Descent Rules and Inter Vivos Transfers

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Very preliminary and incomplete

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[1]I am indebted to the Ghana Statistical Service for making the data available to me and to Harold Coulombe for providing information to match the households in a panel. Financial support from The Pew Charitable Trusts is gratefully acknowledged. The usual disclaimer applies. Correspondence: IGIER, Universita' Bocconi, via Salasco 5, 20136 Milano, Italy. E-mail: eliana.laferrara@uni-bocconi.it

1 Introduction

Principles of social organization clearly shape economic activity. This is especially true in traditional societies, where the distinction between an individual's role within the extended family and his or her economic choices is particularly blurred. This paper attempts to study the effects of one specific aspect of social organization, namely descent rules that govern the way in which kin membership is established and property is inherited, on one specific economic decision, i.e. that of giving inter-vivos transfers to different members of the family. Private transfers constitute a significant fraction of the resources available to poor households in developing countries, and understanding what lies underneath the pattern and flow of these transfers is a crucial task for designing economic policies in the areas of social security, savings promotion, etc.

In traditional societies kinship identity, together with all the duties and rewards it entails, is defined through descent principles that roughly fall into either of two categories: patrilineal or matrilineal.[1] In patrilineal cultures children are members of their father's kin group and inherit the father's property at his death. In matrilineal cultures kin membership is traced through the uterine line, so that children belong to their mother's kinship (*matrikin*) and not to their father's. A man's heirs are thus his sister's children, not his own. Though less common than patrilineal ones, matrilineal rules are embraced by a variety of cultures in the world spanning regions as different as Africa, East Asia, North and South America. Figure 1 shows a world map where shaded areas represent countries where at least one indigenous group follows matrilineal descent principles.

[Insert figure 1]

As will be argued in the next section, the matrilineal form of social organization has important consequences for the claims that family members can make on each other's time and property, and hence can be expected to affect individual choices on who to send transfers to (and how much to send) both in an altruistic setup and in the case of strategic transfers.[2] This papers tests some of these implications using household level data from Ghana and exploiting the variation in descent principles across ethnic groups. In fact the main ethnic group in Ghana, the Akan, is by tradition matrilineal,

[1] In practice several cultures employ "mixed" systems of descent, but the purposes of this analysis is to contrast the two main underlying principles.

[2] For studies of the relationship between matrilineal land tenure institutions and incentives for agricultural investment in Ghana see Quisumbing, Panyongayong, Aidoo and Otsuka (2002). For the relationship with schooling investment in Sumatra, see Quisumbing and Otsuka (2001).

and although customary rules are eroding in response to modernization, the matrilineal structure persists in a large number of communities, especially in rural areas. Preliminary empirical results suggest that the flow of transfers from parents to children and vice-versa responds to the incentives created by matrilineal inheritance rules, controlling for household composition and resources.

2 Matrilineal versus patrilineal descent

Kinship is reckoned in many different ways across cultures in the world. In most cases descent is traced through a single line of ancestors, e.g. either through the mother or through the father (unilineal descent). The two basic forms of unilineal descent are *patrilineal* and *matrilineal*, depending on whether descent is traced through a female or through a male ancestor, respectively. In patrilineal societies, children are considered to be part of their father's kin group and not of their mother's. Kin membership is then passed on by male children to their own children, and so on. In matrilineal societies, on the contrary, children are part of their mother's kin group and only female children can pass kin identity on to their offspring. The existence of these two regimes (and often coexistence in the same area between different ethnic groups) has interesting economic implications, in that they involve substantial differences in social organization as well as in the transmission of property.

From the point of view of social organization, matrilineal societies are characterized by the fact that the relationship between father and child is somewhat weaker than in patrilineal ones. Given that the father does not belong to the same matrikin as his child, some of the responsibilities generally assigned to fathers are instead taken on by the mother's brother, who is the closest male kinsmen of the child.[3] In some cultures, among which the Akan of Ghana, this can reach the point that, as soon as he becomes an adolescent, a male child can be expected to move out of his parents' home and join the maternal uncle's household (something that in anthropology is known as avunculocal residence).[4]

Inheritance patterns are also quite different across matrilineal and patrilineal cultures. Figures 2 and 3 are kinship diagrams that illustrate the rules governing the transmission of property in matrilineal and patrilineal groups. Following the convention in social anthropology, triangles indicate

[3] Among the matrilineal Akan of Ghana, the father is responsible for food and clothing expenditures of his wife and children, as well as for school expenditures of the latter. The matrikin, on the other hand, covers all other expenses (e.g., related to weddings and other ceremonies).

[4] For extensive studies on matrilineal traditions in Ghana, see among others Fortes (1950), Rattray (1969) and Okali (1983).

males, circles females, vertical links indicate a descent bond, horizontal ones a codescent bond, and the sign "=" stands for a marriage relationship. The shaded symbol is the focal point from which every relationship is to be viewed, and I shall refer to it as the household head. The numbers inside the circles or triangles indicate the order in which a given relative should inherit the head's property.

[Insert figures 2 and 3]

The top panel of figure 1 shows the customary inheritance pattern of Akan groups as far as men's property is concerned.[5] Consistently with the principles of social organization, the male head's heir will be his nephew. However, seniority requires that property be passed first to any living male codescendant of the head (i.e., any living brother) and then to the younger generation. If no brother or nephew exists, the closest male relative to inherit the head's property will be the maternal aunt's son. The bottom panel of figure 1 shows that female property is transmitted, in the order, to the mother of the deceased, to any living sister, and then to the deceased's daughters. Finally, figure 2 shows for comparison the typical inheritance pattern of a patrilineal group. In marked contrast with the previous schemes, property will be transmitted first to the head's children (be the head male or female), and only if there are no children to the head's siblings.

The interpretations on the effect of matrilineal organization in the well being of a man's wife and children are quite contrasting. On the one hand, it is generally believed that the strength of the matrikin gives a woman more bargaining power vis-a-vis her husband, and indeed some feature of matrilineal societies seem to point in this direction (e.g., the relatively high incidence of divorce and the absence of sanctions against divorced women). On the other hand, the traditional matrilineal inheritance scheme can lead to the paradoxical situation in which a wife and her children work all their life on their husband's fields and at his death are left virtually with no property. To cope with this risk, it has become more and more common among men to *make donations to their children* earlier in life, or to establish with a *written will* that part of their property should be inherited by their children (customary Akan rules in fact can only apply to intestate property). This obviously creates a tension between different branches of the family, and will constitute an important element of the theoretical framework.

[5] Strictly speaking, this rule must be applied only to inherited property (which belongs to the matrikin) and not to acquired property. In principle, it is often difficult to distinguish between inherited and acquired property.

3 Theoretical framework

Several aspects of existing theories can shed light on the relationship between descent rules and private transfers. On the one hand, there is the literature on altruistically versus exchange-motivated transfers. In the model of Cox (1987) parents send transfers to their children because they care about their children's utility and also they expect to receive some services in exchange. In equilibrium the probability of receiving a transfer is negatively correlated with the recipient's income, but the amount received can be positively correlated with it if the exchange regime is the prevailing one, given that under decreasing marginal utility for the child the parent must give him more to induce him to provide services. Extensions of this model have taken into account the possibility of liquidity constraints and the uncertainty over the permanent income of the recipient (e.g., Cox (1990), Altonji, Hayashi and Kotlikoff (1995)).

