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Abstract

Using data on historical homelands of ethnicities from the Ethnographic Atlas (Murdock, 1959, 1967) and World Values Survey (WVS) data, we analyse how social institutions perpetuate social attitudes that legitimise gender inequality in the labour market, specifically on female labour force participation in sub-Saharan Africa. We find that patriarchal systems in general such as patrilineal kinship, patrilineal land inheritance and patrilocal residence upon marriage reduce female labour force participation, whilst matriarchal systems have the opposite effect. These results are partly influenced by unequal gender attitudes towards women and their work. The findings suggest that social institutions are an important element in understanding gender dynamics in sub-Saharan Africa because they have over time informed on gender identification and appropriate gender roles in most societies.

Keywords: Gender, Africa, Institutions, Culture

JEL Codes: J16, O11, 014, 047, 055

1 Introduction

Empirical studies have shown that the origins of gender unequal outcomes are rooted within cultural, social and economic institutions because these institutions structure gender roles asymmetrically (see Alesina & Giuliano, 2015; Duflo, 2012; Mabsout & Van Staveren, 2010). In this paper, we focus on social institutions, namely kinship structure, land inheritance rules and residence rules upon marriage and narrow our choices to two main categories: patriarchal and matriarchal societies. In patriarchal societies, social and economic connections (such as descent, wealth, land inheritance etc) are passed down the

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male line, whilst the reverse is true in matriarchal societies. Central to our analysis is the idea that social institutions affect gender outcomes since they govern beliefs, norms, values and attitudes about everyday life issues such as the "appropriate" roles of men and women. We hypothesise that these institutions contribute to unequal gender attitudes that determine not only if women can participate in the paid labour market, but also which sectors/areas they can work.

Within these institutions, patriarchal and matriarchal societies are opposites, with the former codifying men's superiority over women whilst the latter attempts to highlight the role of women in society. We test the effect of both groups on outcomes such as labour force participation and gender attitudes. We believe these two groups have differential impacts on these outcomes given the initial positions women are granted in these two societies. We propose that compared to those from matriarchal societies, individuals whose social structure is predominantly patriarchal are more likely to hold unequal gender attitudes today due to more pronounced and rigid gender roles.

The purpose of this research is to analyse the extent to which social institutions affect female labour force participation by influencing attitudes that dictate what the appropriate roles of women and men are in a group of African countries. We do this in 3 steps. First, we examine the impact of these social institutions on historical female labour force participation. We ask the question: what was the impact of social institutions on female labour force participation in historical times? Having asserted that even in historical times social institutions had an impact on female labour force participation, we proceed to ask the question: what is the impact of these same social institutions on female labour force participation today? Lastly, we ask the question: what is the mechanism or channel through which these social institutions affect female labour force participation? In this study, we believe that these institutions affect labour force participation by creating unequal gender attitudes on the "appropriate" roles of men and women. Most research on labour market outcomes generally focus on factors within the labour market to explain participation rates. Therefore, the findings in this paper provide further insights into understanding how other factors outside of the labour market such as culture affect female labour force participation in SSA.

The analysis in this paper feeds into a broad set of literature including studies that examine factors that determine female participation in the labour market. It has been

noted that in the last 50 years, there has been an increase in female labour force participation on a global level (Akbulut, 2011). In explaining this trend, some studies have pointed to differences in wage gap in the developed countries like in the US labour market (Jones, Manuelli, McGrattan, et al., 2003). Other studies such as Caucutt, Guner, and Knowles (2002) suggest that the increase in returns to labour market together with the delay in the timing of fertility contributed to this. Fogli and Veldkamp (2011) point to improved maternal employment conditions as a possible reason for increased female labour. They argue that once the uncertainty regarding maternal employment on children is reduced, more women will enter the labour force and each generation will update their parents' beliefs by observing the children of employed women. Outside of labour market and closer to our analysis, changes in preferences and attitudes have also been identified and analysed as driving forces of the increasing market employment of women. For example, Fernández, Fogli, and Olivetti (2004), develop a model in which sons of working mothers prefer working wives. Due to this change in male preferences, more and more women will decide to work.

We also contribute to the set of literature which focuses on the role of historical institutions and development on contemporary outcomes (see Acemoglu, Johnson, & Robinson, 2001, 2005; Herbst, 2000; Michalopoulos & Papaioannou, 2013). However, while these studies have predominantly looked at historical economic institutions, we focus on pre-colonial historical social institutions and their effects on contemporary gender outcomes. We consider social institutions as long-lasting norms, values and codes of conduct that find expression in traditions, customs and cultural practices, informal and formal laws. Whilst gender inequalities are observable in different forms, such as in education, health and economic and political participation, they are rooted in the gender roles that evolve from social institutions which determine social and economic opportunities of men and women, their autonomy in taking decisions (see Abadian, 1996; Dyson & Moore, 1983; Hindin, 2000) or the capabilities to live the life they value (Sen, 2001).

At the household-level, social institutions inform on individual choices that shape everyday life, for example, families have to decide on which family member to undertake paid labour or unpaid care labour. Within the labour market, employers are often informed by gender-related norms shaped through socialisation and social institutions regarding who is most deserving of a job, whom to hire, fire or promote between men and women. If

these institutions are highly gender inequitable and dominate the social landscape, they will not only affect norms and attitudes at the household or market levels, but may exert measurable effects at a macro-level through government's distribution of resources in key economic sectors.¹

1.1 Kinship Structures, Land Inheritance and Marital Residence Rules and Gender Outcomes

Kinship matters for tracing one's descent but it also affects other everyday issues such as; family obligations, gendered division of labour, social interactions between family members and distribution of authority (Gottlieb & Robinson, 2016). Different kinship structures come with different principles and rules regarding everyday life. These principles and rules form the basis of different family values and structures. Kinship structure is a characteristic passed on from one generation to another through the family's values system. Younger family members identify and adopt older family members as their personal models for emulation and imitation. Like other social concepts, gender identification is also learnt and understood through the family values system passed on from the previous generations. Given this context, there may be some correlation between social institutions and gender identity and roles between the sexes which might affect overall gender (in)equality within a particular society. More specifically, we believe that persistence in cultural traits also informs on current attitudes on the appropriate roles of men and women in society. It is from these attitudes that we believe female labour force participation can vary across ethnicities and countries.

