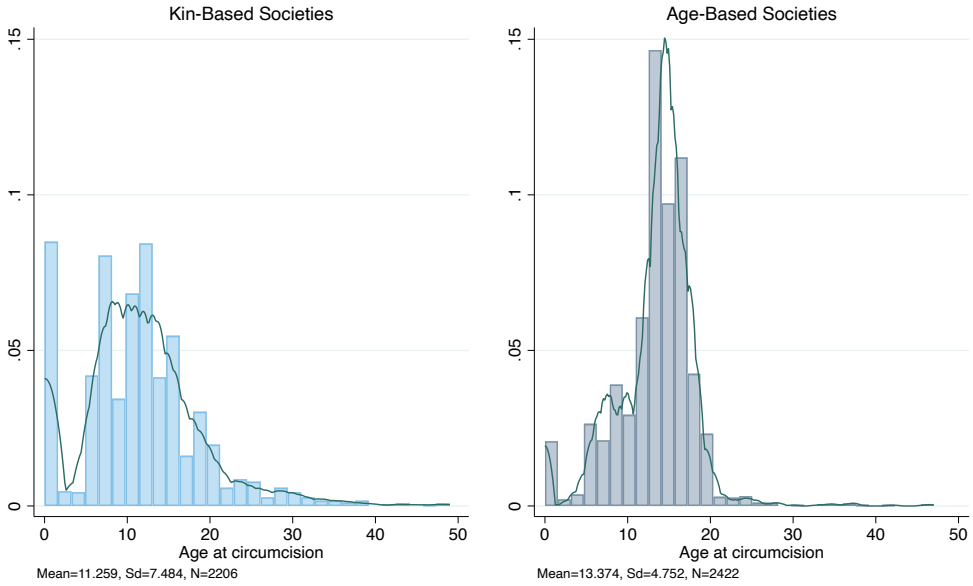
Thus, across all measurable forms of investment that older generations might make in younger generations when the pension program was introduced, we find strong evidence of inter-generational ties in kin-based societies but no evidence of such ties in age set societies. This pattern even seems to extend to older children (i.e., teenagers in secondary school and making marriage decisions).

[40] Among surveyed parents, early marriage for daughters was widely popular (Green et al., 2009, p. 5).

C. Supplementary Figures and Tables

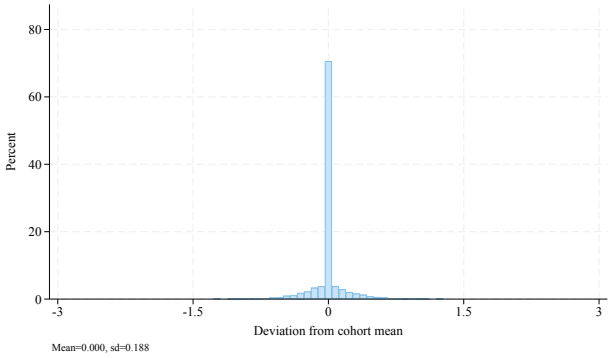


(a) Rural Sample

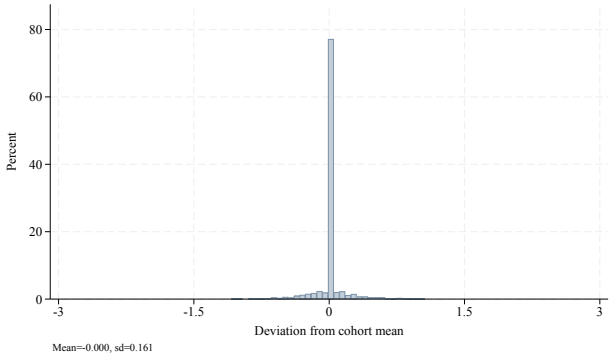


(b) Urban Sample

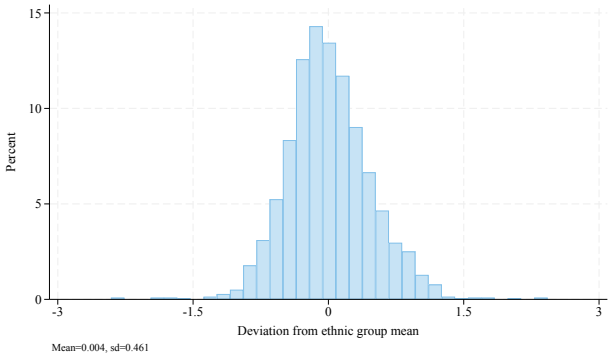
Figure A1: **Circumcision Age in Age Set and Kin-Based Societies: Rural vs. Urban.** Figure A1a displays the histogram of the age of circumcision for all males in the sample of rural households while Figure A1b displays the same for urban households. The mean and standard deviation of each distribution is reported at the bottom of each histogram. Data are from the 2014 and 2016 DHS surveys for Kenya and Uganda respectively.



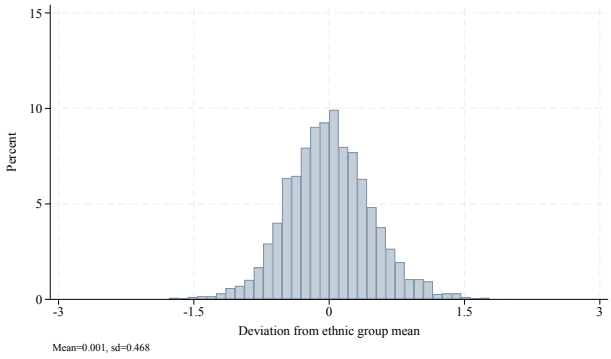
(a) Cohort Deviation: Kin



(b) Cohort Deviation: Age Set



(c) Outside Cohort Deviation: Kin



(d) Outside Cohort Deviation: Age Set

Figure A2: **Consumption Deviations: Age Set vs. Kin.** Figures A2b and A2a display the distribution of expenditure deviation from the main provider's age cohort average for members of societies with and without age sets. Figures A2d and A2c display the distribution of expenditure deviation from the average across members of the same village and ethnicity but outside the age cohort of the main provider for members of societies with and without age sets. Data are from the 2014 and 2016 DHS surveys for Kenya and Uganda respectively.

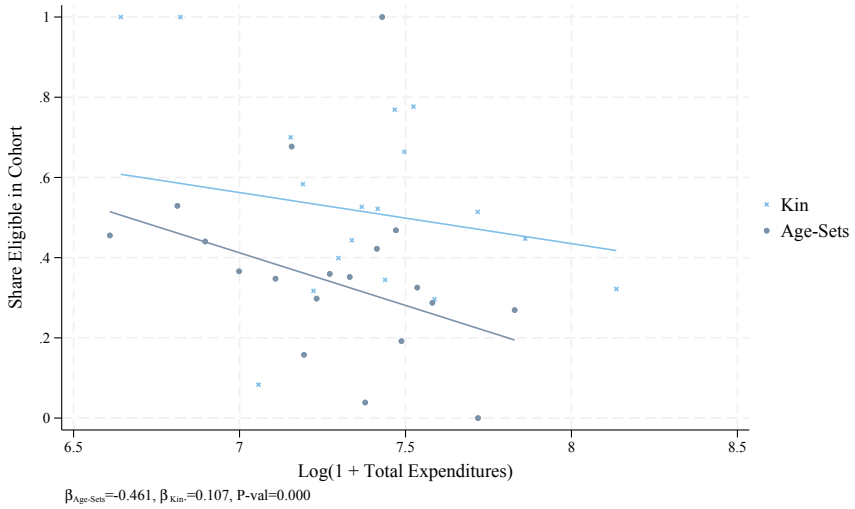
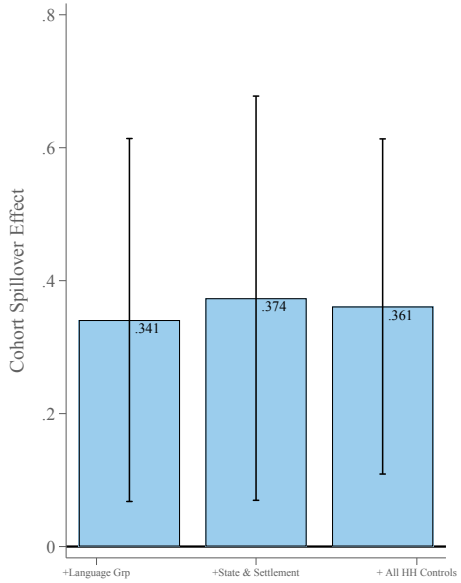
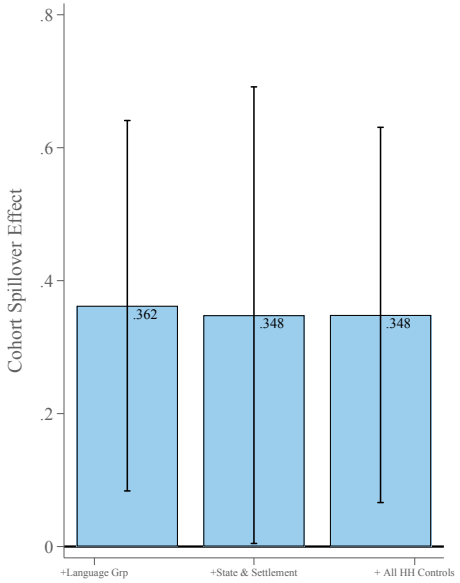