A second branch of models examine the parents' decision of leaving bequests to their children. Since Becker's (1981) early work, it is well recognized that bequests can influence children's behavior. Bernheim, Shleifer and Summers (1985) show that the testator can take this into account and strategically design a bequest rule that maximizes the surplus extracted from the prospective heir(s). In particular, in equilibrium the amount of "services" provided by the recipient (child) to the testator (parent) is increasing in parental wealth and in the credibility of the threat of disinheritance, as proxied for example by the existence of other potential heirs.

Finally, a recent model by McGarry (1999) jointly determines the pattern of inter-vivos transfers and bequests in a multiperiod setting. This model differs from McGarry's in several respects. First, her emphasis is on the role played by liquidity constraints and by uncertainty over the recipient's permanent income, while in this model there are no liquidity constraints for the recipient and no uncertainty. Second, McGarry's is a purely altruistic model, while in this setting children strategically act to influence their parents' choices. Third, in contrast to previous models with one donor and one beneficiary, this model has two potential beneficiaries (a child and a non-child) to embody the conflict in family relationships characteristic of matrilineal societies. Finally, in the present setting the parent is *not* unconstrained in his choice to bequest, but must follow the relevant descent rule.

Combining the elements of these different models it is possible to construct a framework in which the choice between donations during life and bequest is used strategically by the parent, and this induces children to send transfers to the parent while he is alive to affect his bequest decision.

4 The data: a descriptive analysis

The above predictions will be tested using household-level data from the Ghana Living Standard Surveys (GLSS) of 1987/88 and 1988/89. The GLSS contains information on transfers to and from different relatives of the household head, to a level of detail which distinguishes between spouse, children, grandchildren, siblings, parents, parents in law, nieces or nephews, etc. Unfortunately, though, transfers are recorded only from and to people who are *not* household members, so there is no way to infer anything about monetary transfers within the household (see Kochar's (2000) recent paper for a discussion of this issue). Furthermore, as mentioned above, among ethnic groups in Ghana only the Akan follow matrilineal descent principles. The full sample consists of 4,936 households pooled from both years (but with no overlap of the same household in consecutive years).

[Insert table 1]

Table 1 reports the ethnic composition of the sample, both in the aggregate and separately for urban (i.e., with more than 5,000 inhabitants) and rural areas. Akans constitute 49% of the sample, with no difference between the two types of areas. The only significant difference regards the Ga and Adangbe, who are predominantly located in the area of the capital.

[Insert table 2]

Table 2 reports summary statistics on household composition for the full sample (columns 1 to 3) and for male headed households only (columns 4 to 6), distinguishing between Akan and non-Akan. The p-value in each panel refers to the null that the difference between Akan and non-Akan is zero, against the alternative that it is different from zero. In the full sample the fraction of married household heads is 72%, and Akans are singificantly less likely to be married (68% only are). However, looking at female headed households we find that 38% of Akan female household heads are married, compared to only 22% of non-Akan. This suggests that relatively many Akan married women are household heads, compared to other ethnic groups. This is also reflected in the lower incidence of cohabitation of spouses among the Akan: 64% against 80% for the other groups.[6] The probability that there are children living with the household head is 4 percentage points lower for the Akans, and also lower is the number of such children. Conversely, it is more likely that Akan household

[6] Residential choice would require a more careful examination, but for present purposes it is not endogenized. For an analysis in which economic outcomes and residential choice are jointly determined, see Foster (1998).

heads have children under 30 years of age living outside the household (from now on refereed to as non-resident children). Finally, only 5% of the households have a nephew of the head among their members, and the percentage for Akans is actually lower than for other groups. This seems to suggest that any relation between Akan transfer choices and presence of nephews in the household should go not through the higher likelihood that there is a nephew but through the different role that nephews play in matrilineal households.

[Insert table 3 and 3bis]

Table 3 reports mean probabilities of receiving net transfers (defined as a positive difference between the transfer sent to and the transfers received from a given sources) at different levels of disaggregation regarding the donor. The first three columns refer to the whole sample, while the last three to households who received positive transfers in the aggregate. In the full sample, 28% of the households received net transfers, and Akans were significantly more likely to receive than the remaining groups. Scrolling down the columns, Akans remain more likely to receive from each individual source but from siblings, consistently with an interpretation in which siblings are the 'default' heirs by the matrilineal rule, and hence have less incentives to make strategic transfers during lifetime. Table 3-bis contains analogous figures for the average amount of net transfers from each source, conditional on net transfers from that source being positive.

It is interesting to examine the time profile of net transfers received with respect to the age of the recipient. This is done in figures 4 to 7 through locally weighted smoothing of the probability of receiving transfers on the age of the head.[7]

[Insert figures 4 to 7]

In figure 4 the probability of receiving net transfers over the lifetime is traced for the full sample and for Akans and non-akans separately. Both subsamples have a minimum around 40 years of age, but while the pattern for Akans is stadily increasing after 40, for the remaining groups it gradually levels off. It is interesting to investigate whether this pattern is consistent across different sources or not. Figure 5 displays the patterns for the full sample disaggregated by sender. Transfers from spouses monotonically decrease during the lifetime, as do those from parents (not surprisingly) and from siblings. Transfers from children instead increase steeply between 40 and 60 years of age and then grow less steadily. Figures 6 and 7 report the same graphs for Akans and non-Akans,

[7] Cleveland's lowess running line smoother with bandwith equal to .4 is employed.

respectively. The most interesting difference regards transfers from children: while for Akans they increase steeply after 40 until the very end of the parent's life, for the remaining groups they reach a maximum aroun 80 and then decrease. This pattern is consistent with the conjecture that Akan children make strategic transfers to their parents to induce them to leave them some property before it is appropriated by the matrikin, and this need actually *increases* as the parent's life approaches the end.

5 Preliminary econometric results

We next move to multivariate analysis to examine transfer choices of several actors.

[Insert table 4]

Table 4 contains estimates of the probability of receiving a transfer from parents (columns 1,3,5) and of the amount received (columns 2,4,6) allowing for selection through a Heckman model, conditional on the recipient's father and/or mother being alive and *not* living in the same household. Estimates are reported for the full sample and then separately for household heads younger than 30 years and for older ones. While for the former we can expect that transfers from parents mainly serve the purpose of helping the child set up a family or a productive activity, for the latter they are more likely to be exchange motivated. Controls include characteristics of the recipient, such as labor income, age, education, marital status and cohabitation, the presence of children in or out of the household, and a dummy for whether the head was ill in the last year, as a proxy for unexpected shocks. Two characteristics on the side of the sender, namely mother's and father's grade, are included to proxy for the contributing capacity of the latter. Finally, the urban dummy and language dummies are included. The single most relevant characteristic positively correlated with both the probability and the amount received is the education of the recipient's father, as expected. The Akan dummy has a positive and marginally significant impact on probability in the full sample, but not in the urban and rural subsamples. Surprisingly, the income of the recipient is insignificant in all equations.