Kinship structure also determines how wealth, land and position are inherited across generations. It also affects other relationships such as alliances, trade and marriage patterns. Patrilineal kinship describes people's descent through the male line. For example, in a predominantly patrilineal society where people's descent is traced through the male line, both male and female children belong to their father's kin group and not their mother's. Secondly, it is only the male children who can pass on their kin's identity to their children, whilst children from the females members of the kin group adopt their own father's patrilineal identity. In such a system, it becomes automatic that only male children and

¹In most countries, government is also responsible for the enactment, enforcement and regulation of anti-discrimination legislation in employment, rules on access to loans, inheritance and property ownership.

their future male offspring will get first preferences in terms of wealth, land and position allocations. The opposite will be true in a predominantly matrilineal society.

There are two opposing strands of literature on the relationship between patrilineal kinship and gender outcomes. On one end is the literature that states that patriliney is bad for women in general because men structured the social roles to serve their own interests (Reh and Ludwor-Ene 1994). On the other hand, there is literature that states that patriliney binds fathers to their sons and women are aware of the importance of these ties and they support such structures. (Smedley, 2004). Women are believed to condition their own sons to grow up wanting to be fathers, to have sons and pass something of their own identity and cultural knowledge to their sons. Although ownership of assets under patriliney follows the male line, the day-to day control and care of these assets falls to women. This aspect may give the perceived ownership to women (Smedley, 2004). According to (Gottlieb and Robinson (2016)), there is also a debate on whether matrilineal kinship does improve women's outcome. Some argue that matrilineal descent lines merely change the way in which land and lineage is passed down and traced, but decision-making authority remains in the hands of men whilst others state that matriliney improves women's access to land and support networks among women thus increasing their relative position.

The most important aspect of kinship structure and influence is proximity hence there is some correlation between kinship structure and marital residence rules. Patrilineal societies generally have the custom of patrilocality, where the bride goes to live with her husband's family in an extended household or in a nearby household. In this case, the new bride loses the social support of her natal family and is expected to defer to the preferences, authority and expectations of her husband's parents. In matrilocal societies, the newly married couple joins the bride's household or lives close by. In these societies, inheritance and social influence usually pass down through matrilineal kinship lines. As a result, under matrilocal residence, a woman can maintain her social structure, networks and support, thus she may fare better than if she had left.

We also consider traditional land inheritance rules as an important form of social institution. Throughout history, land has been recognized as a primary source of wealth, social status, and power (FAO, 2002). It is the basis for shelter, food, and economic activities. Land is the most significant provider of employment opportunities in rural areas and is an increasingly scarce resource in urban areas (FAO, 2002). It has also been

argued that land also has great cultural, religious, and legal significance. The [FAO \(2002\)](#) states that there is a strong correlation in many societies between the decision-making powers that a person enjoys and the quantity and quality of land rights held by that person. For example, in rural areas, social inclusion or exclusion often depends solely on a person's land holding status whilst in urban areas, the right to participate in municipal planning, in community decisions, and sometimes elections, can depend on the status of an individual as a "resident" or "homeowner" ([FAO, 2002](#)). Hence access to land is an important determinant in directing an individual's economic, social and even political trajectories.

In many communities, access to land resources is governed by both statutory and customary laws. However, in most African countries, statutory law often does not provide for women's independent rights and when such legislation does exist, mechanisms to enforce it are often absent ([FAO, 2002](#)). As a result, land and housing in most African cultures are regulated by customary law ([Richardson, 2004](#)). Land inheritance is one of the main ways for an individual to acquire and control property. The inheritance criterion is often guided by kinship structures and residence rules upon marriage. In Africa, the inheritance structure is mostly patrilineal land inheritance where women are generally prohibited from owning or inheriting land or other property as resources and wealth are passed down the male line. As such, a woman's right to access and use land is thus solely defined by her relation to men. This right to land and property accrues to a woman through her father or guardian while she is still single and through her husband when she gets married. However, in most cases, the rights also disappear with the death of the father, guardian or husband.

The other case is matrilineal land inheritance where a man's primary heirs are his nephews (his sisters' children). Even though it is guided by matrilineal kinship where lineages and families are traced to a female ancestor, and the blood line is traced through the female members of the family, patriliney is still codified in matrilineal societies because men like their patrilineal counterparts, wield the actual power since they sit as chiefs and headmen in traditional courts. Whilst this might be the case, women are still arguably valued more highly than in the patrilineal system. According to the [World Bank \(2012b\)](#), women's legal inability to inherit property can significantly undermine their economic security and independence as well as their access to economic opportunities (see [World](#)

[Bank, 2012a, 2012b]). This will be particularly true in a setting where physical and human capital are perceived as complementary. In such as case, as a woman’s ability to acquire more physical assets such as land increases, parents may then choose to invest more in women in terms of their education and health. Moreover, as women’s ability to inherit increases, this improves women’s bargaining power not just in the household, but also in their communities and other public arenas which encourages women’s social, economic and political empowerment. According to [Harari (2019)], the increase in bargaining power also shifts women’s human capital investment choices towards their preferences that includes consumption on food, children’s welfare, health and educational outcomes. Empirical evidence on the correlation between women’s land rights and better outcomes such as bargaining power, HIV-AIDS exposure, domestic violence for women and their families and even child nutrition can be found in the literature (see [Allendorf, 2007; Deere, Oduro, Swaminathan, & Doss, 2013; Friedemann-Sánchez, 2006; Strickland, 2004]).

