This draft: July 22, 2011
Very preliminary
Comments welcome

Family Ties, Inheritance Rights, and Successful Poverty Alleviation: Evidence from Ghana*

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Abstract

Do legal reforms, intended to modify or displace traditional customs in sub-Saharan Africa, improve welfare and economic outcomes? We study the impact of Ghana's Intestate Succession Law (PNDC Law111, 1986) that allows nuclear families to retain most of the family's assets should a spouse die intestate; and the 1998 Children's Act (Act 560) which, in part, mandates the pensions office to pay 60% of the unexpired pensions of retirees to minor child(ren). Our survey shows that although most people die intestate and many profess to know Law 111, it is rarely implemented. However, it seems that mere knowledge of the law provided an incentive for couples to build up family assets jointly, irrespective of education level. Surprisingly, this is least evident among people whose spouses have a matrilineal lineage tradition – the very people the reforms focused on advancing. Widows with knowledge of the law also reported better (or at least not worse) economic welfare after their husbands' deaths. We also find limited evidence consistent with Act 560 benefiting decedents' nuclear families, especially those of decedents with matrilineal lineage traditions. But our analysis also confirm the tenacity of African traditional rules. Without intensive awareness campaigns and legal aid for those unable to access the law, legal reforms alone may prove ineffective.

* We are deeply grateful to Kofi Awusabo-Asare for his suggestions and tremendous help with the household survey; and to the team of research assistants for their superb field work: Yvonne Adjakloe, Samuel Agblorti, Eugene Darteh, Kobina Esia-Donkoh, Akwasi Kusi-Kyereme and Simon Mariwah. Greatjoy Ndlovu and Panos Rigopoulos provided an excellent assistance with the data analysis. Thanks to the management of Social Security and National Insurance Trust (SSNIT) Fund of Ghana for providing access to individual records; and to William Angko and Alex Larbie-Mensah for the painful task of collecting the data. We thankfully acknowledge financial support from the National Bureau of Economic Research/Africa Project. The views expressed here are solely ours and do not reflect those of the NBER or the SSNIT.

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1. Introduction

One of the central themes in Becker's (1981) influential *A Treatise on the Family* is that individual family lives, and the decisions made therein, are inextricably linked to a society's economic outcomes. Yet, in many parts of sub-Saharan Africa (SSA), such family decisions are often dictated by traditional norms that severely limit opportunities for women and their children. An example is the traditional rules governing inheritance. Under these rules, a family may lose most of their wealth when one of the spouses dies as assets devolve to the deceased's extended family relations. Women (i.e., widows) tend to be the most impacted by these inheritance rules. Indeed, in its June 2008 report, *Achieving the Millennium Development Goals (MDGs) in Africa*, the MDG Africa Steering Group strongly linked the achievement of all 8 goals to the third: namely, promoting gender equality and empowering women. But how can policymakers and development partners empower the poor when most women in SSA face significant cultural barriers? Is it enough to target change through laws and formal institutions? Or are these traditional norms still relevant to the welfare of the under-privileged?

As in many parts of sub-Saharan Africa (SSA), the extended family serves as a bastion of emotional and financial support for Ghanaians (Plateau, 1991). This kinship-based social welfare system provides an important safety net, and might even encourage risk taking and entrepreneurship, as well as investment in education and other long-term productivity enhancing activities. But it also distorts the incentives of spouses to accumulate wealth jointly in a marital relationship by effectively vesting property rights with the extended family. Therefore, the relative economic importance of these countervailing considerations is an empirical question, and to date is little investigated.[1]

[1] The role of the extended family is gaining more interest in both theoretical and empirical economics literature. Bertrand, Mullainathan and Miller (2003) investigates the labor supply decisions of adults in Black South African homes when an older member of the household becomes eligible for pension payments. In the USA, Chiteji and Hamilton (2002) find that transfers among African-American families deters wealth accumulation relative to white families. Theoretically, Hoff and Sen (2005) show that the extended family system can become a poverty trap, and Alger and Weibull (2008 and 2010) also

The West African nation of Ghana is one example with very rigid traditional inheritance laws. Until 1985, transfer of assets was (and in many communities, still is) governed by two main rules: (i) the matrilineal and (ii) the patrilineal inheritance laws. In addition, a woman may have little inheritance rights since a husband is typically presumed to have acquired the assets, even when those assets are jointly owned with his wife.

A combination of two legal instruments, the 1985 Intestate Succession Law 111 and the 1998 Children's Act 560, were enacted to help alter the adverse impact of traditional practices on Ghanaians. However, survey reports continue to point to the fact that application of the law has yet to fully taken root in Ghana, mainly because of the dearth of information, lack of access and the rigidity of the traditional rules (FIDA, 2007; Fenrich and Higgins, 2005; and Scholz and Gomez, 2004). We exploit the heterogeneity in individuals' information sets and differences in traditional rules to investigate to assess some of these claims.

We use results from a survey and pensions benefits data to examine how a 1985 legislative instrument on intestate succession law and a 1998 reform to survivors' pension benefits are altering decisions within marriages and affecting the lives of spouses and their children. Both laws seek to balance the traditional inheritance norms with the rights of the nuclear family. Our survey of low-income households shows that, although most people die intestate and many profess to know Law 111, it was rarely implemented. However, it seems that mere knowledge of the law provided an incentive for couples to build up family assets jointly, and irrespective of education level. Surprisingly, this is least evident among people whose spouses have a matrilineal lineage tradition – the very people the reforms focused on advancing.

We also investigate the economic and social welfare of widows. Those who report knowledge of the law also report better (or at least not worse) economic welfare after their husbands' deaths, as did widows whose husbands were of matrilineal lineage. The former result suggests the reforms may have had the impact their proponents sought. The latter is consistent with the widely-held view that other mem

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demonstrated that the expectation of financial assistance from family members could prevent the development of insurance markets.

members of matrilineal lineages support widows, but might withdraw such support if a widow is knowledgeable of the law and threatens the external family with a formal legal action in accordance with Law 111.

Due to the low response rate from middle-to-high income families, we complement our survey analysis with data on individual records from the Social Security and National Insurance Trust (SSNIT), the sole organization that runs a pension annuity program for retirees in Ghana. The program also provides unexpired pensions to an heir(s) chosen by benefactor upon his/her death. The 1998 Children Act 560 mandated SSNIT to pay 60% of the total unexpired benefits to the deceased children under 18 years, regardless of the retiree's choice of beneficiaries. While inaccessibility to all pension data weighed against finding effects of Act560 on survivors' pension rights, we find limited evidence consistent with the reforms benefiting decedents' nuclear families, especially those of decedents with matrilineal lineage traditions.

Our study contributes to the growing empirical work on the economics of the family; and in particular, inheritance rights in developing countries. Quisumbing and Ostuka (2001) studied land inheritance rights and skills acquisition decisions in Sumatra; and in another paper, Quisumbing, Panyongayong, Aidoo and Otsuka (2001), they find that improved women's land rights in Ghana provides more incentives for tree crop cultivation, such as cocoa. Lastarria-Cornhiel (1997) studies the impact of privatization on the land rights of marginalized persons in Africa. A broader review of the gendered dimensions of inheritance in many parts of the world is provided by Hacker (2010). Our results inheritance and the incentives therein for joint ownership of family assets are similar to Ellul, Pagano and Panuzi (2010), though in a different context. In a sample of 10,004 family and nonfamily businesses across 38 countries, they find that strict (traditional) inheritance laws couple with a weak legal investor protection severely undermines investment in family-owned businesses, but not the nonfamily firms. When inheritance norms allows (or requires) the founder of a family business to bequeath a good proportion of his/her estate to non-controlling heirs, investors are often reluctant to provide external capital for the family firm.

The rest of the paper is organized as follows: We provide a brief background to the traditional inheritance rules within the matrilineal and patrilineal lineages in Section 2. In section 3, we outline the relevant features of both the PNDC Law 111 and the aspect of the Children's Act 560 as it affects survivor's benefits payments under the pension scheme. A descriptive analysis of the data is presented in section 4, and section 5 details the econometric methodology and empirical results. Section 6 concludes the paper.

2. Traditional Inheritance Rules: A Background

The inheritance rights of spouses and children depend on the form of the marriage. Marriages in Ghana can be monogynous or polygynous, and can be *ordinance marriages* (legally valid civil or Christian marriages) or customary marriages as prescribed by customary tribal traditions.[2] The last is by far the most popular, with up to eighty percent of marriages in contemporary Ghana entered solely under the customary system (Awusabo-Asare, 1990).

In practice, almost all couples marry in a traditional ceremony recognizing the new bond between the two families. Subsequently, some follow up with an ordinance marriage in a church. These are usually wealthier couples. Not all traditional marriages can be recapitulated as ordinance marriages because traditional marriages can by polygynous, while ordinance marriages cannot. While the ordinance marriage may specify inheritance rules – for example, that equal thirds might go to the decedent's spouse, children, and extended family – customary rules take precedence in marriages that are also entered in traditional ceremonies.

Under customary rules, the corpse and all property of a person who dies without having written a will (an intestate decedent) passes to the family. Family is customarily

[2] Islamic marriage have a 'special' status, in that the Quran defines marriage and inheritance rules – for example a man can marry up to four women, only men can inherit certain assets, etc. Islamic law shapes the customary traditions of Muslim tribes, which predominate in the far north. Consensual unions, with neither an ordinance marriage nor a marriage under tribal custom, provide no inheritance rights whatsoever. A deceased common law spouse's property reverts to the family. *Inter-vivos* transfers of wealth to a common law spouse are subject to legal challenge.

defined as the "the extended group of lineal descent of a common ancestor or ancestress" (Kludze 1983, pp 60). The head of extended family then appoints a "successor" to assume the estate, rights and obligations of the decedent on behalf of the family. Only a legal will overrides customary law, and few Ghanaians have legal wills.

The applicable customary law varies across ethnic groups, and each tribal tradition is an intricate body of rules, obligations, and norms. However, Ghana's customary legal regimes as regards inheritances can be meaningfully divided into two broad categories: matrilineal and patrilineal traditions: matrilineal and patrilineal.

2.1 Matrilineal Customary Inheritance Norms

The matrilineal Akans (Ashanti, Central and Western regions; see Figure 1 below) and the Lobi, Tampolese and Baga (Northern Ghana) all use variants of matrilineal customary law. The Akans, constituting about 48% of Ghana's population and the largest tribe[3], are often considered an archtypical matrilineal culture. Under matrilineal tradition, a family's controlling spirit passes from generation to generation only through female blood lines, from whom Akan children are believed to inherit their "flesh and blood," i.e., their source of existence (Bleeker (1966). Family ties, traced only through female ancestors, define one's extended family, or *matriclan*.

In a matrilineal tribe, one is thus related by blood to one's mother, full siblings, and half-siblings by a common mother (uterine half siblings), but not to one's father nor to any half-siblings by a common father. Hence, children belong to their mother's family, but not the father's. For example, a traditional Akan male is related by blood to his mother's brother (*wɔfa*: pron. *wə-fa*), but feels only a weak connection to his father's brother.