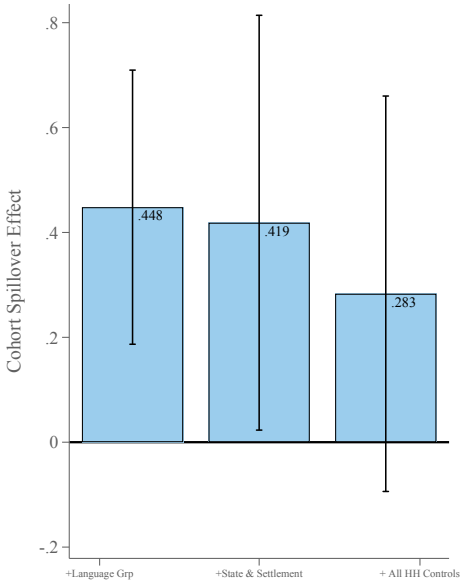
Figure A3: **Consumption and Cohort HSNP Eligibility.** Binscatter plots of (log of) household consumption expenditure (x-axis) vs. the share of cohort members of the main providers who are HSNP eligible (y-axis) for the sample of non-beneficiaries. The relationship is plotted separately for members of kin-based societies (light blue crosses) and age set societies (dark blue circles). We also report the p-value of the difference between the two slopes (p<0.01).



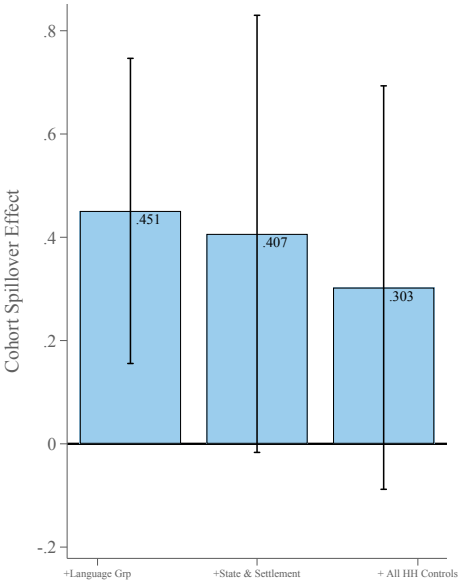
(a) Total Expenditure, Full Sample



(b) Food Expenditure, Full Sample

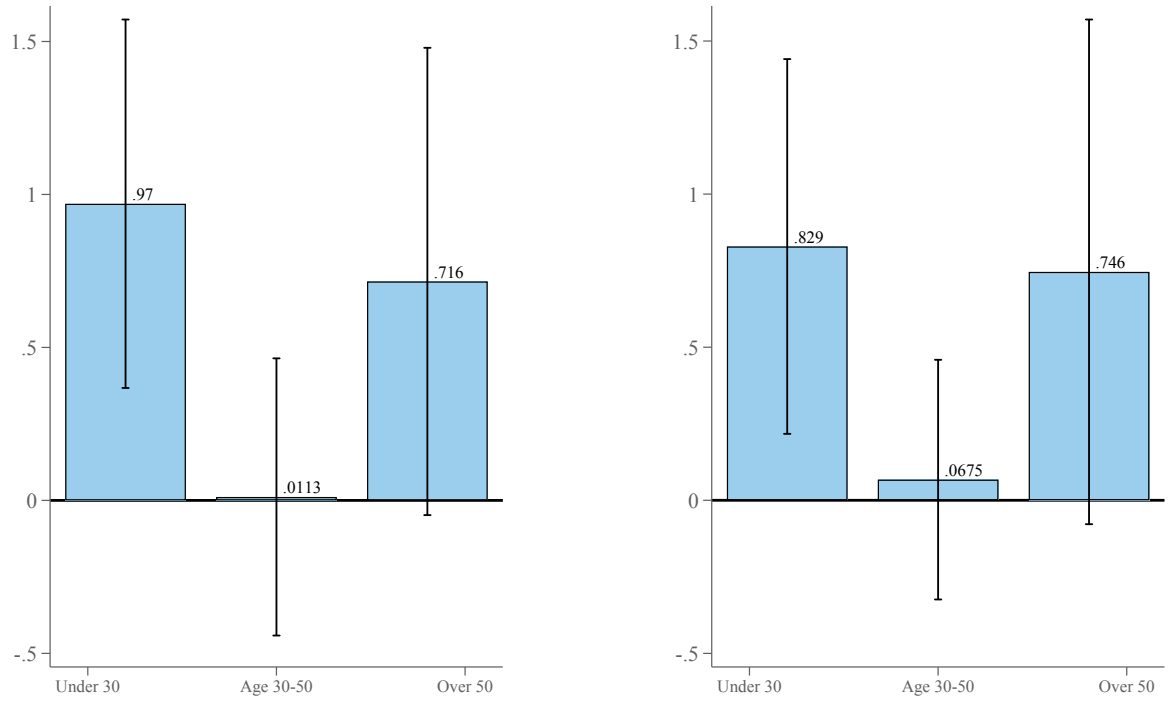


(c) Total Expenditure, Males Only



(d) Food Expenditure, Males Only

Figure A4: **Controlling for Ethnicity-Level Characteristics: Cohort Spillovers in Kenya's HSNP.** Each bar reports an estimate of $\gamma_1 - \gamma_2$ from Equation 2. The leftmost column of each sub-figure controls for language group fixed effects and appropriate interactions; the middle column adds fixed effects in ethnicity-level settlement complexity and jurisdictional hierarchy beyond the local community and appropriate interactions; the third column adds to these the full set of baseline household-level controls. The dependent variable and sample used for each specification is noted in each sub-figure's caption. Standard errors are clustered by sub-location and 95% confidence intervals are reported.

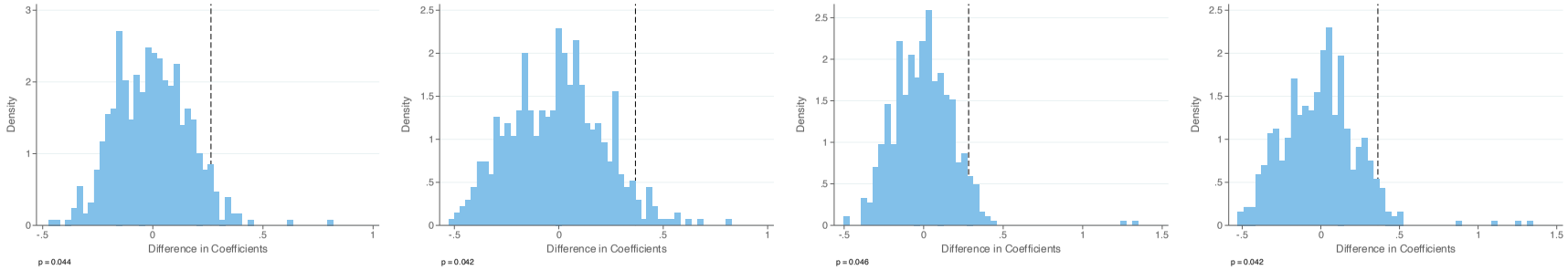


(a) Total Expenditure

(b) Food Expenditure

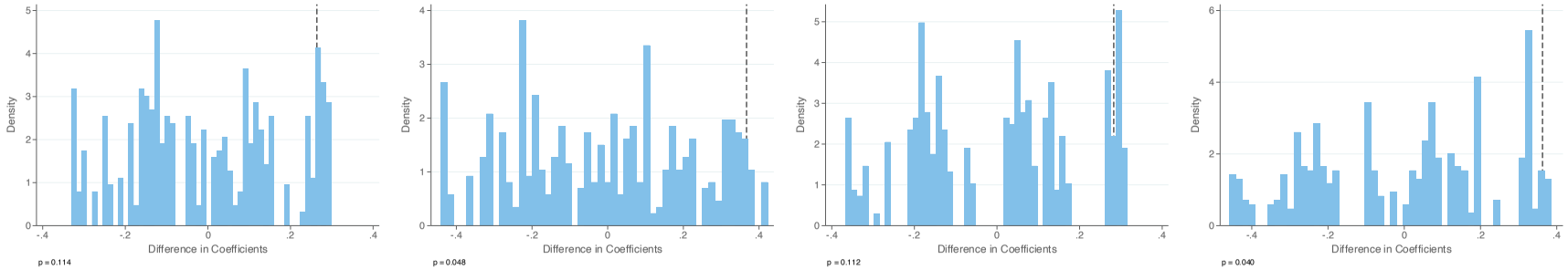
Figure A5: **Heterogeneous Effects By Generation: Cohort Spillovers in Kenya's HSNP.** Estimates of the coefficient of interest from Equation 2, estimated separately on a sample of main providers under 30 years old, from 30-50 years old, and 50 years old or older. In Figure A5a, the y-axis measures (log of) total expenditure while in Figure A5b, it measures (log of) food expenditure. Standard errors are clustered by sub-location and 95% confidence intervals are reported.