2 Data

2.1 Data on Ethnic Homelands

We obtain data on ethnic homelands from the [Murdock (1959)] map and the [Murdock (1967)] Ethnographic Atlas. The Murdock (1959) map shows the distribution of ethnicities across Africa prior to colonisation whilst the Ethnographic Atlas is a database of 1270 ethnicities around the world and contains about 60 variables covering a variety of information on the day to day life of these groups of people. The account is largely based on the time of first description by Europeans which includes culture, geography and economic characteristics of these societies and are coded as categorical data ([Fenske, 2013]). After dropping 8 uninhabited areas as well as the Guanche which is now part of Portugal, we have approximately 843 tribal areas.

The first variable of interest is a measure for kinship structure. This variable describes the traditional social structure (measured by descent) of the ethnic group in pre-colonial Africa and is divided into 6 categories: patrilineal, duolateral, matrilineal, quasi-lineages, ambilineal, bilateral and mixed. Figure 1 below shows the distribution of kinship patterns in the different ethnic homelands. The figure shows that Africa is predominantly patrilineal followed by matrilineal kinship structures.

Figure 1: Historical Ethnic Boundaries in pre-colonial Africa

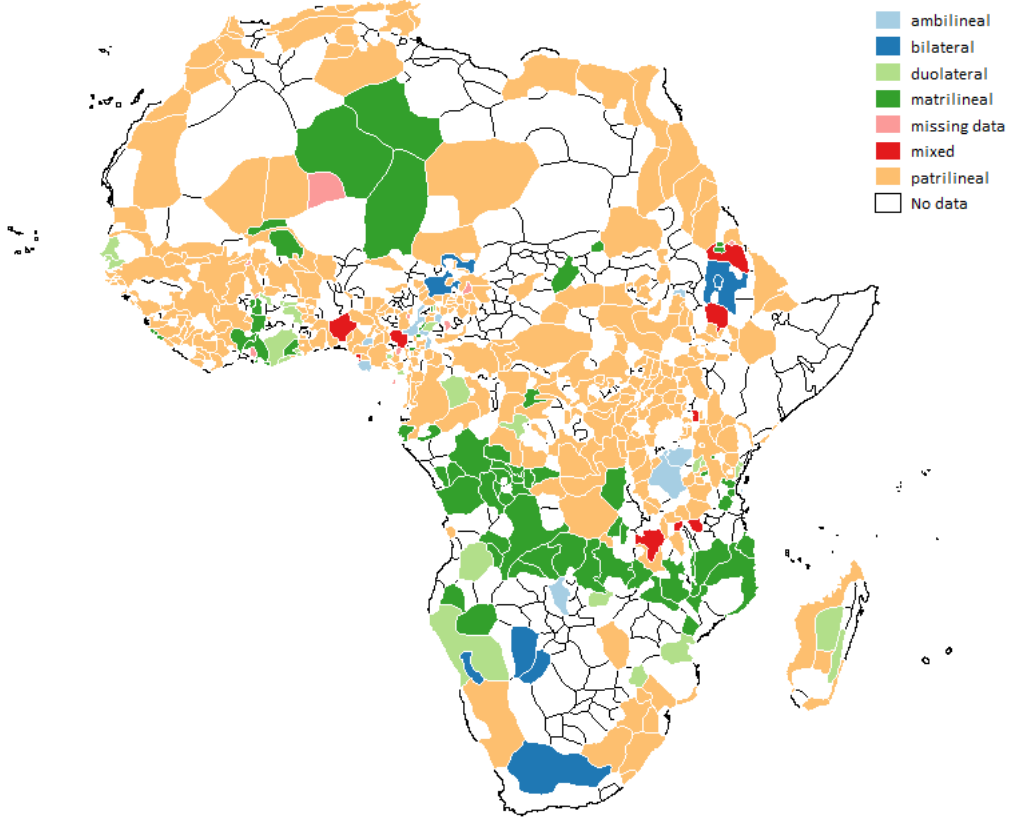


Figure 1 shows descent - specific ethnic boundaries in pre-colonial Africa. We have approximately 843 ethnic groups in the dataset.

The second variable of interest captures the marital residence rules in each ethnic group. The variable describes patrilocal (i.e wife moves to husband's group after marriage) and matrilineal residences (i.e husband moves to wife's group after marriage). The third variable of interest measures land inheritance rules, mainly patrilineal and matrilineal land inheritance. Table A1 in the Appendix gives more details on the main variables of interest.

2.2 Data on Gender Attitudes

Contemporary individual data used in this analysis is built from the World Values Survey (WVS) 1981-2014 Longitudinal Dataset. The WVS is a cross-country project carried out in waves since 1981. In each wave, representative national surveys are done on values and beliefs of individuals in a cross section of countries. Some of the questions included in the questionnaire focus on demographics (sex, age , education), self-reported economic

characteristics (income, social class) and provide answers for specific questions related to religion, gender and political preferences and attitudes. Among other gender-related attitudinal questions, the WVS has questions concerning the rigidity of gender identity, women's role as mothers and workers and beliefs about gender hierarchies in employment, education and politics.

We include 5 measures that capture gender role attitudes as the dependent variables. The first one is *"When jobs are scarce: Men should have more right to a job than women"*. This variable captures attitudes or perceptions of the man as the main breadwinner, or anti-egalitarian views or discriminatory attitudes against working women (Fortin, 2005). Responses for this variable are in an ordered format as disagree, neither agree or disagree and agree. We also use variable *"Pre-school child suffers with working mother"* to capture the inner conflict an individual experiences in deciding whether a woman should enter the labour market. This conflict is partly due to the clash between family values that emphasise the role of the woman as home-maker and egalitarian views that support an active role for women in the labour market. This has been coined "mother's guilt" by Buttrose and Adams (2005).

The third variable is *University is more important for a boy than a girl?*. This variable captures child preference in terms of educational opportunities and is important in determining the kind of job opportunities that males and females can access later on in life. The last attitudinal question *"Men make better executives than women do?"*. This variable captures attitudes about the workplace leadership capabilities of men and women. It is important in explaining gender gaps in leadership positions. Responses for these 4 variables are in an ordered format as strongly disagree, disagree, agree and strongly agree. Description of variables can be found in Table A1 in the Appendix.