[Insert table 5]

Table 5 looks at transfers received from children, conditional on the household head having at least one child who resides outside the household. The controls in the first two columns are the same

as in the previous regressions, except that the age of the oldest nonresident child and the education of the most educated nonresident child are included to proxy for the donor's contributing capacity. Not surprisingly, the probability of receiving a transfer increases both with the recipient's and with the children's age. Furthermore, the coefficient on Akan is positive and statistically significant in column 1, consistently with the predictions of the theory. Also, the fact that the recipient's income enters positively in the amount equation seems to suggest an exchange motivated behavior on behalf of the child. Columns 3 and 4 repeat the probability regressions controlling more accurately for the characteristics of the children who live within the household. Sex composition does not matter, while the presence of children between 0 and 11 years of age *decreases* the likelihood that a nonresident child will send in transfers, opposite to what an altruistic model would predict.

[Insert table 6]

Finally, table 6 tests a sharper prediction of the model, namely whether children's incentives to send transfers to parents are affected by the likelihood that the parent will obey the customary rule and leave all property to the matrikin. The strength of the links with the matrikin is proxied by the presence of a nephew of the head in the household, and the interaction term between the Akan and the nephew dummy is meant to capture whether any potential effect is specific to the matrilineal ethnic group. In the full sample the interaction term is not significant, and this is likely due to the fact that customary inheritance rules do not play a relevant role in urban areas, since they refer mostly to inherited agricultural property. When the sample is restricted to rural households, the presence of a nephew in the household per se decreases the likelihood that the head receives a transfer from the children, but for Akan households the opposite is true. Indeed, when only households whose heads are older than 45 are considered, this effect is strengthened, consistently with the interpretation proposed by the model.

6 Concluding remarks

Further work can be done exploiting the panel nature of the data. Furthermore, in the analysis of rural households this paper has neglected the issue of crop differentiation by gender, though there is evidence that such differentiation exists in Ghana (see Doss (2001)). Future work should take this into account. Finally, it would be interesting to examine the impact of inheritance rules from an intra-household allocation perspective, e.g. by focusing on investments in children's health and

education.

References

[1] Altonji, J., F. Hayashi and L. Kotlikoff, "Parental Altruism and Inter Vivos Transfers: Theory and Evidence", *Journal of Political Economy*, 105(6), 1121-1166.

[2] Bernheim, D., A. Shleifer and L. Summers (1985), "The Strategic Bequest Motive", *Journal of Political Economy*, 93(6), 1045-1076.

[3] Cox, D. (1987), "Motives for Private Income Transfers", *Journal of Political Economy*, 95(3), 508-546.

[4] _____ (1990), "Intergenerational Transfers and Liquidity Constraints", *Quarterly Journal of Economics*, February, 187-217.

[5] Doss, C. (2001), "Men's crops? Women's crops? The Gender Patterns of Cropping in Ghana", mimeo, Williams College.

[6] Fortes, M. (1950), "Kinship and Marriage Among the Ashanti", in A.R. Radcliffe-Brown and D. Forde (eds), *African Systems of Kinship and Marriage*, London: Oxford University Press.

[7] Foster, A. (1998), "Altruism, household coresidence and Women's Health Investments in Rural Bangladesh", mimeo, Brown University.

[8] Kochar, A. (2000), "Parental Benefits from Intergenerational Coresidence: Empirical Evidence from Rural Pakistan", *Journal of Political Economy*, 108(6), 1184-1209.

[9] McGarry, K. (1999), "Inter Vivos Transfers and Intended Bequests", *Journal of Public Economics*, 73, 321-351.

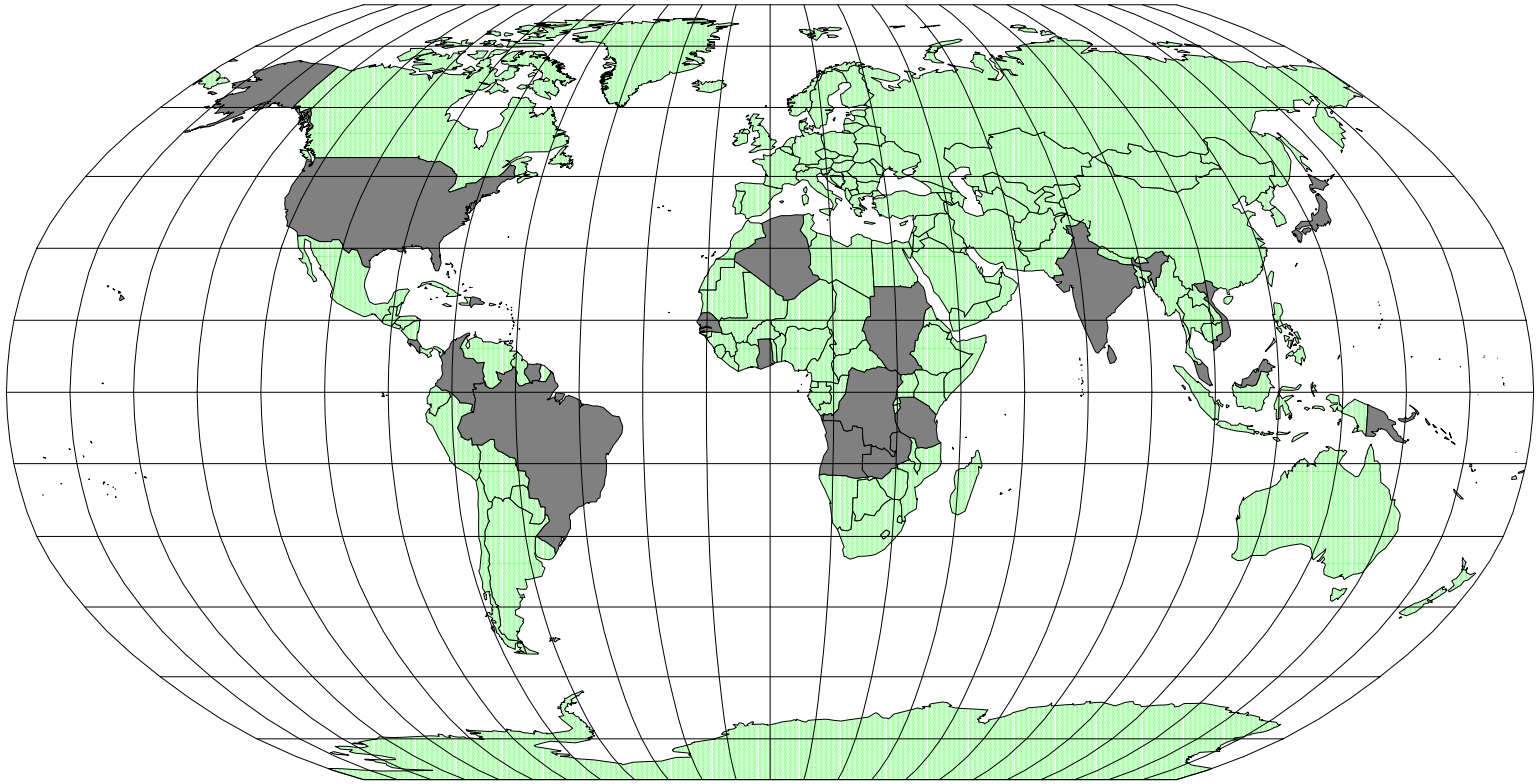
[10] Okali, C. (1983), *Cocoa and Kinship in Ghana; The Matrilineal Akan of Ghana*, Boston: Kegan Paul International.