An Akan male does not consider his children members of his blood lineage. His closest blood relative in the next generation is his sister's son, and this nephew (*wɔfase*:

[3] The Akan tribe consists of several sub-groups, speaking distinct but mostly mutually intelligible dialects. The largest groups are the Asante, Akuapem Twi, Akyem, Brong (in the Brong-Ahafo region), Fante and Agona.

pron. *wə-fa-si*) is his presumed heir if his brothers predecease him and he dies intestate. Because Akan traditional rules cause a married couple's self-acquired property to reverts to the decedent's matrilineal extended family (Awusabo, 1990), a widow and her children can be left destitute by the husband's death. She must thus look to her brothers for support; and her children must look to their maternal uncles for bequests. The expectation of inheriting a maternal uncle's wealth is often said to blunt a nephew's incentives to acquire human capital or seek a job, and is captured neatly in an old Akan adage "*wɔfa wɔho nti me nye egyu ma*" (Lit. "I have a rich uncle so I need no job").

Note that a matrilineal definition of who is and is not in one's family does not imply a matriarchal power structure over that family. Chiefs and tribal leaders in matrilineal tribes are almost always male, and the leaders of matrilineally defined extended families are almost always their highest status males.[4]

Figure 2 illustrates the way a matrilineal controlling spirit flows from generation to generation. The members of a matriclan all share a common female ancestor, to whom their mothers are tied by female-to-female lines of descent – shown in black.

2.2 Patrilineal Customary Inheritance Norms

The main patrilineal societies in Ghana are the Ga tribe (in the Greater Accra region), the Ewe tribe (in the Volta region), and the Dagomba and Nanumba tribes in the Upper East region. In a patrilineal tribe, a family's controlling spirit passes from generation to generation only through male blood lines, and these connections define one's extended family, or *patriclan*.

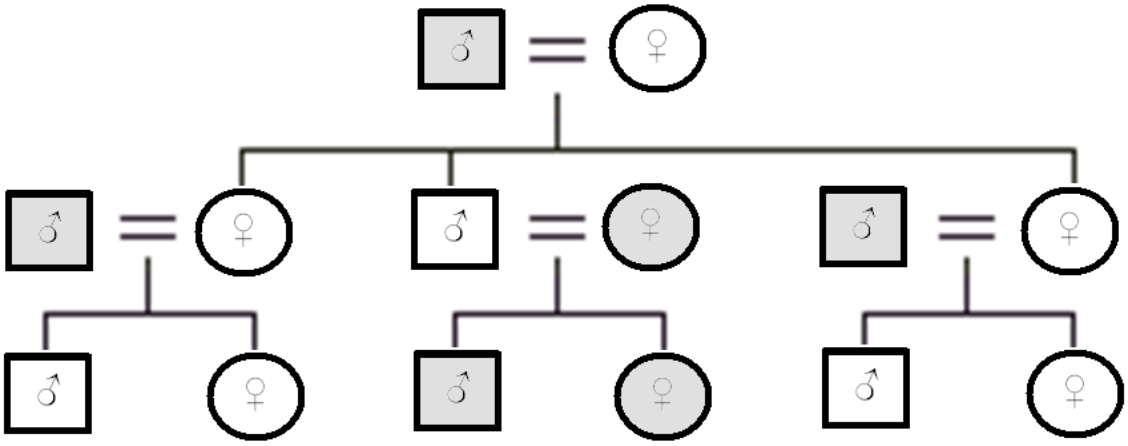
[4] Matrilineal definitions of ethnicity are not unknown in the West. For example, one is Jewish by birth only if one's mother is Jewish. A Jewish father does not count. As with the Akan, a matrilineal definition of family did not imply matriarchal control of ancient Hebrew tribes or kingdoms. Many American aboriginal cultures also use a matrilineal definition of blood kinship - the Cherokee, Gitksan, Haida, Hopi, Iroquois, Lenape, and Navajo, among others.

Figure 1: Regional map of Ghana depicting the 10 regions.
The matrilineal societies are found in the southwest regions (Ashanti, Central and Western), and parts of Northern region. Patrilineal groups are in the southeastern (Greater Accra and Volta) and the Upper regions.



Figure 2: Matrilineal Definition of Blood Relatives

A circle represents a female and square represents a male. One's lineage consists of all descendants (white) of all common female ancestors through female blood lines. Children of both genders belong to their mother's, but not their father's, lineage. One is thus related to one's mother, but not one's fathers, and to all members of one's mother's lineage but not to members of one's father's lineage.

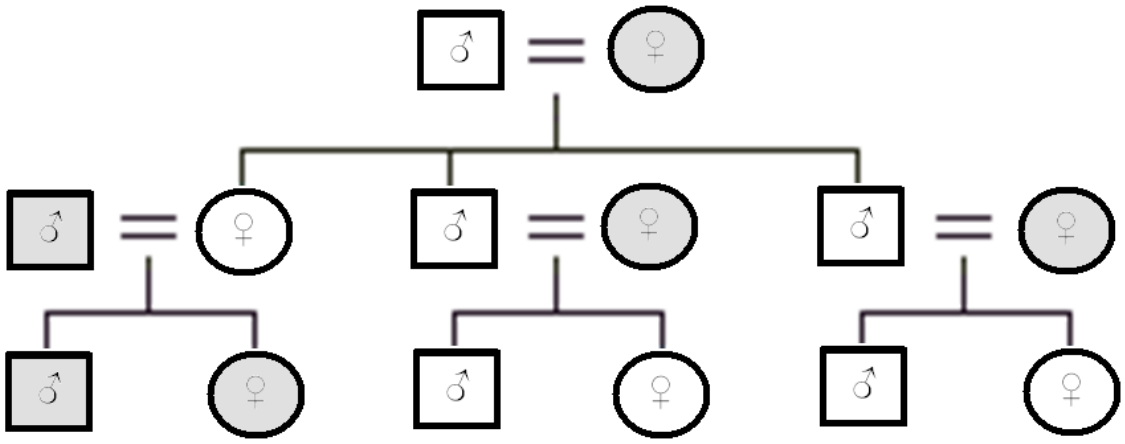


Under patrilineal custom, one's extended family thus includes one's children as well as one's father, siblings, half siblings by a common father, aunts and uncles, and so on. One's sisters and half sisters by a common father are members of one's lineage; but their children are not. This is because they belong to that sister's or half-sister's husband's family. Likewise, one's grandchildren through a son belong to one's family, but grandchildren though a daughter belongs to their father's family, and are thus not one's blood relatives.

In a patrilineal society, children inherit their father's estate (, and widows thus look to their children for support see Ollennu (1966) for details. Figure 3 distinguishes members of a common patriclan, in white, from persons normally considered relatives in Western societies, in grey, who do not count as blood relatives in a patrilineal culture.

Figure 3: Patrilineal Definition of Blood Relatives

A circle represents a female and a square represents a male. One's lineage includes all descendents (white) of common male ancestors through male blood lines. Children of both genders belong to their father's, but not their mother's, lineage. One is thus related to all members of one's father's lineage but not to members of one's mother's lineage.



2.3 Criticisms of Traditional Inheritance Norms

A key difference between Figures 2 and 3 is that matrilineal cultures do not number a deceased man's widow or children among his blood relatives. Western observers thus often see patrilineal traditions as more supportive of widows and children.

However, patrilineal norms also appears superficially more familiar to Western observers, who may neither understand nor appreciate the support provided by brothers, maternal half-brothers, and maternal uncles in matrilineal societies. A widow with a wealthy brother in a matrilineal tribe may be much better off than a widow in a patrilineal tribe whose poor husband left her children a meager estate. Which system better provides for widows and orphans is thus an empirical question, and may not even be subject to broad generalization. Some communities might apply a given set of traditional norms with more generosity to widows and children than others.

Publicized cases of impoverished widows and children in matrilineal tribes, buttressed by survey evidence assembled by women's advocacy groups and Christian organizations, demonstrated a genuine issue in the decades subsequent to Ghana's

1957 independence. Widow-headed households throughout Ghana, but most evidently in rural matrilineal homes, evidenced extreme levels of poverty – due, in part at least, to traditional inheritance norms. Intestacy law reform attracted increasing debate, but no actual reform. One reason for this deadlock was the absence of a viable reform proposal; another was doubtless the legislators' fear of providing fodder for tribal chauvinists.

The case for reform grew to encompass several arguments. The most direct was the case for conjugal (nuclear) families retaining all or most of a deceased spouse's assets to shield widows and their children from poverty.

But the case for reform went beyond such welfare considerations. Of at least equal importance were the incentives inheritance customs created for wealth accumulation by individuals and conjugal families. Especially in matrilineal tribes, a plausible case was made that the transfer of a conjugal family's assets to the deceased man's maternal nephew undermines the incentives of the husband and wife to acquire skills, exert effort, and accumulate assets; and to blunt the same incentives in maternal nephews.

Another problem concerns the alienability of assets passed to a lineage. No individual person owns these assets, and the conditions under which they can be bought and sold are still murky. A lineage is a corporate entity, but often lacks necessary legal titles because of the difficulties of deeding an asset to multiple owners. For example, throughout Ghana, lineages own land and other assets that have no value beyond their primary use. These assets cannot serve as collateral for a loan; and improvements to them are the property of the lineage, not the individual who pays for the improvements. Individuals thus have scant incentive to add to the value of such assets. Traditional inheritance systems might thus explain, in part at least, the failure of most countries in SSA to formalize titles to land and capital assets (De Soto 2000).

It is possible to contract around these problems. But lineages must solve a collective action problem to act in concert. Individuals can nullify traditional inheritance norms with a legal will. However, most Ghanaians die intestate: high illiteracy rates, a

lack of access to the formal legal system, and the fear of retaliation by the extended family doubtless all play a role. Males in matrilineal households can attempt to protect their wives and children with *inter-vivos* transfers; but these can be undone – either legally or by social pressure.

In fact, actual monetary transfers tend to go in the opposite direction: the child pays money to the father to obtain e.g. a plot of land. La Ferrara (2006) finds Akan (matrilineal) sons transferring more money to their fathers than do otherwise similar sons in patrilineal cultures, especially if a paternal aunt's son resides with, or lives in the same village as the, father. La Ferrara concludes that the increased transfers from Akan sons are partially attempts to influence their fathers to direct land gifts to them, rather than to the father's nephew.

3. Legal Reforms

By the mid-1970s, a case for comprehensive reform was widely acknowledged. For example, in 1979, the Constitution of the Third Republic of Ghana proclaimed as article 32 (Woodman, 1985) the following:

> §2 *No spouse may be deprived of a reasonable provision out of the estate of a spouse, whether the estate be testate or intestate.*
>
> §3 *Parliament shall enact such laws as are necessary to ensure that every child, whether or not born in wedlock, shall be entitled to reasonable provision out of the estate of its parents.*

Parliament, of course, did no such thing, and the Constitution was abolished in a military coup later that year. The military junta reiterated the two pledges; but took no immediate judicial or legislative action.

On June 14 1985, the Provisional National Defence Council (PNDC), the ruling military junta, proclaimed four interrelated reforms that, in theory at least, radically reformed the ground rules for intestate inheritances. These were: the *Intestate*

Succession Law (PNDC Law 111, 1985), the *Customary Marriage and Divorce (Registration) Law* (PNDC Law 112, 1985), the *Administration of Estates Law* (PNDC Law 113, 1985), and the *Head of Family Accountability Law* (PNDC Law 114, 1985). All four initiatives were justified in an accompanying Memorandum as reflecting "the growing importance of the nuclear family" relative to the extended family.