Data for female labour force participation is also obtained from the same source. We create a dummy equals to 1 if the woman is in full-time, part-time and self employment and zero otherwise. We also include other data on age, ethnicity, marital status, social status and educational attainment from the same source. The WVS contains data on 16 African countries, but we focus on the 10 countries that include the questions on gender attitudes that are of interest to this study. Our main hypothesis is that relative to matriarchal societies, societies that have predominant patriarchal systems whether in terms of kinship structure, land inheritance or marital residence rules have more pronounced

gender unequal attitudes and outcomes.

3 Impact of social institutions on historical female labour force participation in Africa

In this section, we begin our analysis by documenting from a historical perspective that different social institutions show different patterns of female participation in economic subsistent activities outside of the home. We measure traditional female participation in agriculture, gathering and fishing using information on the gender division of labour reported in the Ethnographic Atlas. We also include four historical controls in the specification to control for other possible influences on historical gender roles. These include plough use, settlement patterns as a proxy for economic development, political hierarchies as a proxy for political institutions and agricultural suitability. Except for agricultural suitability which we obtain from [Alesina, Giuliano, and Nunn \(2013\)](#), the rest of these historical controls are all in the Ethnographic Atlas.

We estimate the following logit model;

$$HFLFP_e^{a,g,f} = \alpha + \beta Institution_e^{p,m} + X_e^H + \varepsilon_e \quad (1)$$

where $HFLFP_e^{a,g,f}$ is the outcome of interest measured as female participation in agriculture, hunting, gathering and fishing for each ethnic group. $Institution_e^{p,m}$ is equal to one for each dummy for patrilineal kinship, matrilineal kinship, matrilineal land inheritance, patrilineal land inheritance, patrilocal residence and matrilineal residence and zero otherwise. X_e^H is a vector of historical controls at the ethnic level described above.

Tables 1a, 1b and 1c show the predicted probabilities of historical female participation in agriculture, gathering and fishing with respect to type of social institution². The results show that there are significant differences in probabilities for female participation in the 3 activities given the institution types. For example, in Table 1a, the probability of a woman working in agriculture was around 20 - 22% higher in matriarchal institutions compared to patriarchal institutions. Tables 1b and 1c show that women under patrilineal inheritance were 6% less likely to be engaged in gathering activities and 11% more likely

²The associated logit regression estimates are provided in Tables A3 - A5 in the Appendix.

to be engaged in fishing compared to other institution types. These findings suggest two important findings: (1) historical evidence that different social institutions did affect the role of women outside the home (2) matriarchy generally allowed women to be more active in agriculture compared to patriarchy.

The role of agricultural practice and early transition into agriculture has been discussed as an important indicator on how much societies have advanced today (see [Alesina et al., 2013](#); [Putterman, 2008](#)) and our results show a variation in female participation in agriculture across the institutions. We find that consistent with our assumption on "gender attitudes", women in predominantly patriarchal societies worked less in agriculture even in historical times. Implicitly, men controlled more of agricultural work and hence output thus a clear distinction in roles and gender outcomes even in historical times. More women worked in agriculture in predominantly matrilineal societies. An interesting question would then be; in societies in where women were historically more active in agriculture, are gender attitudes towards working women less unequal? We attempt to answer this question in Section 4.2.

Table 1: Marginal Effects: Historical Female Labour Force Participation

1a. Agriculture						
	(1) Patrilineal	(2) Patrilineal Inheritance	(3) Patrilocal Residence	(4) Matrilineal	(5) Matrilineal Inheritance	(6) Matrilocal Residence
M.E. at Means	-0.006 (0.071)	0.012 (0.085)	-0.062 (0.083)	0.203*** (0.072)	0.216** (0.086)	0.195** (0.078)
Pseudo R2	0.027	0.023	0.029	0.046	0.042	0.042
Obs	218	184	218	218	184	218
1b. Gathering						
	(1) Patrilineal	(2) Patrilineal Inheritance	(3) Patrilocal Residence	(4) Matrilineal	(5) Matrilineal Inheritance	(6) Matrilocal Residence
M.E. at Means	-0.007 (0.035)	-0.059* (0.032)	0.013 (0.064)	-0.004 (0.054)	-0.038 (0.083)	-0.043 (0.118)
Pseudo R2	0.314	0.374	0.316	0.314	0.319	0.321
Obs	94	86	95	94	86	95
1c. Fishing						
	(1) Patrilineal	(2) Patrilineal Inheritance	(3) Patrilocal Residence	(4) Matrilineal	(5) Matrilineal Inheritance	(6) Matrilocal Residence
M.E. at Means	0.028 (0.053)	0.107** (0.051)	0.003 (0.062)	0.038 (0.070)	-0.041 (0.068)	0.004 (0.072)
Pseudo R2	0.112	0.163	0.111	0.112	0.130	0.111
Obs	149	121	150	149	121	150

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The standard Logistic results are in the Appendix. All marginal effects are calculated at the sample means.

4 Social Institutions, Gender Attitudes and Women’s Work

4.1 Social Institutions and Contemporary Female Labour Force Participation

Given the context of the previous section on historical female labour force participation, we now examine the impact of social institutions on contemporaneous female labour force participation. We estimate the following logit model;

$$FLFP_{ic} = \alpha + \beta Institution_{ic}^{p,m} + X_{ic}^H + X_{ic}^C + \varepsilon_{ic} \quad (2)$$

Where $FLFP_{ic}$ is a dummy equals to 1 if the woman is in full, part time or self employment and zero otherwise. $Institution_{ic}^{p,m}$ is equal to one for each dummy for patrilineal kinship, matrilineal kinship, matrilineal land inheritance, patrilineal land inheritance, patrilocal residence and matrilocal residence and zero otherwise. X_{ic}^H is a vector of historical controls as described in the previous section, whilst X_{ic}^C is a vector of contemporary controls that include age, educational attainment, social status to control for other possible influences on female labour force participation. Table 2 reports the predicted probabilities of institution type on female labour force participation ³

Table 2: Marginal Effects: Contemporary Female Labour Force Participation

	(1) Patrilineal	(2) Patrilineal Inheritance	(3) Patrilocal Residence	(4) Matrilineal	(5) Matrilineal Inheritance	(6) Matrilocal Residence
Marginal Effects at Means	-0.135*** (0.023)	-0.071** (0.034)	-0.182*** (0.055)	0.027 (0.095)	0.206*** (0.061)	0.245*** (0.051)
Obs	7176	7093	7176	7176	7093	7176
Pseudo R2	0.127	0.128	0.125	0.124	0.128	0.127

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The standard Logistic results are in the Appendix. All marginal effects are calculated at the sample means.