[11] Quisumbing, A., E. Panyongayong, J.B. Aidoo and K. Otsuka (2002), "Women's Land Rights in the Transition to Individualized Ownership: Implications for the Management of Tree Resources in Western Ghana", *Economic Development and Cultural Change*, forthcoming.

[12] Quisumbing, A. and K. Otsuka (2001), "Land Inheritance and Schooling in Matrilineal Societies: Evidence from Sumatra", *World Development*, 29(12), 2093-

[13] Rattray, R.S. (1969), *Ashanti Law and Constitution*, New York: Negro Universities Press.

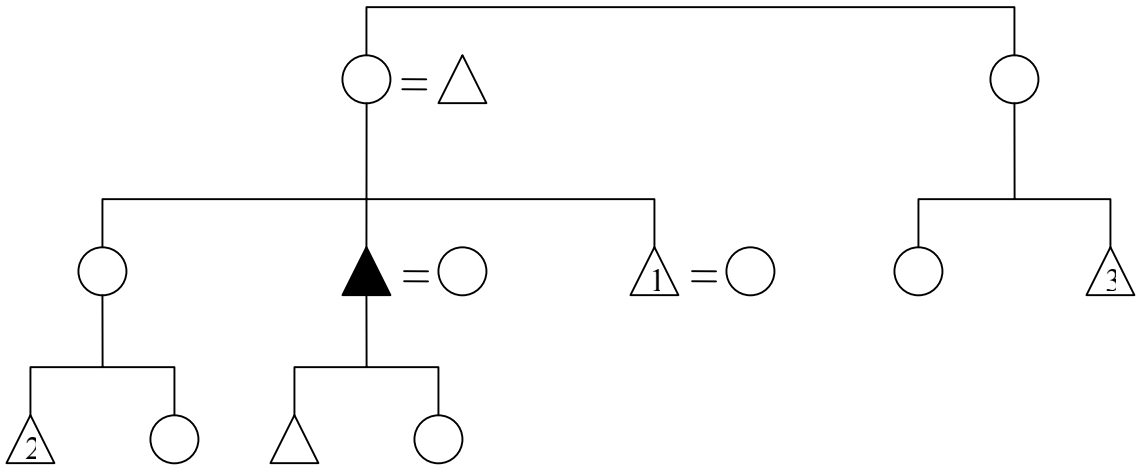
Fig.1: Matrilineal descent in the world



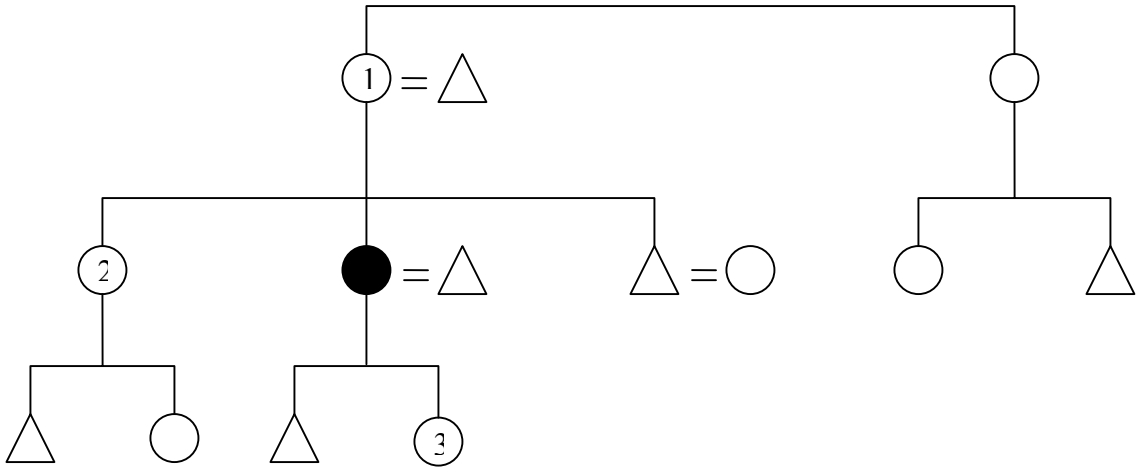
Matrilineal group present (20)

Fig.2: Descent diagram, MATRILINEAL

Panel A: Male head



Panel B: Female head



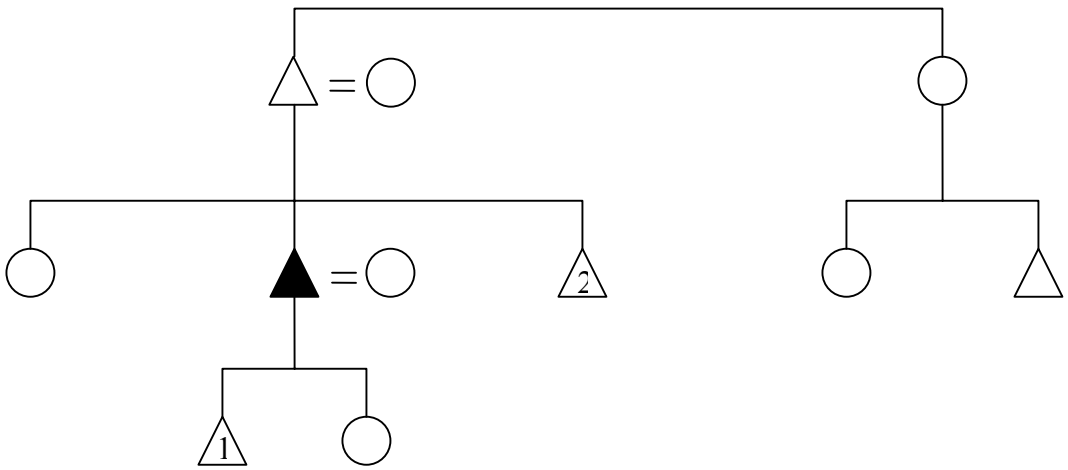
Notes:

△ Male

○ Female

Shaded area refers to household head. Numbers indicate order of inheritance

Fig.3: Descent diagram, PATRILINEAL



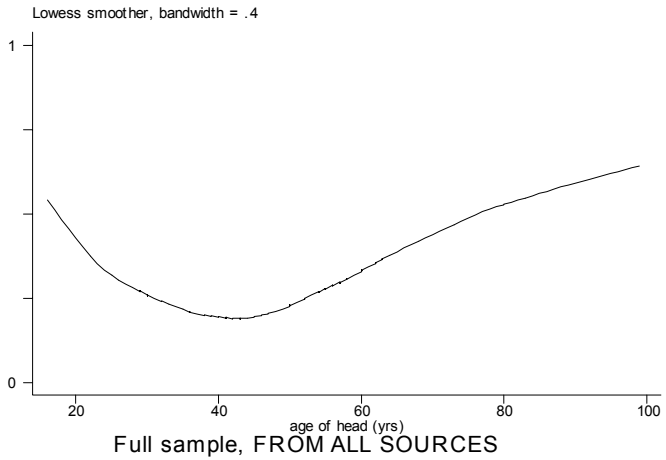
Notes:

△ Male

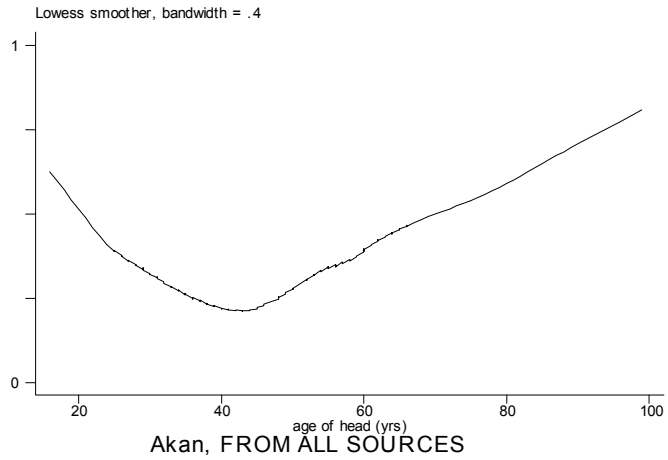
○ Female

Shaded area refers to household head. Numbers indicate order of inheritance

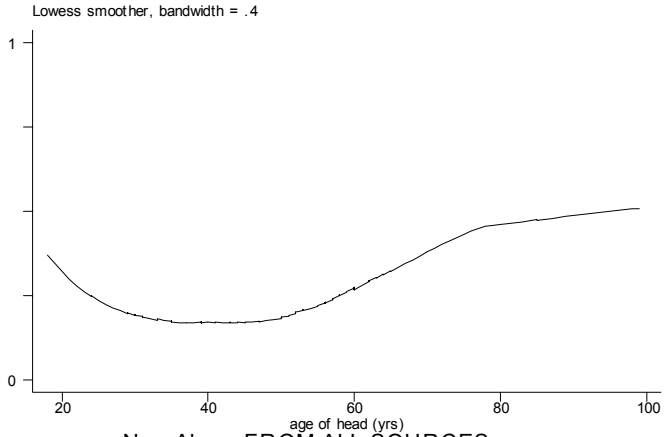
Fig.4: Prob. of receiving positive net transfers, all sources