3.1 The Intestate Succession Law (PNDC Law 111, 1985)

The most important of these for our purposes, and for rebalancing customary inheritance norms against the needs of surviving members of the conjugal family, is the Intestate Succession Law (PNDC) Law 111, 1985 – hereinafter Law 111. Indeed, it has been characterized as the most radical legislative reform ever made in the private law of Ghana (Woodman, 1985). We therefore pause to elaborate.

Although Law 111 is phrased to be gender-neutral, it was seen as a victory for women, and hailed by women advocacy groups. The new law made it possible for a widow and her children – hitherto completely denied rights to the nuclear family's assets under matrilineal inheritance traditions – to become the primary beneficiaries of the deceased husband.

The writ of Law 111 is restricted in two ways. First, the law applies only to property not disposed of in a legal will. Because most Ghanaians die intestate, this restriction is not thought of paramount importance. More importantly, Law 111 does not apply to *lineage property* – a concept unfamiliar to most Western observers. Much land, and other sorts of property too, belongs to a lineage, or extended family, not to any individual. Lineage property assigned to the deceased husband for use during his life automatically reverts to the lineage upon his death; and, in a matrilineal tribe, would most likely pass to one or more maternal nephews.[5] Law 111 applies only to self-

[5] Lineage property, which encompasses the extended family-owned assets, is distinct from tribal property. A typical example of tribal property is the communal land "owned," in principle, by the paramount chieftaincy (called the *stool*) in trust. Individuals have rights to use the land for farming, or for some other commercial activity, by virtue of membership of the tribe but only with the consent from the *stoo1 (i.e., the* chief). Tribal and lineage land are essentially inalienable. Members of the currently living generation of the lineage or tribe are considered custodians for property that also belongs to all past and

acquired property – assets the deceased, or his nuclear family, purchased or created during his life. Because the husband is typically considered its sole owner, a conjugal family's self-acquired property virtually always reverted to a deceased husband's lineage. A woman's role, in whatever form, was rarely recognized. The lawmakers explicitly recognized this issue in an accompanying Memorandum, which explained the reforms thus: "It is the right that the husband with whom the woman has lived and whom she has probably served, is the person on whose property she must depend after his death."

Law 111 assigns the decedent's assets to two categories: household chattels and residue assets. *Household chattels* include all of household belongings in regular use: clothes, furniture, appliances, the family non-commercial vehicle, agricultural/farm equipments, and household livestock. All household chattels automatically devolve to the conjugal family. Residue assets include business-related and investment assets: business properties, commercial vehicles, non-primary residential properties, bank accounts, savings, and investments. Residue assets are distributed to members of the decedent's conjugal family and extended family according to a set of formulae set forth in sections 5 – 8 and 11 (Articles 1 and 2) of Law 111. Table 1 summarizes these.

The first row of the table sets out a baseline case, where the decedent has surviving relatives in all relevant classes. In this example, section 5 stipulates that 3/16 of the residual goes to the spouse, 9/16 to the surviving children, and 1/4 to the lineage; that last to be split equally between the parents and those entitled to inherit under the decedent's traditional norms.

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future generations, and thus cannot be sold without the explicit consent of countless deceases and unborn generations – a condition prospective buyers can never be certain was satisfied.

Table 1. Distribution of Residue Property under Intestate Succession Law (PNDC Law 111, 1985)

The decedent's residue property (property not classified as household chattels or lineage property) is apportioned to relatives by one of the following formulas. The applicable formula depends on which of the decedent's relatives survive.

Living conjugal & extended family members	Share of residue Law 111 assigns to:				
	Spouse	Children	Parents	Lineage [a]	State [b]
If all survive	3/16	9/16	1/8	1/8	0
No living spouse	-	3/4	1/8	1/8	0
No living children	1/2	-	1/4	1/4	0
No living spouse or children	-	-	3/4	1/4	0
No living spouse, children, or parents	-	-	-	1	0
No surviving known relatives	-	-	-	-	1

a. To be distributed in accordance with the traditions of the lineage.

b. In trust for any person subsequently identified as sufficiently close to deceased to be a legitimate heir.

The other rows modify the baseline formula in the absence of surviving heirs of one or more sorts. For example, the second line shows that if the decedent has no living spouse – because of either a divorce or the spouse's prior death – what would have been the spouse's share passes instead to the children. If the decedent has neither a living spouse nor living children, what would have been their shares passes to the decedent's lineage – with the parents receiving 3/4 of the residue property and the remaining 1/4 distributed by the lineage in accordance with its traditional norms. In the rare event of the decedent having no known relatives of any kind, the residue property goes to the state in trust, to be disbursed subsequently to someone "who was maintained by the intestate or with whom the intestate was closely identified". Thus, someone who lived with, or was related in some sufficiently close way to, the decedent can seek a court order to inherit a portion or all of the estate (see Woodman, 1985).

Over the more than a quarter of a century since Law 111 took effect, anecdotal evidence and reports by women's advocacy and religious groups concur that the law is not widely followed. The most likely reasons for this are a lack of information about the law, the inaccessibility of the formal legal system to many people, and a very real fear of

reprisals from the lineage. Many families, especially in rural areas, know only the customary laws of their tribes. Moreover, government officials in these areas are often reluctant to enforce the formal law and apply sanctions when it is violated because these same officials are often also charged by their traditional communities with upholding customary laws.

The formal law is a written body of knowledge, while traditional law is passed along orally, and is thus more accessible to illiterate people. If legislation from Accra conflicts with tribal tradition, the latter usually wins out. One major factor is illiteracy – estimated by UNICEF at 66% for adults nationwide, and certainly much higher among women and in rural areas.[6] A 2007 study by the Ghana office of the International Federation of Women Lawyers (FIDA, 2007) shows about 40% of survey respondents – interviewed in Accra (the capital and mainly patrilineal), Kumasi (the second largest city and predominantly matrilineal), and Koforidua (a mixture of inheritance systems) – had either no or an erroneous knowledge of Law 111 – with these responses much more frequent among people with little or no education. Another 57% report a fair knowledge - they have heard of the law, but have only a vague idea of its dictates.

A mere 3% had a complete knowledge of the law.[7] The FIDA study pursues the issue with the few respondents who knew of the law. Even these find actual use of Law 111 to be restricted by multiple barriers.

Widows often lack the financial resources to mount a legal challenge, and are often overwhelmed and frustrated by the cumbersome legal process required. To mount a challenge, she must petition for a Letter of Administration from the courts to gain standing – and this process must be approved by the head of the decedent's lineage, who is typically a contending party. In addition, she must obtain competent legal guidance so as to execute this document precisely in accordance with the letter of

[6] As reported at www.unicef.org on June 21st 2011.

[7] Recent education drives and social awareness programs are actively working to inform people of their rights under the formal legal system. Prominent among them are: the Ministry of Women and Children, the *Federacion Internacion de Abogadas* (FIDA, known in Ghana as the International Federation of Women Lawyers), the Women's Initiative for self-Empowerment (WISE), and Women in Law and Development in Africa (WiLDAF).

Law 111, for any procedural error nullifies her case. Added to the expense of legal advice is the cost of the decedents funeral and burial rituals, which the widow must pay in their entirety should she contest the customary law. These costs are easily prohibitive given the importance of elaborate funerals in Ghanaian cultures. The community typically expects a grand funeral, and this is only financial possible with the support of the decedent's lineage.

Perhaps even more daunting than all of these financial costs are the social costs a widow risks by challenging traditional norms. The repercussions from overtly disregarding deeply rooted tribal customs can be devastating. She and her children can be disowned and shunned by their extended family and cursed by traditional spiritual (voodoo) leaders. Ghanaians, like most people across the continent, are not only very religious, but also harbor very strong superstitious beliefs.

The messy, complicated, and divisive process of dividing the estate, with all its attendant costs, conflicts, and adverse consequences, can easily be avoided if the decedent leaves a will. But most Ghanaians do not write wills. The FIDA (2007) study reports that a majority of the widows interviewed did not know if their spouses had a will, and had never discussed writing a will with the deceased spouse. This response from one respondent, when asked why, captures the general sentiment:

> *"I could never ask [my husband] if he had a will or not ….. If I asked, he may even think I am planning to kill him so I can take his assets; or accused me of being a witch or something bad. He may even ask for a divorce."*

3.2 Survivors' (Pension) Benefits under the Children's Act 560, 1998

A second comprehensive reform to Ghanaian inheritance laws developed in stages, and provides a wealth of government data – especially pertaining to middle and high income Ghanaian households, whose survey participate rates tend to be low. The Social Security and National Insurance Trust (SSNIT) runs the sole government-sponsored pension annuity program for retirees. Should the contributor die before his accumulated

benefits are fully disbursed, 60% of the remaining benefits pass to the decedent's children under 18. Each contributor apportioned the remaining 40% to one or more chosen heirs. This reflects a sequence of reforms, but primarily the *Social Security Act* (PNDC Law 247, 1991) and the *Children's Act* (Act 560, 1998), hereinafter Law 247 and Act 560, respectively.

Law 247 designates the permissible choices open to members of patrilineal versus matrilineal cultures, and is summarized in Table 2. Thus, Law 247 prohibits a member of a patrilineal culture from listing a sister's son as an heir, and forbids a member of a matrilineal culture from listing a father's father or father's brother as an heir. But in both cases, one has the option of either adhering to the traditional norms of one's lineage or bequeathing benefits to one's conjugal family.

A pension contributor's choice of heirs is private, kept in government files, and only made available to interested parties after the contributor's death. This theoretically lets an individual defy customary inheritance norms by bequeathing their accrued pension wealth to their conjugal families, not their lineages.

The social security system dates back (at least) to 1946, when Chapter 30 of the Pension Ordinance of 1946 provided government pensions for certain public sector employees, a scheme that became known as CAP30. A more general social security system began with the military government of the time, the National Redemption Council, decreeing (NRCD 127, 1972) the expansion of a previous Parliamentary Act 279 to establish a Provident Fund to pay every formal sector worker a lump-sum upon retirement. In 1991, another military government, the Provisional National Defence Council proclaimed the *Social Security Act* (PNDC Law 247, 1991), hereinafter Law 247, under which the Social Security and National Insurance Trust (SSNIT) is made the sole government-sponsored pension system. The system resembles standard Western pension systems in some ways, but deviates markedly from them in others. Our data cover much of the period when Law 247 was in effect.[8]

[8] A new National Pensions Act (Act 766) went into effect on January 2010 and expands the scheme under Law 247 to include voluntary contributions from self-employed persons and individuals in the informal

Table 2. Schedule 45 of the Social Security Act (PNDC Law 247, 1991)

Under Law 247, only certain persons are eligible to be listed as heirs to a deceased beneficiary's SSNIT pension accruals. Different choice sets are offered to members of matrilineal versus patrilineal tribes.