From Table 2, patriarchal institutions generally reduce the probability of a woman working, whilst matriarchal institutions have the opposite effect. Of the 3 patriarchal institutions analysed, patrilocal residence has the largest negative effect on female labour force participation. A woman under patrilocal residence is 18% less likely to work. Patrilineal land inheritance has the least effect, reducing the probability of a woman working by around 7%. On the other hand, matriarchal institutions generally increase the probability of a woman being in the labour force. Matrilocal residence has the largest positive effect

³The logit estimates for equation 2 are in Table A5 in the Appendix.

on the probability of a woman working (around 25%), whilst matrilineal land inheritance increases the probability of a woman working by around 21%. The results show that in societies that are predominantly matriarchal, women have a higher chance of participating within the labour market compared to patriarchal societies. However, whilst these results provide an answer to the influence of social institutions on female labour force participation today, they also raise the question - what is it about these institutions that affects female labour force participation (whether negatively or positively)? We propose that one possible link between social institutions and female labour force participation is the differences in gender attitudes towards working women. We test this link in the next section.

4.2 Social Institutions and Gender Attitudes

In this section, we examine the impact of social institutions on contemporary gender attitudes towards women and their work. The data on gender attitudes is obtained from the World Values Survey as described in the data section. To take account of the ranking of the scaled dependent variables, we use an ordered logit model. For each measure of gender attitudes, we estimate the following model;

$$GenderAttitude_{ic}^* = \alpha_i + \beta Institution_{ic}^{p,m} + X_{ic}^H + X_{ic}^C + \varepsilon_{ic} \quad (2)$$

The ordered logit model relates the latent $GenderAttitude_{ic}^*$ for individual i in country c to a linear index of observable characteristics that include $Institution_{ic}^{p,m}$, X_{ic}^H and X_{ic}^C and ε_{ic} , the error term. The observed ordered variable $GenderAttitude_{ic}$ is tied to the latent variable by the observation rule;

$$GenderAttitude_{ic} = k \text{ if } \tau_{ik} < GenderAttitude_{ic}^* \leq \tau_{ik+1} \quad k = 1, \dots, K \quad (3)$$

where individual-specific thresholds or cut-off points τ_i are increasing ($\tau_{ik} \leq \tau_{ik+1} \forall k$), $\tau_{i1} = -\infty$ and $\tau_{iK+1} = \infty$. For $GenderAttitudes$ defined as *Housewife*, *Mother's_guilt*, *University_Attendance*, and *Men_executives*, there are 4 choice outcomes (i.e. $K = 4$)

which are

$$GenderAttitude^{H,MG,UA,ME} = \begin{cases} 1 = \text{Strongly disagree} \\ 2 = \text{Disagree} \\ 3 = \text{Agree} \\ 4 = \text{Strongly agree} \end{cases}$$

The only *GenderAttitude* with 3 choice outcomes is *Job scarcity* which is

$$Job\ scarcity = \begin{cases} -1 = \text{Disagree} \\ 0 = \text{Neither} \\ 1 = \text{Agree} \end{cases} \quad (6)$$

where superscripts H, MG , UA, ME, JS is abbreviated gender attitudes designations.

In Tables 3 and 4 are the estimated probabilities of response outcomes for gender attitudes with respect to patriarchal and matriarchal institutions. ⁴ From Table 3, we find that the introduction of patriarchal institutions generally increases gender unequal attitudes. This is across the three types of institutions (i.e patrilineal kinship, patrilineal land inheritance and patrilocal residence). For some of the attitudes the effects are stronger under patrilocal residence compared to patrilineal kinship and land inheritance. For example, from Panel C, column 1, the introduction of patrilocal residence increases the probability of either agreeing or strongly agreeing with the perception of the woman's primary role as a home-maker by 6%. These effects are around 3% under both patrilineal kinship and land inheritance. In column 3, Panel C again, we also observe that introducing patrilocal residence heightens mother's guilt by a much larger effect than under both patrilineal kinship and land inheritance. With patrilocal residence, the probability that an individual will either agree or strongly agree with the statement that a preschool child would suffer with a working mother (i.e mother's guilt) is around 7-8%. Under patrilineal kinship and land inheritance, the probability of either agreeing or strongly agreeing with that statement is slightly lower at around 3-5%.

Matriarchal institutions generally have a lessening effect on unequal gender attitudes. From Table 4, panel A, column 4, matrilineal kinship has the largest positive effect on

⁴The regression estimates for equation 3 using ordered logit are in the Appendix. See Tables A7 - A12.

reducing the perception that men make better executives than women. The probability of strongly disagreeing with this perception increases by 18% when matrilineal kinship is introduced, whilst it increases by 5% and 6% respectively when matrilineal inheritance and matrilineal residence are introduced. In panels B and C, column 3, the probability of strongly disagreeing with the statement that a preschool child will suffer with a working mother (i.e mother's guilt) increases to 11% once matrilineal inheritance is introduced. Matrilineal residence does not have an effect on mother's guilt.