Panel A: Randomization With Replacement



(a) Full Sample, All Spending ($p = 0.044$) (b) Males, All Spending ($p = 0.042$) (c) Full Sample, Food ($p = 0.046$) (d) Males, Food ($p = 0.042$)

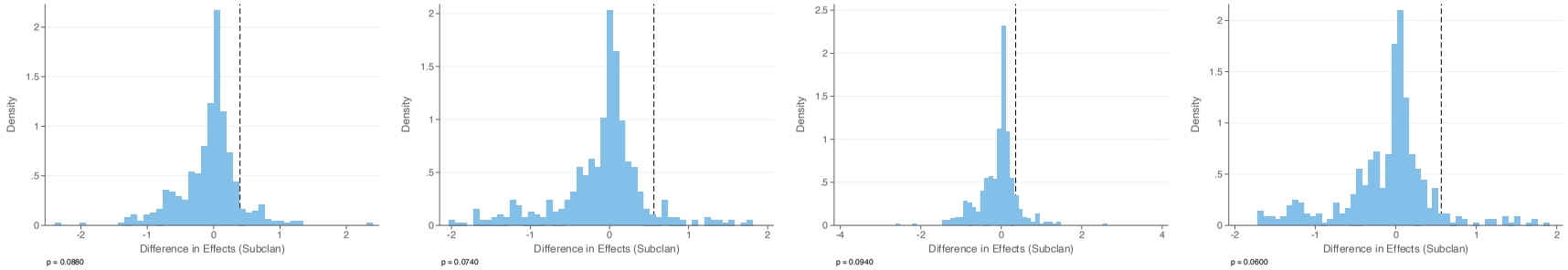
Panel B: Randomization Without Replacement



(e) Full Sample, All Spending ($p = 0.114$) (f) Males, All Spending ($p = 0.048$) (g) Full Sample, Food ($p = 0.112$) (h) Males, Food ($p = 0.040$)

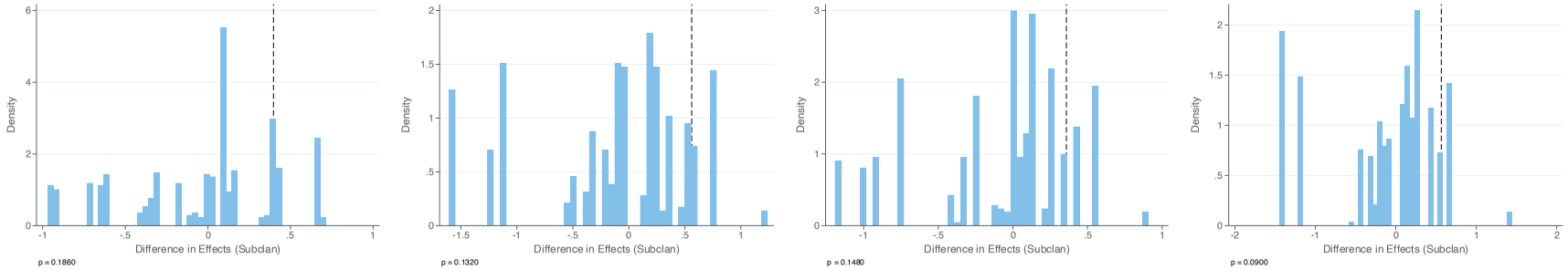
Figure A6: **Kenya's HSNP and Age Set Spillovers: Randomization Inference.** Each sub-figure reports the results from a randomization inference test, corresponding to Equation 2 in the main text. The blue histogram displays the distribution of placebo estimates of $\gamma_1 - \gamma_2$ and the black dashed line is our actual estimate from the corresponding specification. In Panel A, the social structure categorization is randomized across ethnic groups with replacement, and in Panel B it is randomized across ethnic groups without replacement. Figures A6a and A6d correspond to the specification using the full sample and total spending as the dependent variable. Figures A6b and A6f correspond to the specification using the males-only sample and total spending as the dependent variable. Figures A6c and A6g correspond to the specification using the full sample and food spending as the dependent variable. Figures A6d and A6h correspond to the specification using the males-only sample and food spending as the dependent variable.

Panel A: Randomization With Replacement



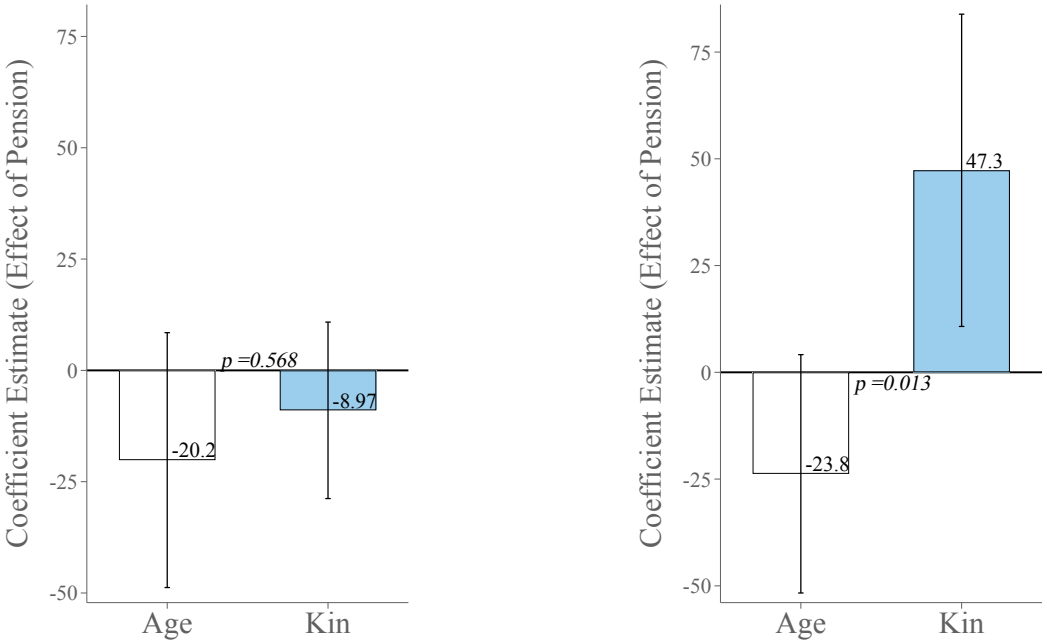
(a) Full Sample, All Spending ($p = 0.088$) (b) Males, All Spending ($p = 0.074$) (c) Full Sample, Food ($p = 0.094$) (d) Males, Food ($p = 0.060$)

Panel B: Randomization Without Replacement



(e) Full Sample, All Spending ($p = 0.186$) (f) Males, All Spending ($p = 0.132$) (g) Full Sample, Food ($p = 0.148$) (h) Males, Food ($p = 0.090$)