Decedent's Traditional Norm	Patrilineal	Matrilineal
Mother, father	allowed	allowed
Husband	allowed	allowed
Wife, son, daughter	allowed	allowed
Brother, sister	allowed	allowed
Father's father	allowed	prohibited
Mother's mother	prohibited	allowed
Father's brother	allowed	prohibited
Mother's brother	prohibited	allowed
Mother's sister	prohibited	allowed
Sister's son	prohibited	allowed
Sister's daughter	prohibited	allowed

Like many other government pension schemes, the SSNIT is a pay-as-you-go system: current formal sector workers' monthly contributions pay for the benefits paid to pensioners each month. Law 247 requires all employers to contribute 17.5% of each employee's monthly basic salary to the fund. This appears as a 5% deduction from the employee's pay check and is matched by a 12.5% employer contribution invisible to the employee. Act 766 now makes it possible for a self-employed person can to join the system by making the full 17.5% monthly contribution to the fund.

Also like many other systems, the SSNIT is a defined benefit system. The minimum annual pension benefit is 50% of the average of the contributor's highest three annual salaries earned in the twenty years prior to retirement. The benefit rises by 1.5% of average of that average for each additional year of work and contributions to the fund. So, theoretically, anyone who retires at aged 60, having contributed for 40

sector. Social Security for the informal sector will be administered by the SSNIT Informal Sector Pension Fund.

years to the fund, merits a pension equal to 80% of average earnings in the retiree's three most prosperous years.[9]

A major difference from Western government pension systems is SSNIT benefits' fixed terms: paid up contributors are entitled to exactly 144 consecutive monthly benefit payments in retirement, no more and no fewer. Under Law 247, an individual becomes entitled to full pension benefits after contributing to the scheme for 240 months and attaining the age of 60, the mandatory retirement age.[10] The retiree then receives a monthly pension for the next 12 years. When the retiree turns 72, the benefit terminates and the retiree must rely on relatives or savings. Individuals may opt out of this default scenario and receive a 25% of the present value as a lump-sum upon retirement, and the other 75% as monthly payments over the next 12 years. If the contributor dies before age 72, the present value of the remaining payments the contributor would have received, computed at the treasury rate over the same period, is paid to the heirs the contributor chose from the options made available in Table 2.[11]

The second major step in the development of this system was the Children's Act (Act 560, 1998). Act 560 effected a major change in 1998 by mandating that, thenceforth, the SSNIT *must* pay 60% of this survivor benefits to any of the contributor's children aged 18 or younger. In theory, when a claim is submitted to the SSNIT complete with all supporting documents (e.g., death and burial certificates), it should investigate the family to ascertain if the decedent has children age 18 or younger who are not listed as beneficiaries. In practice, the SSNIT lacks the resources to do this, and merely investigate the validity of the submitted claim. The remaining 40% of the survivor benefit is then paid to the beneficiaries the decedent selected from the appropriate column in Table 2 in the proportions the decedent specified.

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[9] Early retirement, starting from age 55, with reduced pension payments is permitted under Law 127. Individual who retire before age 60 lose 7.5% of their age 60 retirement benefit for each years until their 60th birthday. People in high-risk occupations, such as mining, are exempted and can retire at 55 years with full pension.

[10] If a contributor falls short of the required 240 months, the total contributions plus interest at half the T-Bill rate is refunded as a lump sum at retirement.

[11] Benefits are discounted at the lower of the prevailing Treasury bill rate and 10.

Thus, Law 247, in conjunction with Act 560, mean that an SSNIT contributor who dies before age 72 must leave the present value of 60% of the monthly payments the contributor would have received to the contributor's children. The present value of the remaining 40% then goes to the heirs the contributor selected from the options in Table 2 in the proportions the contributor designated.

Another major difference is that Ghana's government sponsored pension program was, until very recently, restricted to formal-sector employees. Workers in the informal sector – subsistence agriculture, roadside stands, etc. – are not covered.[12] An estimated 80% (Heintz, 2005) of Ghanaians (work in the informal sector - subsistence agriculture, fishing, roadside stands, petty trading on city streets, etc. This means that SSNIT data pertain only to middle and upper income Ghanaians. We therefore use both these data and surveys of inheritance patterns among low-income Ghanaians to gain a broader picture of the current situation.

4. Data and Empirical Strategy

This section describes out data. We employ surveys and SSNIT records to gather information on bequest patterns among formal and informal sector Ghanaians, respectively. This dual strategy is necessary because middle-to-high-income Ghanaians, who generally work in the formal sector, have low typical response rates to surveys, while low-income Ghanaians, who generally work in the informal sector, are thereby excluded from the SSNIT system.[13]

[12] Recent reforms (Act 766, 2008) mandate that the SSNIT organize the Informal Sector Social Security Fund, which actively encourages informal sector workers to sign up and save for their retirement.

[13] However, the National Pension Scheme (Act 766, 2010; see footnote 7) seeks to widen the coverage of social security and old-age protection in Ghana.

4.1 Survey Data Descriptive Analysis

We survey 676 individuals who were married at the time or had previously been married. Our respondents are roughly evenly distributed across six communities in Southern Ghana. Krokrobite and Dansoman are in the Accra Region; Sagokope and Mafi-Kumasi are in the Volta Region; Assin-Fosu and Assin-Akonfudi are in the Central Region. All six are low-income communities.

As Table 3 shows, the communities provide a balance of relevant characteristics. Half are urban and half are rural. The inhabitants of Sogakope and Krokobite are typically of patrilineal lineage; those of Assin Fosu and Assin Akonfudi are largely matrilineal, whilst the populations of Dansoman and Mafi-Kumasi are more heterogeneous, and exhibit a mixture of lineages.

Table 3. Survey community characteristics

The survey was conducted in both rural and urban communities chosen for populations having predominantly matrilineal lineages, predominantly patrilineal lineages, and mixed lineages. Number of respondents and percent widowed in each village are indicated in parentheses

	Type of Lineage		
	Matrilineal	**Patrilineal**	**Mixed**
Urban	Assin-Fosu (100; 50 %)	Sogakope (111; 41.4%)	Dansoman (153; 53.6%)
Rural	Assin-Akomfudi (111; 51.4 %)	Mafi-Kumasi (103; 54.4%)	Kokrobite (56; 30.4%)

Potential survey participants were identified with the help of a town or village council member, a town leader or the traditional chief, whose approval were sought for our team of researchers to conduct the survey. Households were randomly chosen, and the questionnaires were administered to an adult person in the house, in private. Because visits to randomly selected seemingly more affluent households in the urban areas generally yielded no responses, our final data consist mostly of very low-income respondents. Indeed, about 50% of the respondents report no formal education; and

only 5.5% report having a bank account or savings – only 2.5% have a joint account with their spouse(s). Over half nonetheless report contributing to the conjugal family's wealth.

The survey data contain information to assemble a profile of each respondent's age, education level, religion, inheritance system, years married, children (by spouse), children under 18 years; and marriage type (polygynous or monogynous). Our youngest respondent was 20 and our oldest was 93. Our respondents were 42% rural and 61% female, with an average of slightly over six years of formal education. Eighty-five percent declare themselves Christian; and about 40% report their traditional custom as matrilineal. Table A2 in the Appendix shows the distribution of marriage types across both females (widows and non-widows) and males in our survey. While between 15 – 20% of women are/were in some sort of polygamous marriage, 85% of men reported to be in monogamous marriages. However, about 34.6% of the female non-widows surveyed are unsure if they are the only wife.[14]

Respondents also provided information to let us assemble similar profiles of their spouses. Spouses' profiles appear similar, though only 76% are described as Christian.

A key part of our analysis is to gauge how respondents' information about the law shaped the ownership structure of the family assets (i.e., individually owned or jointly), which law was applied in the distribution of the assets when a spouse died, and the welfare of the family after the death. Of the 676 respondents, 332 were widows or widowers. We therefore ask widow and widower respondents an additional set of questions. Nearly 59% report prior knowledge of the law, at their marriage or before the death of their spouse. But only 3.6% of widows and widowers report its use in their cases. Rather, just over 6% report their deceased spouse having a will and over 72% report the estate having been distributed in accordance with traditional norms. The

[14] Husbands with more than one wife typically maintain a separate household for each wife and her children. Men are likely to report fully regarding all their children, but women in polygynous marriages may not know how many children are in their husbands other families, or may be embarrassed to acknowledge the number. We thus use these data with caution below – for example, to construct a zero-one indicator variable for the existence of minor children.

Table 4. Survey Data, by Formal and Traditional Inheritance Indicators

Panel A. Survey variables by respondent's knowledge of Law 111, which extends limited formal legal inheritance rights to conjugal families regardless of traditional practices

	Knowledge of Law 111		Difference
	Yes	No	t-statistic
Respondent Profile			
Age	51.8	50.7	-0.70
Rural (%)	40.4%	45.4%	1.25
Female (%)	56.1%	69.1%	3.34***
Education (0-20yrs)	7.88	4.35	-8.82***
Christian (%)	89.2%	80.9%	-2.96***
Only Wife (%)	61.0%	52.4%	-1.64
Matrilineal inheritance custom (%)	48.7%	29.0%	-5.08***
Years of Marriage (yrs)	24.1	20.0	-2.43**
Information on Spouse			
Customary Marriage (%)	79.9%	77.7%	-0.40
Education of Spouse (yrs)	7.45	5.47	-4.96***
Christian Spouse (%)	84.1%	71.4%	2.62***
Children with spouse <18 (%)	87.9%	85.1%	-1.06
Other Children (%)	60.4%	67.9%	1.95*
Ownership of Assets			
Individual Savings/Assets (%)	6.19%	4.61%	-0.79
Joint Bank Account (%)	2.83%	2.04%	-0.60
Contribution to assets (0-100%)	58.6%	43.2%	-5.90***
Distribution of Deceased Assets (Widows subsample)			
Will (%)	7.90%	4.67%	-1.19
PNDC Law 111 (%)	6.35%	0.00%	-2.49**
Customary Law (%)	72.22%	71.74%	-0.078
% Unsatisfied with distribution	36.43%	46.62%	1.60
Welfare after Spouse Death (Widows subsample)			
% with worse overall economic welfare (%)	47.34%	70.90%	-4.23***
% with worse relationship with in-laws, proxied by sister-in-law (%)	26.58%	18.55%	1.59

Panel B. Survey variables, by spouses' inheritance custom

	Spouse inheritance custom		Difference
	Matrilineal	**Patrilineal**	**t-statistic**
Respondent Profile			
Age	53.3	51.5	-1.59
Rural (%)	49.3%	44.3%	0.97
Female (%)	61.0%	61.1%	0.017
Education (0-20yrs)	6.68	5.96	-1.64
Christian (%)	91.3%	81.2%	-3.43***
Only Wife (%)	71.8%	47.7%	-4.50***
Matrilineal inheritance custom (%)	88.8%	7.28%	-34.4***
Years of Marriage (yrs)	24.0	21.5	-2.01**
Information on Spouse			
Customary Marriage (%)	80.0%	66.9%	2.51**
Education of Spouse (yrs)	6.94	6.33	-1.36
Christian Spouse (%)	85.8%	69.8%	2.38*
Children with spouse <18 (%)	86.3%	85.7%	-0.204
Other Children (%)	57.7%	65.0%	1.81*
Ownership of Assets			
Individual Savings/Assets (%)	6.48%	5.11%	-0.669
Joint Bank Account (%)	3.39%	2.01%	-1.04
Contribution to assets (0-100%)	57.8%	48.7%	-3.35***
Distribution of Deceased Assets (Widows subsample)			
Will (%)	8.62%	5.19%	-1.21
PNDC Law 111 (%)	4.44%	3.13%	-.508
Customary Law (%)	74.4%	71.09%	-.543
% Unsatisfied with distribution	31.9%	46.00	2.18**
Welfare (Widows subsample)			
% with worse overall economic welfare	46.02%	64.92%	-3.27***
% with worse relationship with in-laws, proxied by sister-in-law (%)	25.23%	20.57%	0.91

remaining 18.4% did not know which rule was employed, or reported that the decedent had no assets of substantial value.[15] Almost 41% report being dissatisfied with the distribution.