Matriarchal institutions also reduce the perception that being a housewife is just as fulfilling as shown in column 1 of panels A and B and C. The probability of strongly disagreeing with the perception of the woman as a home-maker increases by 5% under matrilineal kinship, 8% under matrilineal inheritance, and 7% when matrilineal residence is introduced. In line with attitude Jobscarcity, patrilineal kinship increases the perception of the man as the main breadwinner, whilst surprisingly, patrilineal inheritance just like matrilineal kinship reduces that perception. The probability of disagreeing with the statement that when jobs are scarce men should get the job first decreases by 8% when patrilineal kinship is introduced. On the other hand, this probability increases by 4 and 5 % respectively when patrilineal inheritance and matrilineal kinship are introduced.

Table 3: Marginal Effects: Patriarchal Institutions

Panel A: Patrilineal Kinship						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: Strongly Disagree	-0.034*** (0.005)	-0.065*** (0.008)	-0.030*** (0.011)	-0.030*** (0.005)	Predict probability: Disagree	-0.084*** (0.009)
Disagree	-0.028*** (0.004)	0.007*** (0.001)	-0.022*** (0.007)	-0.037*** (0.007)	Neither	0.006*** (0.001)
Agree	0.029*** (0.004)	0.030*** (0.004)	0.027*** (0.010)	0.023*** (0.004)	Agree	0.078*** (0.008)
Strongly Agree	0.032*** (0.004)	0.027*** (0.003)	0.025*** (0.009)	0.044*** (0.008)		
Pseudo R2	0.023	0.027	0.022	0.066		0.060
Obs	13329	13538	4834	9598		13675

Panel B: Patrilineal Inheritance						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: Strongly Disagree	-0.031*** (0.007)	0.011 (0.011)	-0.055*** (0.018)	-0.016** (0.007)	Predict probability: Disagree	0.041*** (0.013)
Disagree	-0.023*** (0.004)	-0.001 (0.001)	-0.032*** (0.008)	-0.018** (0.008)	Neither	-0.003*** (0.001)
Agree	0.026*** (0.006)	-0.005 (0.005)	0.047*** (0.015)	0.012** (0.006)	Agree	-0.039*** (0.012)
Strongly Agree	0.027*** (0.006)	-0.005 (0.005)	0.040*** (0.011)	0.022** (0.010)		
Pseudo R2	0.023	0.025	0.022	0.064		0.056
Obs	13150	13362	4834	9475		13493

Panel C: Patrilocal Residence						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: Strongly Disagree	-0.078*** (0.009)	-0.024* (0.013)	-0.102*** (0.022)	-0.030*** (0.009)	Predict probability: Disagree	0.011 (0.014)
Disagree	-0.045*** (0.003)	0.003 (0.002)	-0.046*** (0.005)	-0.034*** (0.009)	Neither	-0.001 (0.001)
Agree	0.064*** (0.006)	0.011** (0.006)	0.083*** (0.016)	0.023*** (0.007)	Agree	-0.010 (0.013)
Strongly Agree	0.060*** (0.005)	0.010** (0.005)	0.065*** (0.011)	0.041*** (0.011)		
Pseudo R2	0.024	0.025	0.023	0.065		0.057
Obs	13329	13538	4834	9598		13675

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The standard Logistic results are in the Appendix. All marginal effects are calculated at the sample means.

Table 4: Marginal Effects: Matriarchal Institutions

Panel A: Matrilineal Kinship						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: Strongly Disagree	0.052** (0.024)	0.077** (0.035)		0.179*** (0.037)	Predict probability: Disagree	0.070* (0.037)
Disagree	0.030*** (0.009)	-0.017 (0.011)		0.081*** (0.004)	Neither	-0.007 (0.005)
Agree	-0.042** (0.018)	-0.032** (0.014)		-0.129*** (0.022)	Agree	-0.062* (0.030)
Strongly Agree	-0.040*** (0.015)	-0.028*** (0.011)		-0.131*** (0.014)		
Pseudo R2	0.022	0.025	0.021	0.066		0.057
Obs	13329	13538	4834	9598		13675
Panel B: Matrilineal Inheritance						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: 1.Strongly Disagree	0.075*** (0.009)	0.021 (0.014)	0.109*** (0.022)	0.048*** (0.010)	Predict probability: Disagree	0.017 (0.015)
Disagree	0.044*** (0.004)	-0.003 (0.002)	0.047*** (0.005)	0.050*** (0.009)	Neither	-0.001 (0.001)
Agree	-0.061*** (0.007)	-0.009 (0.006)	-0.087*** (0.016)	-0.038*** (0.008)	Agree	-0.016 (0.014)
Strongly Agree	-0.058*** (0.006)	-0.009 (0.005)	-0.068*** (0.010)	-0.060*** (0.011)		
Pseudo R2	0.025	0.025	0.024	0.064		0.056
Obs	13150	13362	4834	9475		13493
Panel C: Matrilocal Residence						
	(1) Housewife	(2) University Attendance	(3) Mothers Guilt	(4) Men Executives		(5) Job Scarcity
Predict probability: Strongly Disagree	0.072*** (0.009)	0.022 (0.014)	0.109*** (0.022)	0.050*** (0.010)	Predict probability: Disagree	0.021 (0.015)
Disagree	0.042*** (0.004)	-0.003 (0.002)	0.047*** (0.005)	0.052*** (0.009)	Neither	-0.002 (0.001)
Agree	-0.059*** (0.007)	-0.010 (0.006)	-0.087*** (0.016)	-0.039*** (0.008)	Agree	-0.020 (0.014)
Strongly Agree	-0.055*** (0.006)	-0.009* (0.005)	-0.068*** (0.010)	-0.063*** (0.011)		
Pseudo R2	0.024	0.025	0.024	0.065		0.057
Obs	13329	13538	4834	9598		13675

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The standard Logistic results are in the Appendix. All marginal effects are calculated at the sample means.