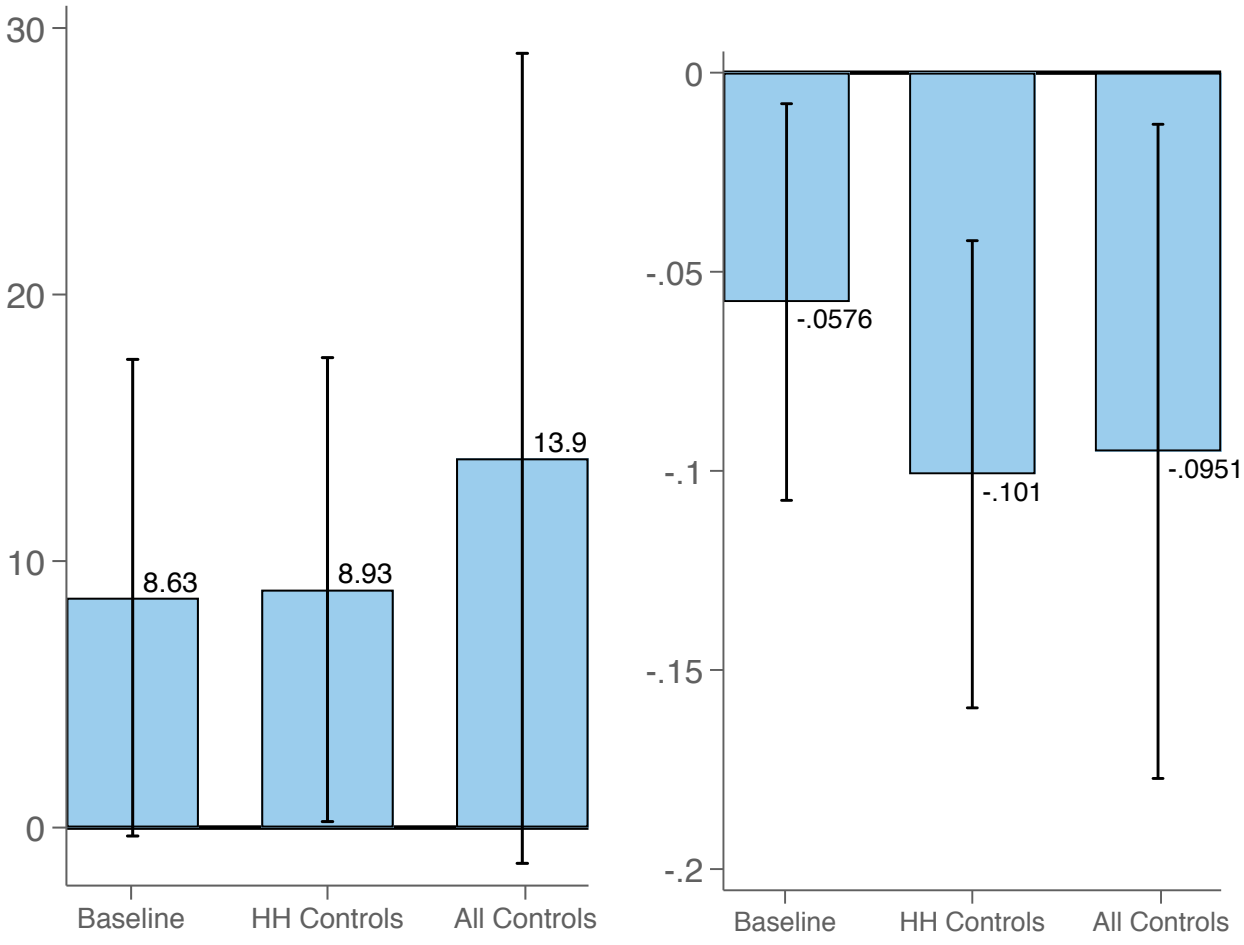
Figure A7: **Kenya's HSNP and Sub-clan Spillovers: Randomization Inference.** Each sub-figure reports the results from a randomization inference test, corresponding to the analysis of sub-clan-level spillovers the main text (Table 3). The blue histogram displays the distribution of placebo estimates of the difference between the effect of sub-clan transfers in kin-based vs. age-based societies, and the black dashed line is our actual estimate from the corresponding specification. In Panel A, the social structure categorization is randomized across ethnic groups with replacement, and in Panel B it is randomized across ethnic groups without replacement. Figures A7a and A7d correspond to the specification using the full sample and total spending as the dependent variable. Figures A7b and A7f correspond to the specification using the males-only sample and total spending as the dependent variable. Figures A7c and A7g correspond to the specification using the full sample and food spending as the dependent variable. Figures A7d and A7h correspond to the specification using the males-only sample and food spending as the dependent variable.



(a) Full Sample

(b) Male Children

Figure A8: **Pension Grants and Child Nutrition in Kenya's HSNP: Controlling for Household-Level Wealth.** Each sub-figure reports estimates of Equation (3); the left column reports ξ_1 and the right column ξ_2. The dependent variable is listed at the bottom of each graph. Specifications reported in A8a and A8b include interviewer fixed effects, ethnicity fixed effects, age-by-age-set fixed effects. We also control for the gender, age, disability status of the child and religion, size and poverty index of the household.

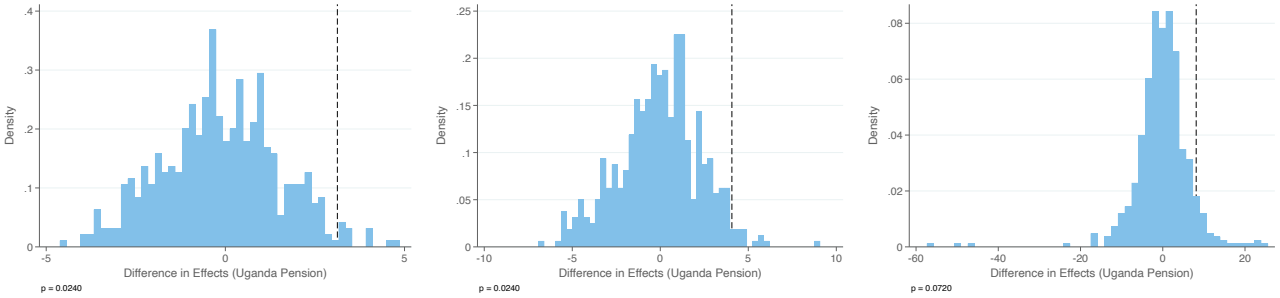


(a) Double Difference: WFH Percentile

(b) Double Difference: WFH Bottom 5% Indicator

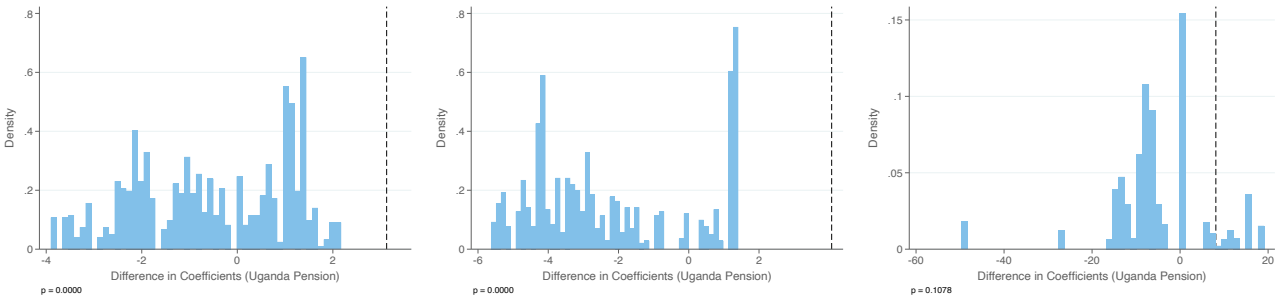
Figure A9: **Uganda's Pension Pilot and Child Nutrition: Double Difference Estimates.** In Figure A9a the dependent variable is child weight-for-height percentile and in Figure A9b it is an indicator that equals one if the child falls below the 5th percentile. Each column reports the coefficient estimate of the difference in the effect of being in a pension pilot district on households in kin-based vs. age-based societies. The leftmost column includes only the baseline controls: ethnicity fixed effects, age-by-sex fixed effects, interview month fixed effects, and a pilot district indicator. The middle column also includes the expanded set of household-level controls and the right column includes the full set of ethnicity-level controls. 95% confidence intervals are reported.

Panel A: Randomization With Replacement



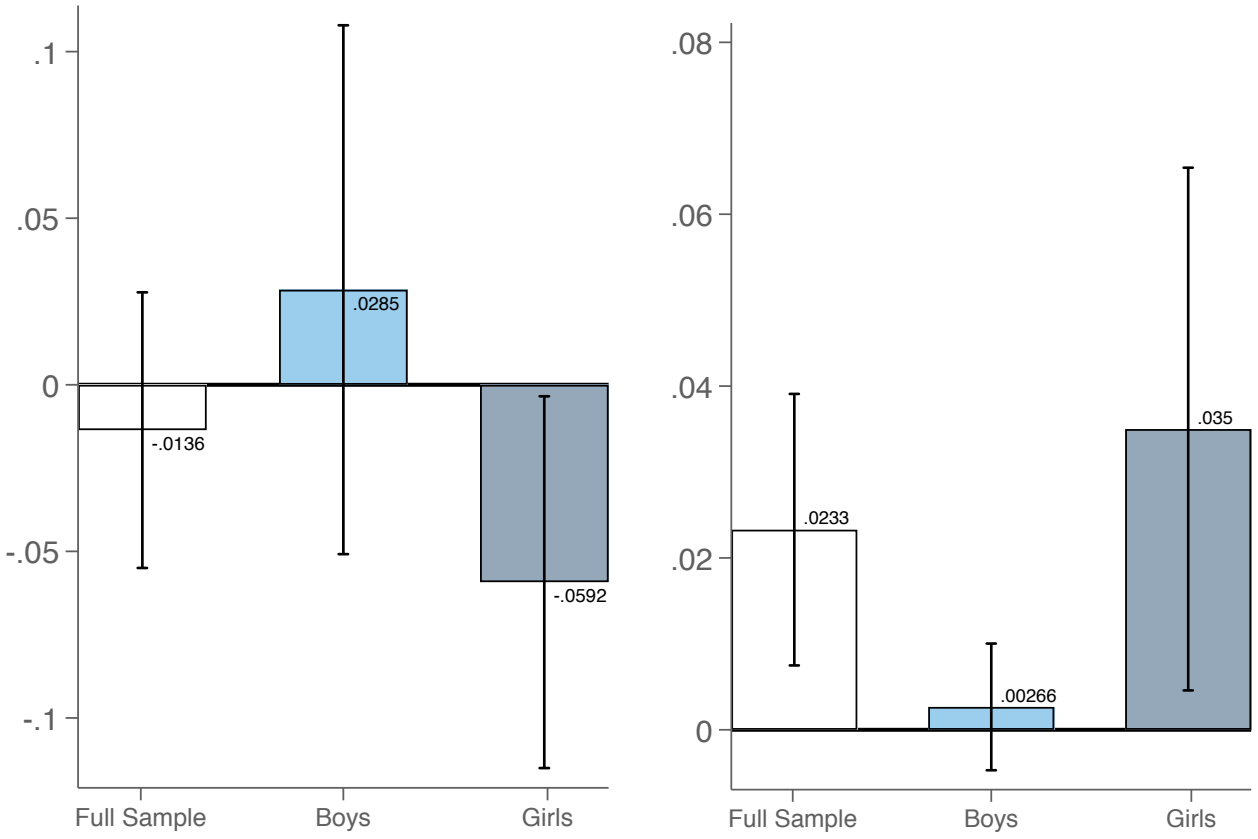
(a) Baseline ($p = 0.0240$) (b) All Controls ($p = 0.0240$) (c) Boys Only ($p = 0.0720$)