To gauge welfare, we asked widows and widowers to rate their overall economic situation – as better, the same, or worse – in the years immediately after their spouse's death than in the years prior to the death. We also asked them to rate their access to financial services, health care, and education for their children.

Finally, the distribution of a decedent's assets can be contentious in any culture. In Ghana, where legal formalities and traditional custom can diverge, tensions can arise between the conjugal and extended families or, more precisely, the traditional lineage family. We therefore asked widows and widowers to compare the quality of their relationships with their deceased spouse's extended family, using their relationships with their sisters-in-law as barometers, before and after the death. Table A1 in the Appendix reports summary statistics of all these variables.

One potential complication we must consider is "mixed marriages" – where one spouse has a patrilineal tradition and another has a matrilineal tradition. Table A2 explores this, and shows interlineage marriages to be rare. Roughly nine in ten Ghanaians marry within their lineage tradition. Studying interlineage marriages would be interesting, but Table A2 reveals our sample of these to be very small.

Table 4 highlights differences in means by measures of respondents' likely inheritance options. Panel A compares respondents who know of Law 111 to respondents who do not. Unsurprisingly, knowledge of the law correlates positively with both Christianity and education, for both the respondents and spouses. Presumably, both churchgoing and education provide access to broader networks of information. That knowledge of the law increases with years married is also plausible – each year of marriage is another in which the law might attract their attention. Male respondents are more likely to know of the law – again perhaps because of broader

[15] As a check, we also asked non-widows/widowers a similar question about a close relative that passed away: 11.43 had a legal will, the intestate law 111 was used 4.46%, and the customary rule used 61.14% of the time. The remaining 21.79% were either unsure or had no response.

networks of contacts outside the village. Confirming the importance of financial incentives, knowledge of Law 111 is also greater among respondents who report contributing more wealth to their conjugal families.

Knowledge of the law is substantially greater among respondents with matrilineal traditions – suggesting women's and Christian organizations have successfully reached those the law is intended to empower. Widows who had knowledge of the law were significantly more likely to have settled their deceased spouse's estate under it. In fact, no-one who did not indicate knowledge of the law prior to their spouse's death made use of the law in dealing with the estate – suggesting that proponents of the Law's greater usage might consider more energetically distributing information at the time of a spouse's death or serious illness.

Most startlingly, but consistently with previous studies such as FIDA (2007), Panel A shows that over 70% of respondents with a prior knowledge of Law 111 nonetheless settled their deceased spouses' estates in accordance with traditional lineage customs, a figure statistically indistinguishable from that for respondents with no prior knowledge of Law 111. Presumably, much or all of the estates passed to the lineage in both cases. However, one oddity in the data merits note, though it falls short of statistical significance: widows knowledgeable about Law 111 report less dissatisfaction with the distribution of the deceased spouses' assets. But those whose spouses are matrilineal (Table 4; Panel B) also reported being less satisfied. Certainly, in either case, they are not more dissatisfied. Perhaps, in the former case, knowledge of the law provides them leverage within the traditional inheritance process; and they merely meet or surpass low expectations in the latter case.

Panel B repeats the exercise, but partitioning the data by the respondents' spouses' inheritance tradition. Respondents with matrilineal spouses tend to be more educated, Christian, and monogynous, and married longer. Remarkably, respondents with deceased spouses of matrilineal heritage – those least likely to inherit a deceased spouse's assets, report having contributed more to the conjugal family's wealth and

being more satisfied with the distribution of assets. The former seems inconsistent with low expectations.

4.2 Pension Bequests Data Descriptive Analysis

To complement our survey data, which cover very low-income Ghanaians, we utilize official data on individuals' bequest instructions regarding their Social Security and National Insurance Trust (SSNIT) benefits. These data pertain only to Ghanaians with employment in the formal sector – persons considered to be of middle to high socioeconomic status.

Hardcopy records of each beneficiary's instructions are retained by the SSNIT, and are considered confidential until the contributor's death. Thereafter, the record is opened so that interested parties can learn of their rights, if any, to the deceased contributors remaining benefits. Because of this confidentiality requirement, we were only allowed access to the bequeathal instructions of deceased contributors whose residual pensions had been disbursed, and whose filed were closed. Names, addresses, and other information that might identify contributors or their relatives were withheld.

Our total sample of SSNIT data consists of records of 860 contributors who passed away between 1992 (when Law 247 came into effect) and 2006. The median age at death is 54 years (mean 52.5 years), and is lower than the mandatory retirement age of 60 years. About 70% of our contributors were married at the time of death; but only 10% are women – reflecting the predominance of men in the formal sector, and of women in the informal sector.

Summary statistics for the variables we construct from these records are reported in Table A3 in the Appendix. Each record sets out the contributor's pension bequeathal decisions and identifies their tribal background, from which we can infer their traditional inheritance custom. Each record also lists the contributor's marital status and most, though not all, provide the average of the contributor's best three annual incomes from among the twenty years prior to the contributor's death.

The 46.5% of contributors reporting tribal affiliations that imply matrilineal inheritance norms aligns well with an estimated 48% for the national average. Thus, 46.5% of contributors chose from the list of permissible heirs under the matrilineal heading in Table 2, and the remaining 53.5% selected heirs from the list under the patrilineal heading.

Recall from section 3 that the purpose of this restriction is to restrict the contributor to leaving residual benefits to the conjugal family or the traditional lineage. Bequests of pension benefits to others – e.g. persons not belonging to the conjugal family or traditional lineage – are proscribed. Thus, the SSNIT does not permit a contributor from a patrilineal tribe to list maternal uncle as an heir. Should a contributor attempt this, the list would be rejected. In private conversations with SSNIT staff, we were told that the SSNIT cannot enforce this rule completely. In practice, a mislabeled maternal uncle might become a heir. We were also told that the SSNIT office lacks the resources to thoroughly investigate each list of beneficiaries and, in the absence of a challenge from other relatives, those on the list are typically compensated without further investigation. The record of each contributor's bequeathal decision lists the chosen beneficiaries, the fraction of the total benefits bequeathed to each, and the relationship of each to the contributor.

Upon the death of a contributor, the SSNIT takes no action. Potential heirs must submit claims for survivors' benefits when a qualified contributor dies. SSNIT staff informed us in private conversations that substantial benefits go unclaimed because the heirs are unaware the benefits exist, and that people who learn they are not beneficiaries often fail to follow up by informing those who are of their rights. Unsurprisingly, contributors who were married at the time of death listed a larger number of beneficiaries: 2.94 versus 1.94 for single contributors. Male contributors list more beneficiaries than do female contributors, and contributors from matrilineal tribes list a slightly larger average number of beneficiaries (2.85) than do those from patrilineal tribes (2.43).

Finally, each record provided the total value of survivor benefits paid out. These can be substantial by Ghanaian standards: the median for the 319 records closed in the 2006-2007 fiscal year – when the Ghanaian cedi was at ¢1.00 = US$1.00 – was ¢2,142, the mean was ¢4,500, and the standard deviation was ¢5,539. The total bequests were thus four to over seven times greater than Ghana's GDP per capita, which then stood at only about US$500.

Also recall from Section 2 that the 1998 Children's Act 560 altered the permitted distribution of survivors' benefits by the SSNIT. Prior to this, the contributor's list of beneficiaries determined the distribution of all remaining benefits; but afterwards 60% of the total benefits must go to the contributor's child(ren) under 18 years, regardless of whether they are listed as beneficiaries or not and the remaining 40% is distributed in accordance with the contributor's list of beneficiaries. The SSNIT theoretically investigates each claim to uncover other minor children, including illegitimate children, though in practice resource constraints limit this. One result of this is an increase in the number of beneficiaries in records closed after 1998 because the SSNIT adds the names of minor children to these. Thus, files closed under Act 560 named an average of 4.91 beneficiaries each, while those closed prior to 1998 named an average of 2.61 beneficiaries each. This Act thus substantially shifted SSNIT survivor benefits away from what contributors initially intended and towards their own children. This will be useful in econometric analysis below.

5. Methodology and Econometric Results

We now examine econometrically the impacts of these two reforms. Our goal is to estimate the extent to which tribal inheritance norms shape economic outcomes of those on the margins of Ghanaian society; and for the case of retirees, how the reforms influence private, end-of-life bequest decisions. We begin the analysis with individuals' bequest decisions about their unexpired pensions.

We first focus on the men in our data from the SSNIT. This is for two reasons: The contributors to the social security are mostly formal sector employees, and in our

data, about 90% are males. Because of this, bequest decisions by men are likely to have larger economic and financial consequences affect more dependents and thus are more important potential factors for explaining general poverty levels. We follow this up with a focus on women in our survey data.

5.1 Pension Bequest Decisions and the Children's Act (Act 560, 1998)

The 1998 child Act 560 mandates that the SSNIT adjust survivors' benefits if the deceased one or more children age 18 or less who are not included in the list of heirs, or are included but are bequeathed less than the mandatory minimum 60% of total unexpired benefits. Typically, the guardian (usually, the surviving spouse) receives any money bequeathed to a minor child.

Ideally, we would like to investigate how this rule change altered the bequest decisions of fund contributors. In 1998, the changes were widely publicized and contributors were urged to alter their bequests to accord with the new rules. No doubt, many contributors ignored this advice and left their original instructions in place. Unfortunately, our data on closed SSNIT files includes too few decedents whose initial instructions are dated after 1998 to allow statistically meaningful analysis. We therefore contrast the recorded bequest decisions of contributors who died after 1999, some of which were changed to reflect the new rules, against the decisions of contributors who died earlier, and who thus felt no pressure to alter their instructions to the SSNIT. We take 1999, rather than 1998, as our transition year to ensure that contributors had sufficient opportunity to react to the rule change.

We first estimate the following model to determine whether the new rule altered the number of heirs a contributor lists in his SSNIT file:

$$\begin{aligned} No.\,of\ heirs = {} & X_i \cdot \alpha + \beta_o\ matrilineal + \beta_1\ postAct560 \\ & + \beta_2\ postAct560 \times matrilineal + \beta_3 matrilineal \times X_i \\ & + \beta_4 \ln (age)_i + e \end{aligned} \tag{1}$$

where $postAct560$ is an indicator variable set to one if the contributor's death occurred after 1999, and zero otherwise; $\log(age)$ is the logarithm of the age at which he died, and X_i is a set of key individual characteristics; including marital status and whether, or not, the individual is among the top 25% of total unexpired pension (*Top25Pension*) of the cohort who died in the same year. In lieu of data on contributors' total wealth, which are unavailable, we use individuals' total unexpired pensions as a proxy for the income distribution, controlling for age at time of death.