5 Conclusion

Understanding gender outcomes within the labour market is an important issue within growth and development economics. In this paper, we focus on female labour force participation given that empirical evidence shows that it is both a driver and an outcome of development. It is therefore important to understand the factors that drive female labour, particularly for policy formulation. The analysis in this paper focuses on culture, through social institutions as an important driver for female labour force participation. We find that consistent with our hypothesis, female labour force participation is lower in predominantly patriarchal societies than in predominantly matriarchal societies. Upon further examination, we find evidence that this outcome is partly driven by differences in gender attitudes towards women's roles and their work. More specifically, we show that predominantly patriarchal societies exhibit more unequal gender attitudes pertaining women's roles outside the home and their work compared to predominantly matriarchal societies. Cultural institutions tend to be persistent and difficult to change. For example, the perception of the men as the breadwinner, or the woman as a home-maker are values that individuals learn and adopt from a young age about what is perceived as the appropriate roles of men and woman within their society. These values form part of their belief system and may persist over generations.

Mother's guilt is yet another attitude that has a serious effect on female labour outcomes. The problem lies with the inner conflict that arises as one reconciles whether a working mother can create and maintain a warm, loving and secure bond with her children similar to a stay at home mother. These attitudes are discriminatory and hamper women's capabilities within the labour market. To counter these discriminatory attitudes, governments around the world have tried to impose gender quotas in certain fields of work but even those are not without problems. For example, some also argue that they are unfair because it often means the best candidates do not get the positions they deserve. In terms of mother's guilt, government regulation that requires companies to set up systems that offer some work-life balance, such as maternity leave, on-site day care and flexi hours can help ease the guilt. Overall, it is important that as government formulates policies targeted at gender equality in the workplace, cultural factors be considered and understood.

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A Appendices

Table A1:

Variables Description

Description of Variables in dataset	Original Variable	Data Source
Patrilineal Kinship equals to 1 if kinship type is patrilineal	v43 – It is divided into 7 categories namely patrilineal, matrilineal, duolateral, bilateral, ambilineal, quasi-lineage and missing data	Ethnographic Atlas
Patrilineal Inheritance equals to 1 if inheritance type equals patrilineal	v74 has 7 categories absence of individual property rights matrilineal (sister's sons), other matrilineal heirs, children, with daughters receiving less, children, equally for both sexes, other patrilineal heirs and patrilineal (sons)	Ethnographic Atlas
Patrilocal Residence equals to 1 if residence type equals patrilocal	v11 has 4 categories wife to husband's group, husband to wife's group, couple to either group or neolocal and no common residence	Ethnographic Atlas
Matrilineal Kinship equals to 1 if kinship type is matrilineal	v43	Ethnographic Atlas
Matrilineal Inheritance equals to 1 if inheritance type equals matrilineal	v74	Ethnographic Atlas
Matrilocal Residence equals to 1 if residence type equals matrilocal	v11	Ethnographic Atlas
Settlement Patterns - proxy for historical economic development	v30 categories include; (1) nomadic or fully migratory, (2) semi-nomadic, (3) semi-sedentary, (4) compact but not permanent settlements, neighbourhoods of dispersed family homesteads, (5) separate hamlets, (6) forming a single community, (7) compact and relatively permanent settlements and (8) complex settlements.	Ethnographic Atlas
Political hierarchy - proxy for political institutions	v33 ranging from no level to four levels, coded 1 to 5 (increasing in levels).	Ethnographic Atlas
Historical female labour force participation		Ethnographic Atlas
Agricultural Suitability - value between 0 and 1		Alesina et al. (2013)
Plough equals 1 if ethnicity practised agriculture using a plough		Alesina et al. (2013)
Age -	X003	World Values Survey
Has a child equals to 1 if individual has one or more children	X011	World Values Survey
Male equals to 1 if individual identifies as male	X001	World Values Survey
Middle class equals 1 if individual identifies as being in the middle class	X045	World Values Survey
Upper class equals 1 if individual identifies as being in the upper class	X045	World Values Survey
Primary education equals 1 if individual had some primary education	X025	World Values Survey
Secondary education equals 1 if individual had some secondary education	X025	World Values Survey
Tertiary education equals 1 if individual had some tertiary education	X025	World Values Survey
Religious attendance equals 1 if individual goes to church at least once a year	F028	World Values Survey
Female labour force participation equals to 1 if the woman is in full-time, part-time and self-employment and zero otherwise	X028	World Values Survey

Table A2:
Variables Description

Description of Variables in dataset	Original Description	Data Source
Jobscarcity	C001 - When jobs are scarce: Men should have more right to a job than women	World Values Survey
Housewife	D061 - Being a housewife just as fulfilling strongly disagree (1), disagree (2), agree (3) and strongly agree (4)	World Values Survey
Mother's_Guilt	D057 - Pre-school child suffers with working mother - strongly disagree (1), disagree (2), agree (3) and strongly agree (4)	World Values Survey
University_Attendance	D060 - University is more important for a boy than a girl strongly disagree (1), disagree (2), agree (3) and strongly agree (4)	World Values Survey
Men_executives	D078 - Men make better executives than women do - strongly disagree (1) disagree (2) agree (3) and strongly agree (4)	World Values Survey
Polity	-	Center for Systemic Peace

Table A3: Logit: Female Participation Historical Institution

	Agriculture					
	(1) HFLFP	(2) HFLFP	(3) HFLFP	(4) HFLFP	(5) HFLFP	(6) HFLFP
Patrilineal	-0.025 (0.314)					
Patrilineal Inheritance		0.052 (0.362)				
Patrilocal Residence			-0.283 (0.390)			
Matrilineal				1.058** (0.465)		
Matrilineal Inheritance					1.086** (0.534)	
Matrilocal Residence						1.019** (0.508)
Settlement Patterns	-0.082 (0.124)	-0.056 (0.126)	-0.093 (0.126)	-0.101 (0.127)	-0.072 (0.128)	-0.094 (0.126)
Political Hierarchy	-0.082 (0.159)	-0.179 (0.160)	-0.077 (0.162)	-0.042 (0.161)	-0.145 (0.161)	-0.054 (0.159)
Agricultural Suitability	-1.104*** (0.421)	-0.925** (0.434)	-1.121*** (0.428)	-1.164*** (0.435)	-1.037** (0.451)	-1.172*** (0.433)
Constant	2.009** (0.953)	1.837* (0.981)	2.294** (1.000)	1.919** (0.938)	1.833* (0.952)	1.937** (0.935)
Pseudo R2	0.027	0.023	0.029	0.046	0.042	0.042
Obs	218	184	218	218	184	218