Panel B: Randomization Without Replacement



(d) Baseline ($p < 0.000$) (e) All Controls ($p < 0.000$) (f) Boys Only ($p = 0.1078$)

Figure A10: **Uganda's Pension Pilot and Child Nutrition: Randomization Inference.** Each sub-figure reports the results from a randomization inference test, corresponding to Equation 5 reported in Table 4 in the main text. The blue histogram displays the distribution of placebo estimates of $\beta_1 - \beta_2$ and the black dashed line is our actual estimate from the corresponding specification. In Panel A, the social structure categorization is randomized across ethnic groups with replacement, and in Panel B it is randomized across ethnic groups without replacement. Figures A10a and A10d correspond to the baseline specification (column 1 of Table 4). Figures A10b and A10e correspond to the specification that includes all controls (column 2 of Table 4); and Figures A10c and A10f correspond to the specification that restricts the sample only to boys (column 5 of Table 4).



(a) Secondary School Attendance

(b) Marriage

Figure A11: **The Effects of Uganda's Pension Program on Older Children.** Each column reports the differential effect of pension exposure on households from kin-based vs. age-based societies ($\beta_1 - \beta_2$). In A11a, the dependent variable is an indicator that equals one if a secondary school age child is attending school, and in Figure A11b, it is an indicator that equals one if the child is married. Moving from left to right, the sample in each specification includes (i) all children 15-18, (ii) male children 15-18, and (iii) female children 15-18. Standard errors are clustered by district and 95% confidence intervals are reported.

Table A4: Correlations between age set organization and other ethnicity-level characteristics

(1) Variable Name	(2) Sample Mean	(3) Age Set vs. Kin	(4) Variable Name	(5) Sample Mean	(6) Age Set vs. Kin
Panel A:Conflict and Herding					
Pastoralism Dependence, 0-10	3.833	0.247	Pre-colonial Conflict	0.0417	-0.0588
		(0.874)			(0.0610)
asinh(Conflicts), ACLED	4.912	0.0485	asinh(Conflicts), Excl. Riots, ACLED	4.786	0.182
		(0.608)			(0.616)
asinh(Deaths), ACLED	6.391	0.257	asinh(Conflicts), UCDP-GED	3.685	0.863
		(0.549)			(0.664)
Panel B: Transfer of Leadership					
Local Leader Elected, 0/1	0.222	-0.267	Hereditary Local Leadership, 0/1	0.500	-0.333
		(0.383)			(0.298)
Panel C: Marriage and the Role of Women					
Polygamous, 0/1	0.958	0.0588	No Cousin Marriage, 0/1	0.529	-0.377
		(0.0610)			(0.262)
Bride Price Practiced, 0/1	0.792	-0.271	Plow Used Historically, 0/1	0.0833	0.141
		(0.179)			(0.0966)
Inheritance Rule for Land, 0/1	0.889	-0.186	Patrilocal, 0/1	0.958	0.0588
		(0.141)			(0.0610)
Women Do Not Inherit Land, 0/1	0.778	0.280	Women Participate Less in Ag. , 0/1	0.222	-0.149
		(0.170)			(0.111)
Panel D: Pre-Colonial Development					
Jurisd. hierarchy (local), 1-5	1.565	-0.178	Jurisd. hierarchy (beyond local), 1-5	2.542	-0.859
		(0.236)			(0.346)
Settlement pattern complexity, 1-8	4.375	-0.212			
		(0.628)			

Notes: The unit of observation is an ethnic group. The sample size ranges from 18 to 24 across specifications due to missing values in the ethnographic data. Columns 1 and 4 report the ethnicity-level characteristics. Columns 2 and 5 report the sample mean of each measure and columns 3 and 6 report the difference in the characteristic between societies with and without age sets. In each case, the dependent variable is the reported ethnicity-level characteristic and the right hand side includes the age set indicator and a Kenya indicator. The ACLED conflict data are measured from 1997-2010 and the UCDP conflict data are measured from 1989-2010. The pastoralism measure is computed as in Becker (2019) and the pre-colonial conflict data are from Besley and Reynal-Querol (2014). The remaining variables are from the Ethnographic Atlas. Robust standard errors are reported in parentheses.

Table A5: Age Cohort Spillover Effects On Expenditure: Cohort of the Household Heads and Main Providers

	(1) Full Sample	(2) Males Only	(3) Full Sample	(4) Males Only
	Household Head		Main Provider & Hh Head	
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Age Set}}$	0.288	0.405	0.332	0.426
	(0.108)	(0.107)	(0.119)	(0.122)
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Kin}}$	0.0803	0.0891	0.0964	0.106
	(0.0906)	(0.0982)	(0.102)	(0.106)
Observations	621	530	560	496
R-squared	0.676	0.705	0.697	0.714
Interviewer FE	Yes	Yes	Yes	Yes
Targeting Code X Ethnicity FE	Yes	Yes	Yes	Yes
Age FE X Ethnicity FE	Yes	Yes	Yes	Yes
Age Set X Share eligible in age cohort	Yes	Yes	Yes	Yes
Mean at baseline	7.320	7.324	7.333	7.335
P-val $\gamma_1 = \gamma_2$	0.154	0.0265	0.144	0.0425

Notes: The unit of observation is a household. In columns 1-2, we assign each household to the age cohort of the household head and in columns 3-4 we assign each household to the cohort-level shock including both the cohort of the main provider and the cohort of the household head. Columns 1 and 3 include the full sample and columns 2 and 4 restrict the sample to male household heads or main providers. The dependent variable is log of per capita monthly food spending. $\mathbb{I}^{\text{Age Set}}$ is an indicator variable that equals one if the respondent belongs to an age set society and $\mathbb{I}^{\text{Kin}}$ an indicator variable that equals one if the respondent belongs to a kin-based society. $\mathbb{I}^{\text{Treat}}$ is an indicator variable that equals one if the respondent is in the treatment group. Additional controls include gender, age, indicators for marriage, employment, disability, educational attainment, and religion, the number of household members, and a poverty index. Standard errors are clustered at the sub-location level.

Table A6: Age Cohort Spillover Effects On Spending: Excluding Households with Savings

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:	Log Total Consumption Spending				Total Cons. Spending
			Panel A: Full Sample		
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.247	0.306	0.279	0.285	2566.7
	(0.0987)	(0.120)	(0.114)	(0.126)	(1054.7)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.00276	0.0423	0.0424	0.0662	-305.7
	(0.0791)	(0.0863)	(0.0773)	(0.0781)	(705.7)
p-value, $\gamma_1 = \gamma_2$	0.066	0.082	0.104	0.157	0.025
Mean at baseline	7.277	7.279	7.279	7.279	7686
R-Squared	0.476	0.633	0.705	0.706	0.697
Observations	626	559	559	556	556
			Panel B: Males Only		
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.344	0.445	0.370	0.396	4051.3
	(0.110)	(0.137)	(0.136)	(0.152)	(1487.6)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.00573	0.0492	0.0666	0.0774	-223.0
	(0.0742)	(0.0927)	(0.0811)	(0.0891)	(795.8)
p-value, $\gamma_1 = \gamma_2$	0.014	0.015	0.060	0.071	0.014
Mean at baseline	7.308	7.299	7.299	7.299	7902
R-Squared	0.498	0.670	0.723	0.728	0.707
Observations	524	468	468	465	465
Interviewer FE	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes
Age x Ethnicity FE	No	Yes	Yes	Yes	Yes
Additional Controls	No	No	Yes	Yes	Yes
Age Set x Share Eligible in Age Cohort	No	No	No	Yes	Yes

Notes: The unit of observation is a household. In Panel A, we include the full sample of non-beneficiary households and in Panel B we include only households with a male main provider. The dependent variable is log of per capita monthly spending in columns 1-4 and raw per-capita monthly food spending in column 5. Additional controls include gender, age, indicators for marriage, employment, disability, educational attainment, and religion, the number of household members, and a poverty index. Households with any savings at baseline are excluded from the analysis. Standard errors are clustered at the sub-location level.