Table 5 reports the estimated parameters of regression (1), with the log of the number of listed heirs as the dependent variable. The typical contributor who died after 1999 had an average of 10% more heirs in his list of beneficiaries regardless of inheritance custom. (The mean number of listed beneficiaries by a male member of SSNIT fund is 2.67 – a rise from somewhat over 2.5 heirs per contributor to just under 3 heirs per contributor. This difference is significant in the estimation using the simple number of heirs. Note that this is over and above any age effect: the positive significant coefficient on ln(age) indicates that older men include more heirs in the bequests decisions. The effect is thus probably not explained merely by older men having larger families.

We include all male contributor files in the above analysis because many males who list themselves as unmarried nonetheless report children. These may be widowers or men with illegitimate children; or the SSNIT may not update this field when updating data about children. Re-estimating the regressions using males who report themselves as married in their SSNIT files generates broadly similar results, though the post Act 560 indicator variable now fails to attain significance in the smaller sample. For completeness, we also estimate the regression for female contributors (not shown) and married female contributors. Like males, older female contributors have more heirs; but unlike their male coworkers, females list markedly fewer heirs after Act 560 than before it. The very small sample makes this result somewhat uncertain, despite its statistical significance.

Conceding the considerable limitations of our data and methodology, we infer that the data are not inconsistent with a discernable difference between bequest decisions before and after the Act.

Table 5. Number of SSNIT Heirs Listed

***Dependent variable is the logarithm of the number of heirs listed by the deceased male contributor to the SSNIT pension system. Reported values are OLS estimates, and numbers in parentheses are t- statistics. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively*.**

Sample	All males		Married males		Married females	
Matrilineal	0.086	(0.90)	0.120	(1.26)	-0.332	(-1.46)
Post-Act560	0.100	(1.66*)	0.098	(1.25)	-0.577	(-2.75***)
Married	0.223	(3.40***)	-		-	
Top25	0.127	(1.68*)	0.158	(1.54)	-0.967	(-0.47)
Post-Act560*matrilineal	-0.038	(-0.42)	0.087	(0.74)	0.240	(0.78)
Married*matrilineal	0.122	(1.25)	-		-	
Top25*matrilineal	0.017	(0.16)	0.433	(0.31)	-0.009	(-0.03)
log(age at death)	0.572	(5.85***)	0.593	(4.28***)	1.034	(3.04***)
Intercept	-1.842	(-5.03***)	-1.707	(-3.16***)	-2.686	(-1.95*)
R^2	0.13		0.08		0.26	
No of obs	761		547		53	

The purpose of the Act was to induce contributors to provide more fully for their conjugal families and to divert bequests away from customary obligations to lineages. We therefore calculate the total fractions of unexpired pension benefits contributors' bequests to different categories of relatives, assigning zero to any unmentioned relation.

Again, data limitations necessitate caveats. We may not have the complete information about each member's family. For example, if we observe no son or daughter listed among a contributor's beneficiaries, this means he made no provisions for a son or daughter in his bequests decision. We cannot tell whether this means he

had no sons or daughters, had no sons or daughters at the time he compiled his list of beneficiaries and neglected to update the list, or deliberately chose to leave sons or daughter out of his list of beneficiaries entirely.

We partition each contributor's heirs into two groups: members of his conjugal (or nuclear) family – his sons, daughters and surviving spouse(s); and his extended family – other members of his lineage. This partition highlights the difficulties we confront in drawing inferences from these data: only 72% of males are classified as married. This is much lower that the fraction of Ghanaian men who are married, and thus recalls the problem of contributors not updating their SSNIT records. Moreover, given the high value attached to having children in the Ghanaian society, most men (and in particular, those in the formal sector) put marriage and raising a family among their highest life priorities. Also, the wide network of each lineage makes inconceivable the prospect of any Ghanaian having no relatives at all.

We then run regressions explaining the fraction of residual benefits each contributor in our sample bequeathed to members of his nuclear family, as opposed to his lineage, which we denote $percentNUC$. Specifically, we estimate

$$\begin{aligned} percentNUC = {} & X_i\alpha + \beta_o matrilineal + \beta_1 postAct560 \\ & + \beta_2\, postAct560 \times matrilineal + \beta_3 matrilineal \times X_i \\ & + \beta_4 \log(age) + e \end{aligned} \tag{2}$$

where the right-hand side variables are defined as in regression (1). Because the dependent variable is bounded by the unit interval with observations at both endpoints, we report tobit regressions in Table 6.

Table 6: Fraction of unexpired pension bequeathed to nuclear family members
Marginal effects estimated from Tobit regressions explaining fraction of benefits bequeathed to surviving spouse(s) and children, as opposed to lineage. Right-hand side variables are as in Table 5. Numbers in parentheses are robust z-statistics, adjusted for clustering by age of death. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively. Note: Pseudo R-squared may not represent variation explained by dependent variables.

Sample	All males		Married males		All females	
matrilineal	0.17	(1.97)**	0.001	(0.02)	-0.209	(-0.88)
post560	0.127	(2.45)**	0.098	(1.97)**	-0.168	(-0.91)
married	0.543	(7.71)***	-	-	0.353	(1.97)**
Top25	- 0.069	(- 1.15)	-0.055	(-0.94)	-0.215	(-1.14)
Post560*matrilineal	- 0.136	(- 1.91)*	-0.074	(-1.09)	0.267	(1.18)
Married*matrilineal	- 0.146	(- 1.77)*	-	-	-0.120	(-0.58)
Top25*matrilineal	0.034	(0.43)	0.018	(0.23)	0.296	(1.21)
Log(age at death)	0.508	(5.47)***	0.415	(4.59)***	0.534	(2.20)**
R^2 /Pseudo R^2	0.18		0.04		0.11	
No. of obs	761		547		99	

Unsurprisingly, married men bequeath more to conjugal families than to unmarried men. Some of the latter may be separated or widowers, but others might be single (at least when they filled out the SSNIT instructions form) and so have no nuclear family. We therefore re-estimate the tobits using only men who list themselves as married. The third column presents results for female contributors. Also unsurprisingly, older men leave larger fractions of their pensions to their nuclear families. This may be because older men have more wives and children, or because older men grow more attached to their conjugal families.

Participants whose deaths occur after the implementation of Act 560 allocate 12.7% more of their pensions to their nuclear families. This indicates that the Act had an effect: Trivially, when the law mandated contributors provide more to nuclear families, they complied. There is a general time trend over our sample period towards increasing

pension allocations to nuclear families – perhaps because of an ongoing erosion of traditional values. If we include a time trend in the regressions in Table 6, the trend is significant, but a jump is nonetheless discernable at 1999. This indicates that the Act had a discernable effect beyond the general trend.

Intriguingly, the primary effect is not the intended change to bequests by men from matrilineal tribes. These tend to bequeath a higher percent of their pensions to their conjugal families both before the reform, and do not substantially increase these bequests to conjugal families after 1999. One possible explanation is that men from matrilineal tribes used pension bequests to circumvent their tribal inheritance customs all along. The SSNIT bequest decision was, after all, confidential until the contributor's death, and could thus provide privacy from pressure to adhere to the traditional inheritance system. These results appear independent of the magnitude of unexpired benefits.

A major purpose of Act 560 was to change attitudes about men's responsibilities towards their nuclear families – especially in tribes with matrilineal concepts of family. The SSNIT was intended, in part at least, to provide a defense to men from matrilineal tribes who wish to provide for their children but fear the disapproval of traditionally-minded relatives. During the collection of data, staff members (in particular, female staff) at the SSNIT records office shared with us stories about how, over time, they have taken up the role of "nuclear family advocates" by prodding men to show concern for their spouses and children when listing heirs in their SSNIT records.

To see if values might be genuinely changing, we test for married men's "generosity" towards their nuclear families. We define "generosity" as the man bequeathing more than 60% to his nuclear family. That is, $generosity$ = 1 if $percentNUC$ > 60% and zero otherwise. We then run logistic regressions explaining this variable. Table 7 presents the results.

Next, we investigate the implementation of Act560, which raises the bequest to a deceased contributor's minor children to 60%. First, we estimate the likelihood that a claim is found to be in violation of the Act 560. As noted above, the SSNIT does not

automatically institute an audit. Rather, a member of the decedent's family with reason to believe a minor child was excluded from the list of heirs, or bequeathed less than 60% of the remaining benefits, can petition the SSNIT to investigate the file.[16] Secondly, we are interested in the size of the adjustments the SSNIT makes in cases where a violation of Act 560 is discovered.[17]

We estimate the probability of the SSNIT finding a violation using the following probit regression:

$$Pr(Act560\ violated = 1) = X_i \cdot \alpha + \beta_0\ matrilineal + \beta_1\ matrilineal \times X_i + \beta_2 \log(age)_i + e \quad (3)$$

where $Act560\ violated$ is an indicator variable set to one if the SSNIT decides that the contributor's bequests decision violates Act 560, and to zero otherwise.

Table 8 reports these results in the first column. The files of married decedents are about 19% more likely to be found in violation of Act560. But the older these men are, the less likely their files not in compliance with Act 560. A 100% percent increase in age above the mean, reduces the risk of being found in violation by about 49%. This may well reflect higher odds that older men have only adult children. Finally, matrilineal men in the high-income bracket are more likely to have their bequests decisions adjusted by SSNIT.

We next explore the adjustments SSNIT staff make to bequests found in violations of the Children's Act. This lets us explore which sorts of contributors are most apt to bequeath too little to their conjugal families when they have minor children. To do this, we run regressions on the adjustments the SSNIT makes under Act 560. Specifically, we estimate:

$$pct(paid) - pct(beq) = X_i \cdot \alpha + \beta_0\ matrilineal + \beta_1 matrilineal \times X_i + \beta_2 \log(age)_i + e \quad (4)$$

[16] If the contributor's list includes a minor child bequeathed less that the allowable minimum, the case is straightforward. Violations can also be uncovered when SSNIT staff ask beneficiaries who submit claims about minor children, or when minor children's' caregivers specifically request a review of the file.

[17] The Act gives SSNIT staff a degree of discretion where a violation is discovered. In such cases, the bequests to minor children can be raised to more than the minimum allowed by the Act.

Table 7: Generosity of Pension Bequests to Nuclear Family

Marginal effects are estimated using logit regressions explaining an indicator variable set to one if bequest to surviving spouse(s) and children, as opposed to lineage, exceeds the mandatory minimum required by law for minors (60%). Right-hand side variables are as in Table 5. Numbers in parentheses are robust z-statistics, adjusted for clustering by age of death. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively. Note: Pseudo R-squared may not represent variation explained by dependent variables.