Full sample, FROM ALL SOURCES



Akan, FROM ALL SOURCES



Non-Akan, FROM ALL SOURCES

Fig.5: Prob. of transfers by source, all households

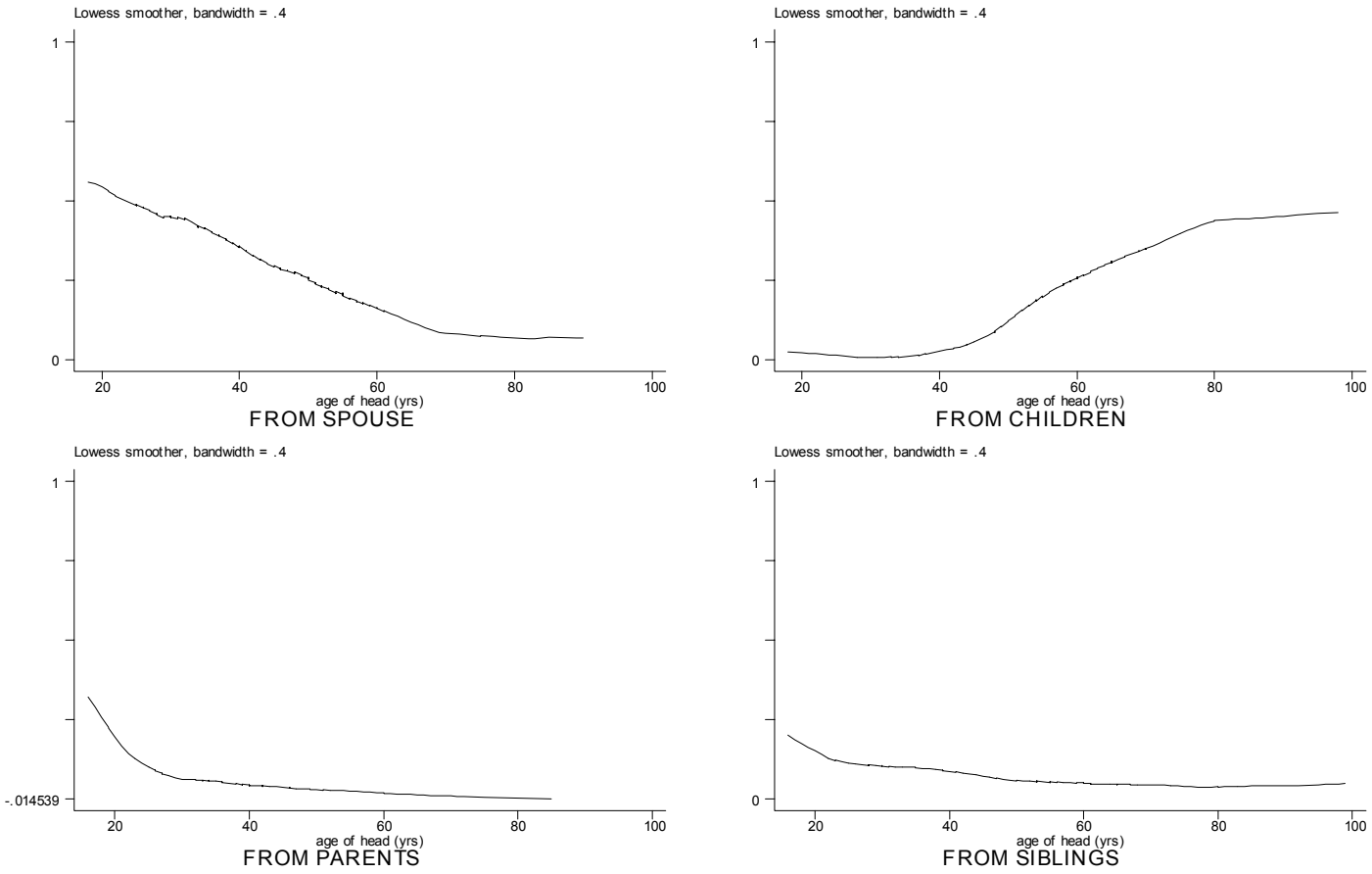


Fig.6: Prob. of transfers by source, Akan

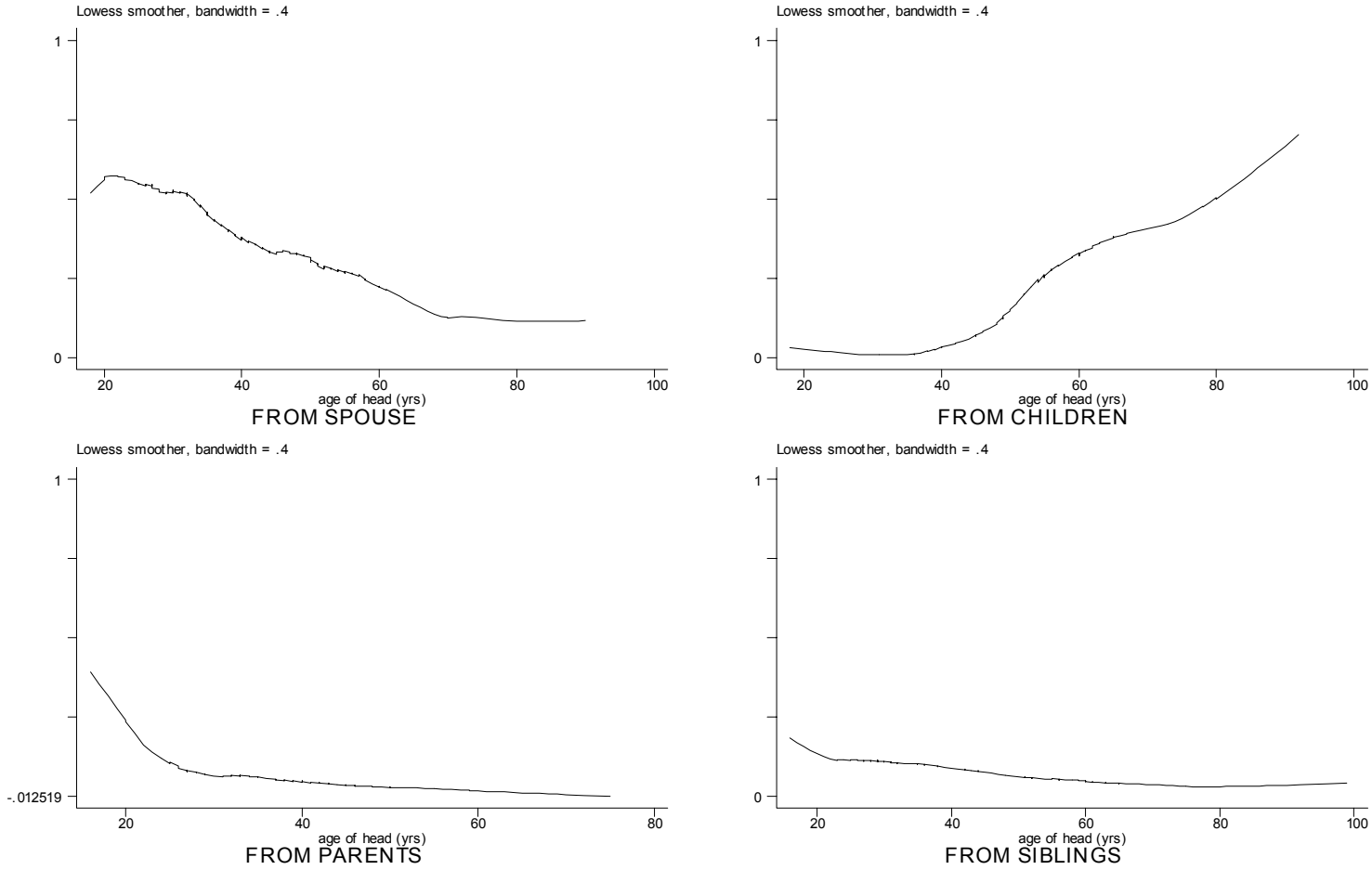


Fig.7: Prob. of transfers by source, non-Akan

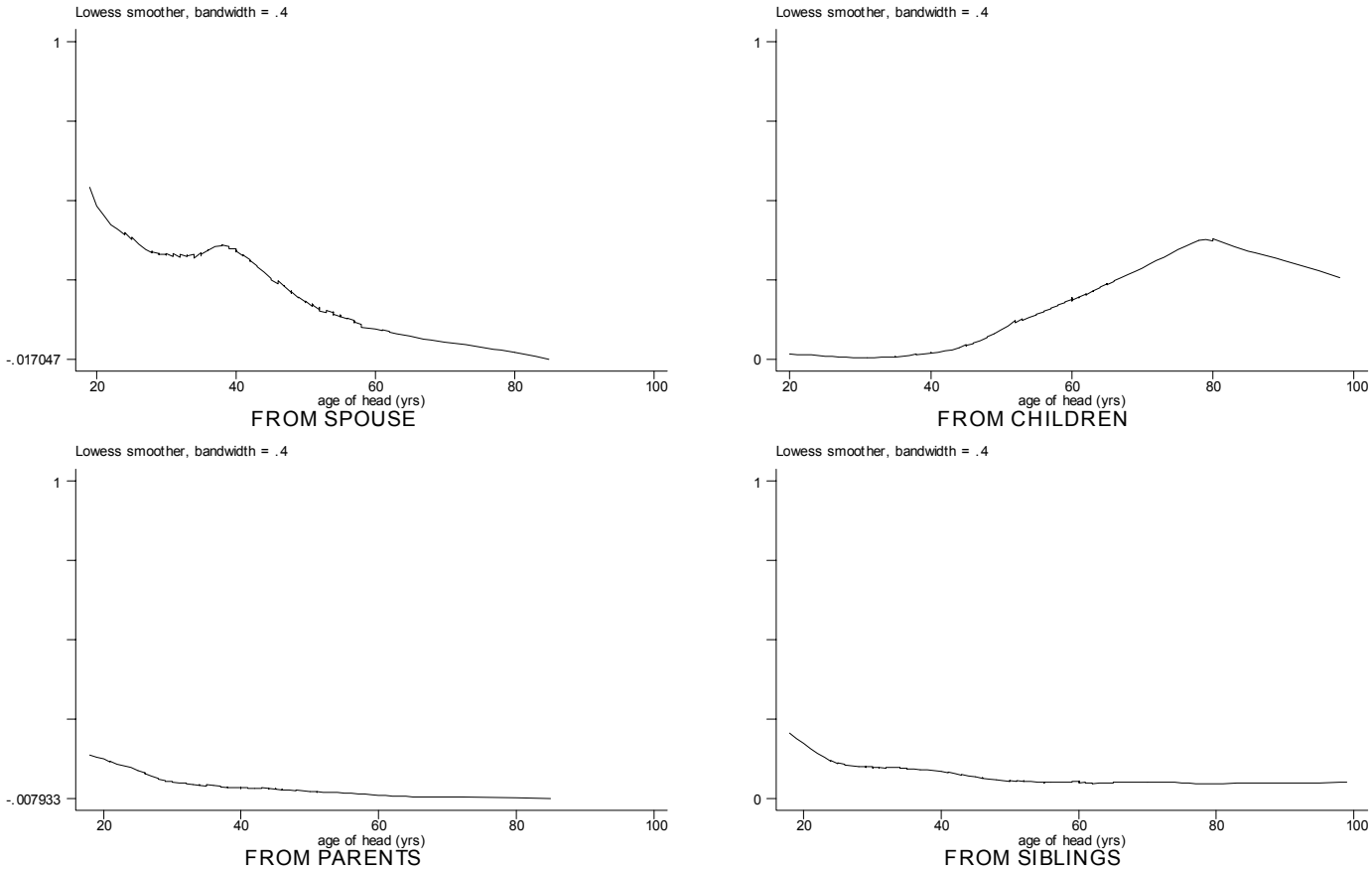


Table 1: Language Distribution

	Full Sample	*Rural*	*Urban*
Akan	.49	.49	.49
Ewe	.16	.16	.15
Ga_ad	.08	.05	.12
Other	.27	.30	.24