Table A7: Age Cohort Spillover Effects On Expenditure: Robustness to Excluding Each Group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent Variable is log Total Consumption Spending							
Excluded Group:	Borana	Burji	Gabra	Garre	Rendille	Samburu	Somali	Turkana
				Panel A: Full Sample				
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Age Set}}$	0.285	0.258	0.261	0.258	0.203	0.278	0.269	0.173
	(0.131)	(0.107)	(0.114)	(0.107)	(0.109)	(0.111)	(0.107)	(0.107)
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Kin}}$	-0.00267	-0.00613	-0.00519	-0.0244	-0.00464	-0.00552	0.0674	-0.0381
	(0.0764)	(0.0761)	(0.0762)	(0.0847)	(0.0761)	(0.0762)	(0.145)	(0.0753)
p-value, $\gamma_1 = \gamma_2$	0.0655	0.0550	0.0648	0.0466	0.134	0.0441	0.296	0.125
R-squared	0.455	0.471	0.473	0.474	0.474	0.468	0.423	0.529
Observations	633	713	676	638	643	697	454	545
				Panel B: Males Only				
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Age Set}}$	0.393	0.376	0.359	0.375	0.351	0.421	0.400	0.263
	(0.142)	(0.118)	(0.126)	(0.118)	(0.130)	(0.121)	(0.122)	(0.111)
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Kin}}$	-0.0140	-0.0153	-0.0144	-0.0302	-0.0163	-0.0143	0.0697	-0.0507
	(0.0750)	(0.0757)	(0.0758)	(0.0839)	(0.0755)	(0.0758)	(0.138)	(0.0751)
p-value, $\gamma_1 = \gamma_2$	0.0158	0.00793	0.0152	0.00764	0.0193	0.00374	0.0997	0.0242
R-squared	0.465	0.485	0.490	0.491	0.480	0.484	0.461	0.539
Observations	532	603	576	529	550	591	374	474
Interviewer FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The unit of observation is a household and the dependent variable is log of total consumption spending. Panel A includes the full sample and Panel B restricts the sample to male main providers. Each column excludes members of a different ethnic group from the sample, and the excluded group is noted at the top of each column. Standard errors are clustered at the sub-location level.

Table A8: Age Cohort Spillover Effects On Food Expenditure: Robustness to Excluding Each Group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent Variable is log Food Spending							
Excluded Group:	Borana	Burji	Gabra	Garre	Rendille	Samburu	Somali	Turkana
	Panel A: Full Sample							
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Age Set}}$	0.307	0.261	0.264	0.261	0.215	0.273	0.275	0.146
	(0.119)	(0.0992)	(0.106)	(0.0990)	(0.0985)	(0.102)	(0.0995)	(0.106)
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Kin}}$	-0.0183	-0.0218	-0.0220	-0.0494	-0.0214	-0.0209	0.0324	-0.0477
	(0.0896)	(0.0891)	(0.0890)	(0.0970)	(0.0889)	(0.0892)	(0.151)	(0.0898)
p-value, $\gamma_1 = \gamma_2$	0.0360	0.0428	0.0481	0.0304	0.0874	0.0380	0.212	0.180
R-squared	0.334	0.352	0.357	0.351	0.350	0.349	0.311	0.431
Observations	633	713	676	638	643	697	454	545
	Panel B: Males Only							
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Age Set}}$	0.397	0.348	0.334	0.349	0.320	0.381	0.375	0.195
	(0.135)	(0.113)	(0.119)	(0.113)	(0.114)	(0.118)	(0.117)	(0.128)
Share Cohort Eligible * $\mathbb{I}^{\text{Treat}}$ * $\mathbb{I}^{\text{Kin}}$	-0.0125	-0.0146	-0.0140	-0.0347	-0.0161	-0.0136	0.0326	-0.0442
	(0.0856)	(0.0861)	(0.0860)	(0.0954)	(0.0856)	(0.0862)	(0.150)	(0.0871)
p-value, $\gamma_1 = \gamma_2$	0.0148	0.0145	0.0232	0.0124	0.0243	0.00954	0.100	0.129
R-squared	0.348	0.368	0.380	0.367	0.360	0.365	0.345	0.435
Observations	533	603	574	529	549	591	370	480
Interviewer FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The unit of observation is a household and the dependent variable is log of food spending. Panel A includes the full sample and Panel B restricts the sample to male main providers. Each column excludes members of a different ethnic group from the sample, and the excluded group is noted at the top of each column. Standard errors are clustered at the sub-location level.

Table A9: Age Cohort Spillover Effects on Total Expenditure: Two-way Clustering by Sub-location and Solidarity Group

Dependent Variable:	(1)	(2)	(3)	(4)	(5) Total Cons. Spending
	Log Total Consumption Spending				
	Panel A: Full Sample				
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.258	0.339	0.279	0.287	2481.3
	(0.117)	(0.138)	(0.134)	(0.139)	(1199.9)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.00613	0.00364	0.0218	0.0315	-815.3
	(0.0542)	(0.0793)	(0.0861)	(0.0811)	(635.8)
p-value, $\gamma_1 = \gamma_2$	0.050	0.041	0.117	0.121	0.018
Mean at baseline	7.321	7.317	7.317	7.315	8026
R-Squared	0.471	0.628	0.682	0.684	0.673
Observations	713	646	646	643	643
	Panel B: Males Only				
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.365	0.443	0.344	0.377	4076.3
	(0.119)	(0.151)	(0.149)	(0.156)	(1288.9)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.00234	0.0194	0.0487	0.0499	-698.9
	(0.0497)	(0.0844)	(0.0875)	(0.0918)	(763.8)
p-value, $\gamma_1 = \gamma_2$	0.007	0.007	0.092	0.068	0.002
Mean at baseline	7.353	7.341	7.341	7.338	8272
R-Squared	0.487	0.663	0.703	0.710	0.689
Observations	603	548	548	545	545
Interviewer FE	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes
Age x Ethnicity FE	No	Yes	Yes	Yes	Yes
Additional Controls	No	No	Yes	Yes	Yes
Age Set x Share Eligible in Age Cohort	No	No	No	Yes	Yes

Notes: The unit of observation is a household. In Panel A, we include the full sample of non-beneficiary households and in Panel B we include only households with a male main provider. The dependent variable is log of per capita monthly consumption spending in columns 1-4 and raw per-capita monthly consumption spending in column 5. Additional controls include gender, age, indicators for marriage, employment, disability, educational attainment, and religion, the number of household members, and a poverty index. Standard errors are double-clustered at the sub-location level and the "solidarity group" level, where the solidarity groups are defined as the age cohort in age set societies and the sub-clan in kin-based societies.

Table A10: Age Cohort Spillover Effects on Food Expenditure: Two-way Clustering by Sub-location and Solidarity Group

Dependent Variable:	(1)	(2)	(3)	(4)	(5) Food Cons. Spending
	Log Food Consumption Spending				
	Panel A: Full Sample				
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.261	0.373	0.314	0.326	2269.2
	(0.109)	(0.135)	(0.135)	(0.138)	(1037.8)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.0218	0.00949	0.0209	0.0390	-592.4
	(0.0673)	(0.0860)	(0.0843)	(0.0872)	(537.3)
p-value, $\gamma_1 = \gamma_2$	0.035	0.028	0.074	0.083	0.017
Mean at baseline	7.041	7.041	7.041	7.038	6039
R-Squared	0.352	0.550	0.619	0.624	0.591
Observations	713	646	646	643	643
	Panel B: Males Only				
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{AgeSet}$	0.348	0.471	0.385	0.422	3635.4
	(0.117)	(0.157)	(0.167)	(0.172)	(1158.2)
Share Cohort Eligible * $\mathbb{I}^{Treat}$ * $\mathbb{I}^{Kin}$	-0.0146	0.0357	0.0578	0.0747	-287.6
	(0.0585)	(0.0909)	(0.0846)	(0.0976)	(669.6)
p-value, $\gamma_1 = \gamma_2$	0.008	0.019	0.086	0.075	0.005
Mean at baseline	7.069	7.064	7.064	7.060	6227
R-Squared	0.368	0.586	0.639	0.646	0.609
Observations	603	548	548	545	545
Interviewer FE	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes
Age x Ethnicity FE	No	Yes	Yes	Yes	Yes
Additional Controls	No	No	Yes	Yes	Yes
Age Set x Share Eligible in Age Cohort	No	No	No	Yes	Yes

Notes: The unit of observation is a household. In Panel A, we include the full sample of non-beneficiary households and in Panel B we include only households with a male main provider. The dependent variable is log of per capita monthly food spending in columns 1-4 and raw per-capita monthly food spending in column 5. Additional controls include gender, age, indicators for marriage, employment, disability, educational attainment, and religion, the number of household members, and a poverty index. Standard errors are double-clustered at the sub-location level and the "solidarity group" level, where the solidarity groups are defined as the age cohort in age set societies and the sub-clan in kin-based societies.