Sample	**All males**		**Married males**		**All females**	
matrilineal	0.235	(2.30)**	0.048	(0.76)	-0.361	(-2.04)**
post560	0.118	(1.95)**	0.081	(1.47)	-0.346	(-2.39)**
married	0.550	(10.92)***	-	-	0.373	(2.09)**
Top25	0.035	(0.48)	0.024	(0.37)	-0.278	(-1.29)
Post560*matrilineal	-0.105	(-1.20)	-0.025	(-0.31)	0.414	(2.70)***
Married*matrilineal	-0.133	(-1.30)	-	-	-0.219	(-0.88)
Top25*matrilineal	-0.118	(-.018)	-0.02	(-0.02)	0.218	(1.16)
Log(age at death)	0.558	(5.61)	0.427	(4.71)***	0.523	(2.41)**
R^2 /Pseudo R^2	0.22		0.05		0.14	
No. of obs	761		547		99	

where $[pct(paid) - pct(beq)]$ is the percentage of unexpired pension ultimately paid to the decedent's conjugal family minus the percentage bequeathed. The left-hand side variable is always non-negative, but can be zero; so we run tobit regressions.

The remaining columns of Table 8 describe the results of this exercise. Larger adjustments are made to bequests by unmarried, younger matrilineal men. Our data do not fully clarify their circumstances. One interpretation is that, despite all of the above government policy initiatives and the SSNIT's exhortations, many young men from matrilineal tribes still feel less duty towards their wives' children, or perhaps to their out-of-wedlock children. Alternatively, young matrilineal men might be less attentive to updating their SSNIT files to record marriages and new children. Even this interpretation suggests at least less attention to the affairs of their conjugal families compared to young men from patrilineal tribes.

Table 8. Act 560 Audits and Bequest Adjustments

The first column is estimated coefficients and z-statistics for a probit regression explaining which bequests the SSNIT files ultimately judges in violation of Act 560, which requires 60% of residual pension benefits be paid to the decedent's conjugal family if he has one or more minor children at the time of his death. The sample of 454 files includes those of all males who died after 1999, whereafter the SSNIT gained authority to alter bequests. The second column presents estimated coefficients and z-statistics for a tobit regression explaining the adjustments to bequests to nuclear families in the 232 files the SSNIT deemed in violation of Act 560. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively.

Dependent variable	**Pr(Act560 violated)**		**Percent paid minus percent bequeathed to nuclear family**	
Regression type	**Probit**		**Tobit**	
	Marginal effect	**z-stat**	**Marginal effect**	**z-stat**
matrilineal	-0.035	(-0.04)	1.324	(1.71)*
Married	0.189	(2.34)**	-0.303	(-4.46)***
Ln(age at death)	-0.487	(-2.76)***	-0.104	(-0.71)
Top25	-0.006	(-0.08)	0.0001	(0.00)
married*matrilineal	0.010	(0.08)	0.066	(0.69)
Ln(Age)*matrilineal	0.002	(0.01)	-0.393	(-1.96)**
Top25*matrilineal	0.182	(1.69)*	0.016	(0.18)
McFadden's R^2	0.04		0.38	
Sample (No. of obs)	All male contributors who died after 1999 454		All male contributors who violated Act560 rules 232	

5.2 Knowledge of Law 111 and Asset Acquisition Decisions

We now turn from relatively well-off formal sector Ghanaian men to informal sector Ghanaian women on the margins of the modern economy. Here, we examine the correlation between knowledge of the Intestate Succession Law and decisions that affect asset accumulation within the marriage, inheritance outcomes, and the economic conditions of widows.

As with the SSNIT files, data limitations prevent cut and dried assessments. We cannot compare responses before and after the Law 111 – the law was enacted many years ago. Moreover, knowledge of the law is almost certainly not randomly distributed across women. Social networks among Ghanaians are generally very strong, and a woman may well belong to many social groups – religious organizations, trade groups, and so on. Information about the law is likely disseminated through these groups, so more socially active women are more likely to learn of it. Access to the media – newspapers, radio, and TV – depends on living in an urban area, literacy or having literate friends or relatives, access to electricity, and other factors that quite plausibly also correlate with their economic situations. We can control for education and literacy, but concede the potential importance of left-out variables.

To explore these issues, we estimate regressions of a woman's knowledge of Law 111 and other factors on her fractional contribution to her nuclear family's assets. Our regression model is

$$\begin{aligned}\mathrm{Contrib}_{\mathrm{assets}} = X_i \cdot \alpha + \beta_0 KnowLaw111 + \beta_1 educ_i + \beta_2 matrilineal \\ + \beta_3 matrilineal \times KnowLaw111 + e\end{aligned} \tag{5}$$

where $\mathrm{Contrib}_{\mathrm{assets}}$ is the fraction of total family assets the respondent estimates as his/her contribution. The values of $\mathrm{Contrib}_{\mathrm{assets}}$ are answers to the direct question posed to survey participants: *In your estimation, what percentage of total family assets*

Table 9. Contributions to Conjugal Family Assets

Table reports the coefficients of ordered logit regressions explaining the fraction of the conjugal family's assets that were contributed by persons of different categories. Robust z-statistics, adjusted for clustering at the town/village level are in parentheses. Regressions (5) contain the following added control variables: Spouse's education level, log of years married, and indicator variables for rural, matrilineal tradition, spouse having a matrilineal tradition, knowledge of the law interacted with a matrilineal spouse, children under 18, and children of any age. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively.

All respondents	(1)	(2)	(3)	(4)	(5)
Knowlaw111	0.889***		0.569***	0.976***	0.755***
	(6.62)		(3.20)	(5.08)	(3.39)
Educ		0.120***	0.103***		0.152***
		(5.23)	(4.67)		(7.83)
Matrilineal spouse				0.645***	0.591***
				(3.86)	(3.51)
KnowLaw111 x Matrilineal spouse				-0.472***	0.326*
				(-2.64)	(1.64)
Other controls	No	No	No	No	Yes
Sample	537	538	537	522	435
Female respondents only					
Knowlaw111	1.042***		0.976***	1.037***	0.983***
	(3.86)		(3.34)	(2.71)	(2.63)
Educ		0.052***	0.027		0.037**
		(2.67)	(1.28)		(2.30)
Matrilineal spouse				1.011***	0.455
				(3.36)	(1.18)
KnowLaw111 x Matrilineal spouse				-0.494	-0.295
				(-1.34)	(-0.56)
Other controls	No	No	No	No	Yes
Sample	326	327	326	314	245

(since marriage) is your contribution? Respondents were presented with six choices: (i) zero, (ii) less than 10%, (iii) 10 to 39%; (iv) 40 to 59%, (v) 60 to 79%, (vi) 80% or more. Because the categorical nature of this response, we employ ordered logit regressions to estimate how knowledge of the Intestate Succession Law 111 and a matrilineal spouse affect the decisions to acquire assets that will be deemed jointly owned. We denote as

X_i the set of respondent and spouse characteristics used as control variables. The indicator variable $\mathrm{chlid18}$ is set to one if the respondent has a minor child with the spouse and to zero otherwise. The variable educ is the respondent's educational level, and varies from zero (no formal education) to twenty (representing 20 or more years of formal education).

The results with and without various controls and interaction terms are presented in Table 9. Respondents who report knowledge of Law 111 also report significantly higher contributions to their nuclear family's assets. This is true for men and women, but the effect is larger for women. The effect is evident over and above any impact on asset accumulation associated with education. Despite Law 111, individuals with matrilineal spouses contribute less – though controlling for education nullifies this effect.

5.3 The Economic and Social Status of Widows

Ultimately, the purpose of the reforms we study above is to improve the lot of widows and their children. Our final set of regressions therefore examines the economic and social situations of widows in the informal economy. Based on survey responses in the four villages we study, we construct the following dependent variables.

To gauge widows' economic welfare, we ask respondent widows to compare their overall economic condition in the years immediately after losing their spouse to that in the years immediately before their spouses' deaths. The respondents were asked to choose between: (i) worse, (ii) the same, and (iii) better. From these responses, we construct a "change in overall economic welfare" indicator variable set to 1 if the widow response that her economic situation is "better" after the spouse's death, 0 if her response "the same", and -1 if her response is "worse".

A major concern about laws that assign larger fractions of a deceased husband's assets to his widow and children is that this might engender ill will towards the widow and children among members of the deceased man's lineage. This is especially salient if

the man belongs to a matrilineal tribe, where the widow and her children are traditionally thought of as the responsibility of her brother or other matrilineal relatives.

To assess widows' social situation, we ask our widow respondents about their relationships with their various in-laws. Most declined to answer regarding their mothers-in-law, however a larger fraction answered regarding their relationships with their sisters-in-law. Each widow respondent was asked to assess the quality of this relationship with her sisters-in-law in the years immediately before the spouse's death as very bad (coded as 1), bad (2), neutral (3), good (4), or very good (5); and was then asked to similarly assess the quality of the same relationships in the years immediately

Table 10. Widows' Economic and Social Status

Probit regressions explaining affirmative survey response to question about improvement in overall economic welfare and quality of relationship with in-laws (represented by sisters-in-law) from the years before the spouse's death to 2 to 5 years after the spouse's death. Sample is widow respondents only. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively.

	Overall economic welfare		**Relationship with in-law**	
	coefficient	**z-stat**	**coefficient**	**z-stat**
Knowlaw111	2.059	(3.10)***	0.005	(0.01)
Educ	0.008	(0.16)	0.085	(1.25)
Spouse educ	-0.108	(-3.01)***	-0.091	(-2.65)***
Rural	-0.638	(-1.65)*	0.793	(1.01)
log(yrs of marriage)	0.186	(0.48)	0.696	(4.29)***
Matrilineal	-0.054	(-0.11)	1.062	(2.14)**
Spouse matrilineal	1.512	(2.82)***	-0.395	(-0.61)
knowLaw*spouse matrilineal	-1.227	(-2.68)***	-0.382	(-0.48)
childrenunder18	-0.183	(-3.36)***	0.342	(0.99)
childunder18&older	0.032	(0.13)	-0.898	(-1.36)
Sample	140		132	
Pseudo R^2	0.11		0.08	

after the spouses death. From these responses, we construct a "change in in-law relationship" indicator variable defined as the response code for after the spouse's death minus the response code before the spouse's death. This produces an integer ranging from -4 (the worst possible transition: from a 5 before the death to a 1 afterwards) to +4 (the best possible transition: from a 1 before the death to a 5 after the death).

Because both of these variables are discrete, we run ordered logits to explain them in terms of other responses to our survey. These results are displayed in Table 10. Unsurprisingly widows are substantially worse off if their spouses were better educated and if they are left caring for more children. Knowledge of Law 111 correlates with an improved economic welfare as a widow, but this effect is largely reversed if the spouse was from a tribe with a matrilineal inheritance tradition. Widows' social ties to their in laws also suffer more strain if the deceased spouse was better educated, but less strain if the marriage lasted longer and if the spouse's tribal tradition is matrilineal. The correlation coefficient between our indices of welfare and before/after relationship with in-laws is 0.13.