Source: author's calculation on the GLSS.
Sample include both rounds of the survey

Table 2: Household Composition

	All Households			*Male-headed Households*		
	Full Sample	*Rural*	*Urban*	*Full Sample*	*Rural*	*Urban*
	[1]	[2]	[3]	[4]	[5]	[6]
MARRIED						
All Households	.72	.10	.69	.83	.85	.80
Akan	.68	.68	.68	.82	.83	.80
Non-Akan	.75	.78	.71	.84	.86	.80
p-value$^{(a)}$	.00	.00	.10	.13	.08	.86
FEMALE-HEADED						
All Households	.30	.29	.32			
Akan	.38	.38	.38			
Non-Akan	.22	.19	.27			
p-value$^{(a)}$	.00	.00	.00			
SPOUSE COHABITATION						
All Households	.72	.76	.65	.89	.92	.82
Akan	.64	.67	.59	.85	.89	.79
Non-Akan	.80	.84	.71	.91	.94	.85
p-value$^{(a)}$	.00	.00	.00	.00	.00	.00
CHILDREN IN HH						
All Households	.71	.73	.67	.71	.74	.66
Akan	.69	.71	.66	.68	.70	.64
Non-Akan	.73	.75	.69	.73	.76	.67
p-value$^{(a)}$	.00	.00	.28	.00	.00	.20
# CHILDREN IN HH						
All Households	2.26	2.39	2.03	2.41	2.56	2.14
Akan	2.10	2.17	1.96	2.20	2.29	2.04
Non-Akan	2.41	2.60	2.10	2.58	2.77	2.22
p-value$^{(a)}$	.00	.00	.16	.00	.00	.15
NON-RESIDENT CHILDREN						
All Households	.57	.58	.56	.59	.59	.59
Akan	.58	.60	.56	.62	.63	.60
Non-Akan	.56	.56	.55	.56	.55	.58
p-value$^{(a)}$	.04	.02	.83	.00	.00	.44
# NON-RESIDENT CHILDREN						
All Households	1.56	1.62	1.46	1.70	1.73	1.64
Akan	1.67	1.76	1.51	1.94	2.06	1.74
Non-Akan	1.46	1.48	1.42	1.51	1.49	1.56
p-value$^{(a)}$	.00	.00	.31	.00	.00	.13
NEPHEW IN HH						
All Households	.05	.05	.04	.05	.05	.04
Akan	.03	.03	.04	.04	.04	.04
Non-Akan	.06	.06	.05	.06	.06	.05
p-value$^{(a)}$	.00	.00	.10	.05	.04	.56

Source: author's calculation on the GLSS. Sample include both rounds of the survey

(a) Null hypothesis: $\mu_{Akan} - \mu_{Non-Akan} = 0$ Alternative hypothesis: $\mu_{Akan} - \mu_{Non-Akan} \neq 0$

Table 3: Probability of Net Transfers

	All Households			*Households with positive transfers*		
	Full sample	*Rural*	*Urban*	*Full Sample*	*Rural*	*Urban*
	[1]	[2]	[3]	[4]	[5]	[6]
ALL SOURCES						
All Households	.28	.27	.31			
Akan	.34	.34	.34			
Non-Akan	.23	.19	.28			
p-value[(a)]	.00	.00	.01			
FROM SPOUSE						
All Households	.08	.07	.09	.26	.25	.28
Akan	.11	.11	.12	.32	.31	.32
Non-Akan	.04	.03	.06	.18	.16	.22
p-value[(a)]	.00	.00	.00	.00	.00	.00
FROM CHILDREN						
All Households	.10	.11	.09	.34	.38	.27
Akan	.12	.13	.10	.34	.38	.29
Non-Akan	.08	.08	.08	.33	.39	.26
p-value[(a)]	.00	.00	.04	.63	.68	.51
FROM PARENTS						
All Households	.03	.03	.04	.10	.08	.12
Akan	.04	.03	.05	.10	.09	.12
Non-Akan	.02	.02	.04	.10	.07	.13
p-value[(a)]	.00	.00	.22	.86	.46	.90
FROM SIBLINGS						
All Households	.08	.07	.09	.23	.23	.24
Akan	.08	.08	.08	.19	.19	.19
Non-Akan	.08	.07	.09	.29	.29	.29
p-value[(a)]	.69	.24	.44	.00	.00	.00

Source: author's calculation on the GLSS. Sample include both rounds of the survey

(a) Null hypothesis: $\mu_{Akan} - \mu_{Non-Akan} = 0$

Alternative hypothesis: $\mu_{Akan} - \mu_{Non-Akan} \neq 0$

Table 3-bis: Amount of Net Transfers

	Full sample	*Rural*	*Urban*
ALL SOURCES			
All Households	42,695	29,002	62,878
Akan	44,523	31,082	67,870
Non-Akan	40,047	25,458	57,140
p-value$^{(a)}$	.33	.05	.29
FROM SPOUSE			
All Households	58,160	42,379	79,698
Akan	54,565	40,172	78,074
Non-Akan	67,081	48,578	82,449
p-value$^{(a)}$	.16	.25	.80
FROM CHILDREN			
All Households	32,999	25,225	48,988
Akan	31,863	27,224	42,510
Non-Akan	34,706	21,943	57,131
p-value$^{(a)}$	.66	.26	.39
FROM PARENTS			
All Households	25,540	16,591	34,240
Akan	21,394	14,124	30,386
Non-Akan	31,722	21,632	38,547
p-value	.03	.11	.28
FROM SIBLINGS			
All Households	36,531	15,969	65,437
Akan	47,694	17,443	100,505
Non-Akan	25,893	14,300	39,248
p-value	.11	.32	.05
INCOME			
All Households	129,884	106,094	166,971
Akan	118,815	89,172	172,605
Non-Akan	146,491	135,118	160,509
p-value$^{(a)}$	.01	.00	.51

Source: author's calculation on the GLSS. Sample include both rounds of the survey
Monetary amounts in Ghanaian cedis, constant prices Sept. 1989
(a) Null hypothesis: $\mu_{Akan} - \mu_{Non-Akan} = 0$
Alternative hypothesis: $\mu_{Akan} - \mu_{Non-Akan} \neq 0$