Table A11: Pension Receipt and Household Spending: Kenya's HSNP

	(1) Log(1+Ed. Spending	(2) Log(Ed Spend/ Tot. Spend)	(3) Log(Food Spend/ Tot. Spend)	(4) Log(Rent Spend/ Tot. Spend)	(5) Log(Health Spend/ Tot. Spend)
			Panel A: Full Sample		
$\mathbb{I}^{\text{Treat}} * \mathbb{I}^{\text{Kin}}$	0.974	0.946	0.00367	-0.170	0.484
	(0.397)	(0.349)	(0.0186)	(0.0872)	(0.402)
$\mathbb{I}^{\text{Treat}} * \mathbb{I}^{\text{Age Set}}$	0.120	0.0387	0.0150	-0.148	-0.142
	(0.447)	(0.414)	(0.0224)	(0.169)	(0.341)
p-value $\gamma_1 = \gamma_2$	0.141	0.0809	0.652	0.919	0.229
Mean at baseline	2.997	-4.140	-0.279	-7.047	-4.746
R-squared	0.589	0.578	0.617	0.513	0.408
Observations	284	284	885	885	885
			Panel B: Males Only		
$\mathbb{I}^{\text{Treat}} * \mathbb{I}^{\text{Kin}}$	1.091	1.099	0.00352	-0.109	0.419
	(0.588)	(0.522)	(0.0174)	(0.0854)	(0.444)
$\mathbb{I}^{\text{Treat}} * \mathbb{I}^{\text{Age Set}}$	-0.497	-0.490	0.0156	-0.122	-0.513
	(0.629)	(0.569)	(0.0179)	(0.194)	(0.358)
p-value $\gamma_1 = \gamma_2$	0.0525	0.0292	0.594	0.954	0.130
Mean at baseline	3.042	-4.101	-0.284	-7.093	-4.764
Observations	201	201	663	663	663
R-squared	0.584	0.575	0.599	0.556	0.428
Interviewer FE	Yes	Yes	Yes	Yes	Yes
Targeting Code x Ethnicity FE	Yes	Yes	Yes	Yes	Yes
Age x Age Set FE	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes

Notes: The unit of observation is a household in the pension targeting mechanism group. Baseline controls include gender, education, marriage status, occupation, religion, household size and a poverty index. Panel A includes the full sample of households and Panel B restricts the sample to male main providers. Standard errors are clustered at the sub-location level.

Table A12: Balance: Societies With vs. Without Age Sets in the DHS

(1) Variable Name	(2) Sample Mean	(3) Age Set vs. Kin	(4) Variable Name	(5) Sample Mean	(6) Age Set vs. Kin
Panel A: Household-Level Variables					
Pension Exposure (all years)	0.304	0.099	Pension Exposure (2016)	0.073	0.027
		(0.147)			(0.029)
Pension Exposure (2015)	0.065	0.024	Pension Exposure (2014)	0.059	0.025
		(0.028)			(0.027)
Pension Exposure (2013)	0.059	0.012	Pension Exposure (2012)	0.051	0.011
		(0.032)			(0.032)
Pension Exposure (2011)	0.051	-0.000	Children Under 5	1.662	0.063
		(0.030)			(0.051)
Pension-Years Per Child	0.215	0.028			
		(0.086)			
Panel B: Child-Level Variables					
Weight-for-Height (Percentile)	47.112	0.532	Weight-for-Height (Bottom 5%)	0.060	-0.017
		(2.212)			(0.018)
Weight-for-Age (Percentile)	31.114	1.402	Weight-for-Age (Bottom 5%)	0.220	-0.039
		(3.687)			(0.036)
Height-for-Age (Percentile)	26.336	2.300	Height-for-Age (Bottom 5%)	0.315	0.001
		(4.017)			(0.044)
Pension-Years Per Child	2.410	0.142			
		(0.091)			
Panel C: Child-Level Variables - Heterogeneity by Pension Exposure					
Weight-for-Height (Percentile)	47.24	0.733	Weight-for-Height (Bottom 5%)	0.060	-0.011
		(0.766)			(0.006)
Weight-for-Age (Percentile)	31.18	-0.120	Weight-for-Age (Bottom 5%)	0.221	0.001
		(0.562)			(0.011)
Height-for-Age (Percentile)	26.36	-0.998	Height-for-Age (Bottom 5%)	0.314	-0.002
		(0.717)			(0.011)
Pension-Years Per Child	2.415	0.012			
		(0.033)			

Notes: The unit of observation is a household in Panel A and a child in Panels B and C. The sample is restricted to households and children in non-pilot districts. Columns 1 and 4 report the household or child-level characteristic of interest; columns 2 and 5 report the sample mean of each characteristic; and columns 3 and 6 report the coefficient on the age set indicator (Panels A and B) or the interaction term between the age set indicator and potential pension exposure (Panel C). District and interview month fixed effects are included in all specifications. Standard errors, clustered by ethnicity, are reported in parentheses.

Table A13: Effects of Pension Exposure on Nutrition: Alternative Measures of Exposure

Dependent Variable is Child Weight-for-Height				
	(1)	(2)	(3)	(4)
Measure of Pension Exposure:	Only 2016		Incorporating Child Age	
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Kin}}$	6.247	10.83	1.906	2.481
	(2.432)	(4.505)	(0.844)	(1.095)
Pension Exposure *$\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Age Set}}$	-1.423	-2.505	-0.694	-0.706
	(1.862)	(1.986)	(0.725)	(0.781)
p-value, coefficient difference	0.0126	0.00800	0.0197	0.0209
District x Ethnicity Fixed Effects	Yes	Yes	Yes	Yes
Interview Month Fixed Effects	Yes	Yes	Yes	Yes
Age Set x Potential Exposure Fixed Effects	No	Yes	No	Yes
Age in Months x Gender Fixed Effects	No	Yes	No	Yes
Observations	4,112	4,107	4,112	4,107
R-squared	0.129	0.202	0.129	0.202

Notes: The unit of observation is a child and the sample includes all children in the DHS survey who are less than 60 months of age. The dependent variable is the child's weight-for-height percentile. In columns 1-2, pension exposure is computed using only household composition in 2016, and in columns 3-4 it is computed incorporating child age. Standard errors are clustered at the district level.

Table A14: Effects of Pension Program on Child Nutrition: Alternative Mechanisms and Additional Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent Variable is Child Weight-for-Height (percentile)						
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Kin}}$	3.571	3.505	3.100	4.533	4.832	3.334	5.382
	(1.269)	(1.207)	(1.103)	(1.775)	(1.842)	(1.096)	(2.232)
Pension Exposure *$\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Age Set}}$	-0.881	-0.888	-0.866	-1.157	-2.432	-0.713	-1.956
	(0.968)	(1.009)	(0.934)	(2.076)	(2.045)	(0.908)	(1.654)
p-value, coefficient difference	*0.00611*	*0.00709*	*0.00831*	*0.0412*	*0.0111*	*0.00587*	*0.00870*
Number of Children Fixed Effects	Yes	No	No	No	No	No	Yes
Household Asset Controls	No	Yes	No	No	No	No	Yes
Household Wealth Index Fixed Effects	No	No	Yes	No	No	No	Yes
Ethnicity-Level Controls	No	No	No	Yes	No	No	Yes
Language-Family Controls	No	No	No	No	Yes	No	Yes
Interview Month Fixed Effects	No	No	No	No	No	Yes	Yes
District x Ethnicity Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interview Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age Set x Potential Exposure Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age in Months x Gender Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,107	4,104	4,107	4,107	4,107	4,100	4,097
R-squared	0.206	0.219	0.205	0.201	0.204	0.224	0.246

Notes: The unit of observation is a child and the sample includes all children in the DHS survey who are less than 60 months of age. The dependent variable is the child's weight-for-height percentile. Household asset controls include indicators for the presence of electricity, radio, television, a refrigerator, a bicycle, a motorcycle, and a car or truck, as well as fixed effects for main floor material, main roof material, main wall material, the type of toilet facility, and the number of rooms used for sleeping. The household wealth index is an index computed by the DHS that ranges from 1-5. Ethnicity level controls include fixed effects for the number of levels of jurisdictional hierarchy beyond the local community and the ethnic group's settlement pattern complexity, along with their full set of interactions. Language family fixed effects include each group's language family from the Ethnographic Atlas (v99), along with their full set of interactions. Standard errors are clustered at the district level.

Table A15: Effects of Pension Exposure on Nutrition: Alternative Measures of Nutrition

Dep Var:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Weight-for-Height:			Weight-for-Age:			Height-for-Age:			PCA
	Percentile	Z-Score	Bottom 5% Indicator	Percentile	Z-Score	Bottom 5% Indicator	Percentile	Z-Score	Bottom 5% Indicator	First PC
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Kin}}$	3.135	0.115	-0.0276	2.091	0.0924	-0.0400	0.751	0.0177	-0.0205	0.171
	(1.098)	(0.0444)	(0.00884)	(1.235)	(0.0363)	(0.0115)	(1.213)	(0.0282)	(0.0126)	(0.0617)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Age Set}}$	-0.933	-0.0421	0.0302	-1.083	-0.0154	0.0278	0.272	0.0383	-0.0144	-0.0609
	(0.951)	(0.0390)	(0.0199)	(0.784)	(0.0326)	(0.0195)	(1.105)	(0.0515)	(0.0189)	(0.0654)
District x Ethnicity Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interview Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age Set x Potential Exposure Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age in Months x Gender Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,107	4,050	4,107	4,068	4,012	4,068	4,068	4,012	4,068	4,012
R-squared	0.203	0.194	0.134	0.256	0.239	0.165	0.229	0.221	0.191	0.240
p-value, coefficient difference	*0.00659*	*0.00958*	*0.0105*	*0.0322*	*0.0338*	*0.00380*	*0.767*	*0.726*	*0.787*	*0.0137*

Notes: The unit of observation is a child and the sample includes all children in the DHS survey who are less than 60 months of age. The dependent variable from each regression is noted at the top of each column. In column 10, the dependent variable is the first principal component from a principal components analysis including the dependent variables from columns 1-9. Standard errors are clustered at the district level.