6. Conclusion

Recent decades have seen major political, economic, social and cultural transformations across sub-Saharan Africa. These changes trouble Africans who see these transformations threatening their prized cultural traditions. Some, especially the older generation, are wary of acculturation and argue that Africa's culture and traditional institutions are the basis of life itself, and that real and sustainable growth can only emerge when these values are upheld, built upon, and passed on to future generations. See, for example, Ayittey (2004) and new evidence on traditional institutions set forth in Michalopoulos and Papaioannou (2004). Others welcome cultural assimilation as a first step towards achieving the greater economic and social freedom necessary to spur growth and give people better lives. Legal reforms designed to modify, displace, or even

overtly subvert traditional customs are advanced in the hope that new and modern institutions might lead to better economic outcomes.

This study examines an important set of traditional Ghanaian cultural values that differ starkly from those familiar in the Western world and Asian, customary tribal inheritance rules. Reformers saw these traditions deterring wealth accumulation by the country's poorest citizens and impoverishing widows and their children. These views were especially strong regarding the traditions of matrilineal tribes, in which men considered their sisters' children, not their wives' children, as their nearest relatives in the next generation. These traditions were thought to leave widows and their children especially vulnerable.

To counter these traditions, Ghana's governments enacted two major legal rules designed to nudge individuals towards making decisions that would better protect their nuclear families. First, the 1986 Intestate Succession Law 111 changed the rules for dividing up the estate of an individual who dies without a legal will. This reform let the surviving spouse and his/her children to keep majority of the family's assets, and was a major departure from customary rules that assigned most assets to the decedent's lineage (extended family) which, if the deceased belonged to a matrilineal tribe, does not include his widow and children. Second, in 1998, Ghana's parliament passed a comprehensive set of laws that protect children from abuse, curtail child-labor, and provide meaningful access to health care, education and family care. A key component of these reforms was the Children's Act 560, which mandated that the Social Security and National Insurance Trust (SSNIT), the country's pension fund administrator, allocate 60% of deceased contributors' unexpired pensions to their minor children. Both of these reforms were widely lauded as achievements in a long struggle to strengthen nuclear families and weaken tribal customs thought inimical to development.

We assess the impacts of these reforms by analyzing individuals' SSNIT files and by conducting a survey. The SSNIT files pertain to Ghanaians working in the formal sector, while the survey assesses people living at the margins of the Ghanaian economy.

Our results reveal that, although more than half of the people surveyed profess a fair to good knowledge of Law 111 and most people die intestate, Law 111 was rarely implemented in settling estates. However, it seems that mere knowledge of the law provided an incentive for couples to build up family assets jointly, and irrespective of education level. Surprisingly, this is least evident among people whose spouses have a matrilineal lineage tradition – the very people the reforms focused on advancing. These findings are consistent with knowledge of the law encouraging people to accumulate wealth. However, we cannot preclude the possibility that people who have accumulated assets are more concerned about losing them and therefore seek information about the law regarding inheritances. While formal legal rights might give widows more bargaining power – they can threaten to embarrass their lineage by demanding their legal rights – their scant usage suggests major obstacles still impede access to the law for the villagers we survey.

We also investigate the economic and social welfare of widows. Those who report knowledge of the law also report better (or at least not worse) economic welfare after their husbands' deaths, as did widows whose husbands were of matrilineal lineage. The former result suggests the reforms may have had the impact their proponents sought. The latter is consistent with that traditionalist argument that brothers and other members of matrilineal lineages support widows, but might also reflect lower expectations of widows under matrilineal inheritance traditions. We cannot reject the concern that widows with knowledge of the formal law lose lineage support. They report (insignificantly) worsening relationships with their sisters-in-law), and decline to answer questions about their relationships with their mothers-in-law.

The results from the analysis with SSNIT pension data are even less clean cut. This is, in part at least, likely due to the restriction that we examine only the files of deceased contributors whose pension bequests are fully disbursed and whose SSNIT files are closed. Conversations with SSNIT staff and management indicate that many contributors' bequest instructions were made when they first filled out a SSNIT

membership from and never updated. This "stale data" problem weighs against our finding significant effects of the legal reforms affecting SSNIT survivors' pension rights.

Nonetheless, we find some limited evidence consistent with the reforms benefiting decedents' nuclear families. Males who died after Act 560 was implemented allocate more of their pensions to the nuclear families; indeed, they bequeath significantly more than the mandatory 60% minimum prescribed by the law. Also, when the SSNIT judges a bequest decision to violate Act 560, the adjustment it imposes are overtly favorable to nuclear families, especially those of decedents with matrilineal lineage traditions.

While our analysis finds some evidence of successful reform, we feel their deeper message is a confirmation of the tenacity of African cultural traditions. Formal legislation adopted in Accra does not change the social, economic, and spiritual forces that constrain people's decisions. Genuinely effective reforms appear to require intense efforts to promote social awareness and provide legal aid for those who would exercise their rights under the reforms, and even then can achieve only qualified success.

Our findings complement recent work by Scholz and Gomez (2004). Their examination of formal-sector inheritance rights in Botswana, Ethiopia, Ghana, Nigeria, Rwanda, Senegal, South Africa, Swaziland, Zambia and Zimbabwe leads them to conclude that traditional inheritance norms prevail regardless of the paper law. Our findings suggest that the absence of resources to exercise formal legal rights may well be more important than a lack of information about those rights. Absent formal social assistance or legal aid programs – which are tenuous to non-existent in all of these countries, poor Africans rationally conclude that the economic security, however minimal, offered by one's lineage is too valuable to sacrifice for uncertain, inaccessible, and often effectively unenforceable formal legal rights.

If African governments wish to effect reforms to inheritance customs, their formal legal reforms need bolstering by awareness campaigns, meaningful rule of law, and a sensitivity to existing traditions. Appiah (2010) sheds practical light on how awareness campaigns can be run. However, challenges to longstanding traditions are

likely to meet sustained resistance in Africa, as in Asia and in the Western world. Our findings also suggest that governments seeking to counter cultural norms thought to deter development might consider designing formal legal rights to empower people within the context of their traditional cultures. Matrilineal widows' economic welfare may well have been improved by the fact that they could challenge traditional inheritance norms, even if few actually did. The law sounds hollow without an accompanying "highlife" drumbeat.

Appendix

Table A1. Summary statistics of survey data

	Obs.	Mean	Std.	Min	Max
Respondent Profile					
Age (yrs)	616	51.4	16.3	20	93
Rural (%)	636	0.425	0.495	0	1
Female (%)	636	0.615	0.487	0	1
Education (1-20yrs)	636	6.39	5.26	0	16
Christian (%)	636	0.855	0.352	0	1
Only Wife	360	0.567	0.496	0	1
Knowledge of Law 111 (1=Yes)	633	0.586	0.493	0	1
Matrilineal (%)	636	0.404	0.491	0	1
Years of Marriage	514	22.9	14.3	0	64
Information on Spouse					
Matrilineal spouse	598	0.403	0.491	0	1
Customary Marriage	604	0.786	0.410	0	1
Education Spouse	605	6.61	5.39	0	20
Christian Spouse (%)	603	0.765	0.425	0	1
Children with spouse <18	636	0.866	0.341	0	1
Other Children	636	0.637	0.481	0	1
Ownership/Assets					
Individual assets/savings	543	0.0552	0.229	0	1
Joint Bank Account	600	0.0250	0.156	0	1
Contribution to Assets	541	0.523	0.306	0	1
Distribution of assets (Widows only)					
Will	330	0.064	0.244	0	1
PNDC Law 111	219	0.0365	0.188	0	1
Customary Law	219	0.721	0.449	0	1
% unsatisfied with distribution	243	0.407	0.492	0	1
% close to mother-in-law					
Welfare after distribution (Widows)					
Financial access	311	0.788	0.410	0	1
Healthcare access	307	0.664	0.473	0	1
Education access	303	0.723	0.448	0	1

Table A2. Lineage Profiles of Respondents and their Spouses

Numbers in each cell are numbers of respondents of horizontal lineage classification whose spouses are in vertical lineage classification. Percentages to the right of these numbers are percentages of respondents, percentages below each number are percentages of spouses.

		Spouses' traditional lineage				
		Matrilineal		Patrilineal		Total
Respondents' traditional lineage	Matrilineal	331	92%	27	8%	358
		93%		11%		60%
	Patrilineal	26	11%	214	89%	240
		7%		89%		40%
	Total	357	60%	241	40%	598

Table A3: Types of marriages of survey participants

For females, 2 (or multiple of) wives means they reported to be one of two wives, etc; and for males, this means he reported to be married (customarily) to 2 wives, and so on.

	Female (Widows)		Female (Non-widows)		Male (Non-widows)	
Monogomous	176	78.22%	95	51.35%	124	84.93%
2 wives	23	10.22%	21	11.35%	13	8.90%
3 wives	17	7.56%	3	1.62%	5	3.42%
4 wives	6	2.67%	2	1.08%	4	2.74%
5 or more wives	3	1.33%	0	0.00%	0	0.00%
Don't know	0	0	64	34.59%	0	0.00%

Table A4: Summary Statistics of Pension Bequest Data

Means of key variables for all files, files of matrilineal decedents, and files of patrilineal decedents. Numbers in square brackets are sample sizes. Final column contains difference between matrilineal and patrilineal mean, with t-statistic for the difference being significantly different from zero in parentheses. One, two, and three asterisks denote significance level at 10%, 5%, and 1%, respectively.

Sample	All	Matrilineal	Patrilineal	Difference (t-stat)
	(i)	(ii)	(iii)	(ii) minus (iii)
Age at death (years)				
All decedents	52.5 [860]	52.13 [421]	52.75 [439]	-0.62 (0.82)
Male decedents	53.12 [761]	53.14 [357]	53.1 [404]	0.02 (0.20)
Female decedents	47.27 [99]	46.56 [64]	48.57 [35]	-2.01 (-0.83)
Married (fraction)				
All decedents	69.7 [600]	69.0 [290]	71.0 [310]	-2.0 (0.55)
Male decedents	71.9	72.5	71.3	1.3 (-0.39)
No. heirs listed				
All decedents	2.64	2.85	2.43	0.422 (3.25)***
Married decedents	2.94	3.21	2.68	0.53 (3.19)***
Male decedents	2.67	2.96	2.41	0.55 (3.79)***
Married male decedents	2.96 [547]	3.29 [259]	2.65 [288]	0.64 (3.63)***
If claims adjusted by Act560 [a]	4.91 [250]	5.06 [123]	4.76 [127]	0.30 (-1.04)
Bequest to nuclear family (%)				
All decedents	58.4	59.8	57.1	2.7 (0.85)
Male decedents	58.2	60.5	56.2	4.3 (1.30)
Married male decedents	73.3	74.1	72.7	1.4 (0.43)
Pre-Act560 decedents [b]	51.8 [348]	55.7 [168]	48.2 180]	7.5 (1.52)
Post-Act560 decedents	62.9 [512]	62.5 [253]	0.633 [259]	-0.008 (-0.21)
Act560 audited decedents	0.547	0.564	0.530	0.034 (0.575)
Benefits paid / claim (2006/7) [c]	4,500 [85]	5,279 [45]	3,622 [40]	1,657 (-1.38)

Notes:

a. Length of time (in years) from death of contributor to completion of disbursement of survivor benefits.

b. Act 560, passed in 1998, altered the permissible distribution of survivor benefits.

c. In Ghanaian cedis per claim. The exchange rate in 2006/2007 was approximately ¢1.00 = US$1.00.

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