Table 4: Transfers from parents

	Full Sample		*Head* $\leq$ 30 yrs		*Head* $\geq$ 30 yrs	
	Prob.	*Amount*	*Prob.*	*Amount*	*Prob.*	*Amount*
	[1]	[2]	[3]	[4]	[5]	[6]
Income$^{(a)}$	-.051	.002	-.128	.0003	-.002	.001
	(.129)	(.006)	(.284)	(.007)	(.104)	(.010)
Education	.001	-156.9	.001	-398.5	.0004	-1.3
	(.001)	(191.6)	(.001)	(330.8)	(.0005)	(255.9)
Age	-.003*	-287.2	-.035	-1415.6	-.003	-1415.4
	(.002)	(1114.2)	(.036)	(6314.9)	(.003)	(2811.1)
Age squared$^{(b)}$	.024	2.1	.001	6.2	.021	16.8
	(.024)	(13.5)	(.001)	(124)	(.029)	(32.4)
Married	-.001	-2555.4	-.019	-240.8	–	12334.4
	(.017)	(3928.8)	(.040)	(7725.4)	–	(14136.4)
Cohabitation	.003	1204.1	-.022	-3610.9	.007	6346.4
	(.011)	(4339.2)	(.030)	(6418.2)	(.008)	(8086.2)
Female	.011	-7335.9	-.031	-27373.8	.030**	25603.4
	(.015)	(20424.7)	(.021)	(30097.6)	(.021)	(31813.2)
Hh size	-.001	190.3	.004	1979.3**	-.001	-141.8
	(.002)	(406.6)	(.006)	(985.2)	(.001)	(545.1)
Child in hh	-.004	-1792.3	-.017	-5137.9	.006	6202.5
	(.011)	(4933.04)	(.026)	(5766.5)	(.009)	(11706)
Non resid. child	-.009	2379.8	-.025	5512.4	-.004	-1492.2
	(.008)	(3295)	(.018)	(5110.1)	(.007)	(5336.8)
Illness	-.004	-1266.7	-.019	-1631.3	.001	-1830.5
	(.007)	(1460.8)	(.016)	(2331.4)	(.006)	(2331.6)
Father's grade	.002**	526**	.004**	665.1**	.0005	753.6**
	(.001)	(164.6)	(.001)	(285.7)	(.001)	(348.2)
Mother's grade	-.001	-571.7**	-.0002	-122.9	-.005*	-1853.3**
	(.001)	(272.2)	(.002)	(370.6)	(.003)	(579.3)
Urban	.001	-1617.1	-.017	-3267.9	.009	-1271.9
	(.007)	(2008.8)	(.015)	(4061.9)	(.007)	(2617.2)
Akan	.020*	707.8	.033	-1337.8	.012	2406.7
	(.011)	(2799.1)	(.020)	(4807.5)	(.010)	(3783.7)
Ga_ad	.048**	6020.9*	.008	288.4	.053**	10877.3**
	(.030)	(3637.5)	(.042)	(6077)	(.031)	(5247.7)
Ewe	.005	1871	.020	5207.6	-.002	-6907.8
	(.014)	(3956.2)	(.032)	(4668.5)	(.012)	(7978.7)
Constant		17584		65662.2		-28181.3
		(18636.1)		(102578)		(29600.4)
λ		-4400.61		-16884.9		19576.9
ρ		-.269		-.086		.867
No. obs	2137	2137	735	735	1383	1402
Pseudo R^2	.082		.083		.111	
Wald (p-value)	.00	.00	.00	.00	.00	.00

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.

(a) Coefficient and std. error multiplied by 10^7 in column [1], [3] and [5]

(b) Coefficient and std. error multiplied by 10^3 in column [1] and [5]

Table 5: Transfers from children

	Prob. [1]	*Amount* [2]	*Prob.* [3]	*Prob.* [4]
Income$^{(a)}$	-.105	.092*	-.109	-.107
	(.124)	(.047)	(.126)	(.125)
Education	.0006	-1210.6	.0005	.0005
	(.0005)	(2553.5)	(.0005)	(.0005)
Age	.006**	-3994	.005**	.006**
	(.002)	(24235.6)	(.002)	(.002)
Age squared$^{(b)}$	-.024	14.7	.024	-.025
	(.015)	(121.9)	(.015)	(.015)
Cohabitation	.006	-7253.1	.004	.007
	(.008)	(29400.1)	(.008)	(.008)
Female	.067**	-33855.4	.061**	.068**
	(.021)	(154770.8)	(.020)	(.021)
Hh size	-.0003	3391.7	.001	.0001
	(.001)	(2601.2)	(.001)	(.001)
Child in hh	-.005	-1697.8		
	(.010)	(22002.6)		
Age of non resid. child	.002**	-1977.6	.002**	.002**
	(.001)	(8890.5)	(.001)	(.001)
Educ. of non resid. child	.001	2993.1	.0006	.0006
	(.001)	(2816)	(.0006)	(.0006)
# of children 0-11			-.005*	
			.003	
# of children 12-16			.002	
			(.004)	
# children 17 plus			.005	
			(.004)	
Son				-.009
				(.008)
Daughter				-.003
				(.007)
Akan	.021**	-25314	.021**	.021**
	(.009)	(76576.1)	(.009)	(.009)
Constant		338765.6		
		(1753194)		
λ		-72323.44		
ρ		-.69		
No. obs	2169	2202	2169	2169
Pseudo R^2	.26		.26	.26
Wald (p-value)	.00	.00	.00	.00

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.
Controls include: illness, urban, ga_ad, ewe.
(a) Coefficient and std. error multiplied by 10^7in column [1], [3] and [4]
(b) Coefficient and std. error multiplied by 10^3 in column [1], [3] and [4]

Table 6: Nephews and transfers from children

	Full Sample	*Urban*	*Rural*	*Rural (head > 45 yrs)*
	[1]	[2]	[3]	[4]
Income[(a)]	-.010	-.013	-.072	-.017
	(.012)	(.017)	(.014)	(.057)
Education	.0005	-.001	.001**	.006**
	(.0005)	(.001)	(.0004)	(.002)
Age	.006**	-.001	.007**	.036**
	(.002)	(.005)	(.001)	(.011)
Age squared[(b)]	-.025	.038	-.037**	-.0002**
	(-.015)	(.045)	(.011)	(.0001)
Cohabitation	.006	.023*	-.004	-.039
	(.008)	(.013)	(.010)	(.045)
Female	.068**	.038	.073**	.267**
	(.021)	(.031)	(.025)	(.074)
Hh size	.0001	-.001	.0001	.003
	(.001)	(.002)	(.001)	(.003)
Age of non resid. child	.002**	.003**	.002**	.006*
	(.001)	(.001)	(.001)	(.003)
Educ. of non resid. child	.001	.0004	.001	.003
	(.001)	(.001)	(.001)	(.003)
Son	-.009	-.017	-.002	-.020
	(.008)	(.014)	(.006)	(.030)
Daughter	-.003	-.009	.003	-.004
	(.007)	(.012)	(.006)	(.027)
Akan	.020**	.029*	.012	.056
	(.009)	(.018)	(.008)	(.037)
Nephew	-.006	.152**	-.021**	-.112**
	(.013)	(.117)	(.007)	(.025)
Akan * Nephew	.041	-.013	.180*	.498**
	(.059)	(.031)	(.174)	(.274)
No. obs	2169	774	1395	1395
Pseudo R^2	.26	.31	.28	.28
Wald (p-value)	.00	.00	.00	.00

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.
Controls include: illness, urban, ga_ad, ewe.
(a) Coefficient and std. error multiplied by 10^7in column [1], [3] and [4]
(b) Coefficient and std. error multiplied by 10^3 in column [1], [3] and [4]