Table A16: Effects of Pension Program on Child Height: Heterogeneity by Age

	(1)	(2)	(3)
	Panel A: Height-for-Age (percentile)		
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Kin}}$ * $\mathbb{I}^{\text{Young}}$	4.986	6.820	6.476
	(1.456)	(1.719)	(1.840)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Age Set}}$ * $\mathbb{I}^{\text{Young}}$	0.452	1.071	0.949
	(2.796)	(2.838)	(2.884)
p-value, coefficient difference	0.163	0.085	0.097
R-Squared	0.378	0.392	0.408
Observations	3841	3841	3839
	Panel B: Height-for-Age (Bottom 5% Indicator)		
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Kin}}$ * $\mathbb{I}^{\text{Young}}$	-0.0117	-0.00199	-0.0107
	(0.0478)	(0.0497)	(0.0516)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Age Set}}$ * $\mathbb{I}^{\text{Young}}$	0.0100	0.00460	0.00279
	(0.0447)	(0.0500)	(0.0567)
p-value, coefficient difference	0.743	0.926	0.863
R-Squared	0.343	0.362	0.381
Observations	3841	3841	3839
	Panel C: Height-for-Age (z-score)		
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Kin}}$ * $\mathbb{I}^{\text{Young}}$	0.119	0.150	0.136
	(0.0745)	(0.0658)	(0.0721)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$ * $\mathbb{I}^{\text{Age Set}}$ * $\mathbb{I}^{\text{Young}}$	-0.00231	0.0285	0.0163
	(0.112)	(0.117)	(0.127)
p-value, coefficient difference	0.378	0.369	0.421
R-Squared	0.365	0.383	0.399
Observations	3789	3789	3788
District x Ethnicity FE x $\mathbb{I}^{\text{Young}}$	Yes	Yes	Yes
Interview month x Age x Gender FE	Yes	Yes	Yes
Pension Years FE x $\mathbb{I}^{\text{Age-Set}}$ x $\mathbb{I}^{\text{Young}}$	Yes	Yes	Yes
$\mathbb{I}^{\text{Age Set}}$ x $\mathbb{I}^{\text{Young}}$	Yes	Yes	Yes
Ethnicity-Level Controls	No	Yes	Yes
Household Asset Controls	No	No	Yes

Notes: The unit of observation is a child. $\mathbb{I}^{\text{Young}}$ is an indicator that equals one if the child is less than 24 months old. The dependent variable for each specification is listed at the top of each panel and the included controls are listed at the bottom of each column. Standard errors are clustered at the district level.

Table A17: Factor Loadings from Principal Component Analysis

Variable	Loading of First Principal Component
Weight-for-Height (percentile)	0.3017
Weight-for-Age (percentile)	0.4233
Height-for-Age (percentile)	0.3124
Weight-for-Height (z-score)	0.3015
Weight-for-Age (z-score)	0.4469
Height-for-Age (z-score)	0.3380
Weight-for-Height (Bottom 5% Indicator)	-0.1559
Weight-for-Age (Bottom 5% Indicator)	-0.3453
Height-for-Age (Bottom 5% Indicator)	-0.2895

Notes: This table presents the loading weights of the first principal component of the nine characteristics listed in the left column. The sample includes all children under the age of 5 in the 2016 round of Uganda's DHS. This principal component is used as the dependent variable in column 10 of Table A15.

Table A18: Effects of Pension Program on Primary Education in Societies With and Without Age Sets

Dependent Variable is an Indicator that Equals One if the Child is Currently Attending School					
	(1)	(2)	(3)	(4)	(5)
		Full Sample		Male	Female
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Kin}}$	0.0104	0.0102	0.00661	0.0108	-0.00500
	(0.00472)	(0.00449)	(0.00444)	(0.00415)	(0.00679)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Age Set}}$	0.000619	-0.00317	-0.00347	-0.0190	0.00679
	(0.0124)	(0.0164)	(0.0160)	(0.0125)	(0.0194)
Observations	18,384	18,383	18,383	9,016	9,223
R-squared	0.190	0.191	0.232	0.212	0.271
District x Ethnicity FE	Yes	Yes	Yes	Yes	Yes
Interview Month FE	Yes	Yes	Yes	Yes	Yes
Age Set x Potential Exposure FE	No	Yes	Yes	Yes	Yes
Age x Gender FE	No	No	Yes	Yes	Yes
p-value, $\beta_1 = \beta_2$	0.464	0.435	0.544	0.026	0.566
Mean Non-Pilot	0.927	0.927	0.927	0.927	0.927

Note: The unit of observation is a child between the ages of 6 and 14 years old. The dependent variable is an indicator variable that takes value one if the child is currently in school. Pension exposure is a measure of exposure to the pension constructed as indicated in Equation 6. $\mathbb{I}^{\text{Treat}}$ is an indicator variable that takes value one if the household is in a pilot district, and 0 otherwise. $\mathbb{I}^{\text{Age Set}}$ is an indicator variable that takes value one if the household belongs to an age set society and 0 otherwise. $\mathbb{I}^{\text{Kin}}$ is an indicator variable that takes value one if the household belongs to a kin-based society and 0 otherwise. Standard errors are clustered at the district level.

Table A19: Effects of Pension Program on Secondary Education and Marriage in Societies With and Without Age Sets

	Males		Females	
	(1)	(2)	(3)	(4)
	In school	Married	In school	Married
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Kin}}$	0.0416	-0.000606	-0.0558	0.0381
	(0.0242)	(0.00138)	(0.0213)	(0.0126)
Pension Exposure * $\mathbb{I}^{\text{Pilot}}$* $\mathbb{I}^{\text{Age Set}}$	0.0130	-0.00327	0.00344	0.00313
	(0.0302)	(0.00343)	(0.0186)	(0.00886)
Observations	1,740	1,740	2,245	2,245
R-squared	0.205	0.110	0.244	0.190
District x Ethnicity FE	Yes	Yes	Yes	Yes
Interview Month FE	Yes	Yes	Yes	Yes
Age Set x Potential Exposure FE	Yes	Yes	Yes	Yes
Age x Gender FE	Yes	Yes	Yes	Yes
p-value, $\beta_1 = \beta_2$	0.477	0.475	0.038	0.025
Mean Non-Pilot	0.716	0.040	0.716	0.040

Note: The unit of observation is a child between the ages of 15 and 18 years old. The dependent variables are indicator variables that take the value one if the child is in secondary school (columns 1 and 3) or if the child is married (columns 2 and 4). The sample includes all male children in columns 1-2 and all female children in columns 3-4. Pension exposure is a measure of exposure to the pension constructed as indicated in Equation 6. $\mathbb{I}^{\text{Treat}}$ is a indicator variable that takes value one if the household is in a pilot district, and 0 otherwise. $\mathbb{I}^{\text{Age Set}}$ is an indicator variable that takes value one if the household belongs to an age set society and 0 otherwise. $\mathbb{I}^{\text{Kin}}$ is an indicator variable that takes value one if the household belongs to a kin-based society and 0 otherwise. Standard errors are clustered at the district level.

Table A20: Life Cycle Consumption in Societies With and Without Age Sets

	(1) Full Sample	(2) Males Only	(3) Full Sample	(4) Males Only
	Main Providers		Main providers who are household heads	
Age*$\mathbb{I}^{\text{Age Set}}$	0.00534	0.00636	0.00925	0.0127
	(0.00372)	(0.00451)	(0.00447)	(0.00468)
Age*$\mathbb{I}^{\text{Kin}}$	-0.0121	-0.0131	-0.0144	-0.0135
	(0.00396)	(0.00428)	(0.00497)	(0.00508)
Age^2*$\mathbb{I}^{\text{Age Set}}$	-7.32e-05	-7.09e-05	-0.000119	-0.000139
	(4.07e-05)	(4.87e-05)	(4.75e-05)	(4.90e-05)
Age^2*$\mathbb{I}^{\text{Kin}}$	9.95e-05	0.000118	0.000118	0.000119
	(4.16e-05)	(4.11e-05)	(5.04e-05)	(4.80e-05)
Observations	5,063	3,812	4,224	3,326
R-squared	0.519	0.509	0.517	0.502
Sub-Location x Ethnicity FE	Yes	Yes	Yes	Yes
Controlling for hh size	Yes	Yes	Yes	Yes
P-value equality linear Term	0.00215	0.00326	0.000708	0.000442
P-value equality quadratic term	0.00481	0.00531	0.00127	0.000528

Notes: The unit of observation is a main provider in the HSNP baseline data. In columns 3-4, we further restrict the sample to include only main providers who are also household heads. $\mathbb{I}^{\text{Age Set}}$ is an indicator variable that takes value one if the household belongs to an age set society and 0 otherwise. $\mathbb{I}^{\text{Kin}}$ is an indicator variable that takes value one if the household belongs to a kin-based society and 0 otherwise. All columns control for the number of household members. Standard errors clustered at the sub-location level.

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