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$ **Table A4: Logit: Female Participation Historical Institution**

	Gathering					
	(1) HFLFP	(2) HFLFP	(3) HFLFP	(4) HFLFP	(5) HFLFP	(6) HFLFP
Patrilineal	-0.191 (0.947)					
Patrilineal Inheritance		-2.081 (1.705)				
Patrilocal Residence			0.314 (1.385)			
Matrilineal				-0.090 (1.318)		
Matrilineal Inheritance					-0.694 (1.275)	
Matrilocal Residence						-0.842 (1.666)
Settlement Patterns	-0.635*** (0.215)	-0.502** (0.237)	-0.658*** (0.189)	-0.649*** (0.182)	-0.582*** (0.171)	-0.644*** (0.177)
Political Hierarchy	1.115** (0.506)	1.226** (0.514)	1.134** (0.504)	1.125** (0.503)	1.093** (0.506)	1.176** (0.534)
Agricultural Suitability	2.018* (1.062)	2.532* (1.307)	2.088** (1.034)	2.059** (1.030)	2.459** (1.141)	2.103** (1.041)
Constant	2.973** (1.356)	3.098** (1.416)	2.641* (1.530)	2.896* (1.525)	2.330 (1.528)	2.818* (1.453)
Pseudo R2	0.314	0.374	0.316	0.314	0.319	0.321
Obs	94	86	95	94	86	95

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A5: Logit: Female Participation Historical Institution

	Fishing					
	(1)	(2)	(3)	(4)	(5)	(6)
	HFLFP	HFLFP	HFLFP	HFLFP	HFLFP	HFLFP
Fishing Participation						
Patrilineal	0.259 (0.501)					
Patrilineal Inheritance		1.274** (0.646)				
Patrilocal Residence			0.027 (0.562)			
Matrilineal				0.316 (0.547)		
Matrilineal Inheritance					-0.431 (0.766)	
Matrilocal Residence						0.032 (0.632)
Settlement Patterns	0.140 (0.140)	0.192 (0.180)	0.135 (0.143)	0.130 (0.142)	0.228 (0.164)	0.134 (0.140)
Political Hierarchy	-0.522** (0.257)	-0.503* (0.297)	-0.536** (0.260)	-0.536** (0.261)	-0.483 (0.295)	-0.536** (0.262)
Agricultural Suitability	-1.785** (0.706)	-2.175*** (0.796)	-1.812** (0.714)	-1.825*** (0.693)	-1.907** (0.806)	-1.818** (0.706)
Constant	-0.711 (1.268)	-1.676 (1.623)	-0.475 (1.322)	-0.477 (1.195)	-1.047 (1.409)	-0.448 (1.179)
Pseudo R2	0.112	0.163	0.111	0.112	0.130	0.111
Obs	149	121	150	149	121	150

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A6: Logit Model

	(1)	(2)	(3)	(4)	(5)	(6)
	FLFP	FLFP	FLFP	FLFP	FLFP	FLFP
Patrilineal	-0.542*** (0.092)					
Patrilineal Inheritance		-0.287** (0.137)				
Patrilocal Residence			-0.735*** (0.220)			
Matrilineal				0.109 (0.381)		
Matrilineal Inheritance					0.831*** (0.245)	
Matrilocal Residence						0.986*** (0.206)
Country Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.127	0.128	0.125	0.124	0.128	0.127
Obs	7176	7093	7176	7176	7093	7176

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A7: Ordered Logit:Patrilineal Kinship

	(1)	(2)	(3)	(4)	(5)
	Job Scarcity	Housewife	University Attendance	Mothers Guilt	Men Executives
Patrilineal	0.338*** (0.037)	0.254*** (0.034)	0.298*** (0.035)	0.214*** (0.075)	0.270*** (0.048)
Plough	-0.718*** (0.048)	-0.450*** (0.045)	-0.261*** (0.045)	-0.485*** (0.133)	-0.980*** (0.064)
Settlement Patterns	0.067*** (0.020)	-0.022 (0.018)	-0.033* (0.019)	-0.215*** (0.036)	0.072*** (0.025)
Political Hierarchy	-0.200*** (0.030)	-0.163*** (0.030)	-0.381*** (0.030)	0.453*** (0.070)	-0.206*** (0.038)
Agricultural Suitability	-0.162 (0.102)	1.033*** (0.094)	-0.074 (0.100)	-0.078 (0.171)	-0.232* (0.121)
Age	-0.003* (0.002)	0.003* (0.001)	-0.002 (0.001)	-0.002 (0.002)	-0.002 (0.002)
Has a Child	0.220*** (0.044)	0.159*** (0.041)	0.067 (0.041)	0.069 (0.064)	0.016 (0.048)
Male	0.875*** (0.035)	0.205*** (0.033)	0.472*** (0.033)	0.088 (0.055)	0.592*** (0.038)
Middle Class	-0.094** (0.038)	-0.066* (0.035)	0.005 (0.035)	-0.109* (0.057)	0.077* (0.041)
Upper Class	0.136 (0.118)	-0.218* (0.127)	0.036 (0.126)	0.038 (0.180)	-0.065 (0.140)
Primary Education	-0.261*** (0.058)	0.096* (0.055)	-0.366*** (0.055)	-0.210* (0.125)	-0.402*** (0.063)
Secondary Education	-0.533*** (0.060)	-0.001 (0.057)	-0.570*** (0.056)	-0.369*** (0.124)	-0.698*** (0.064)
Tertiary Education	-0.552*** (0.070)	-0.158** (0.068)	-0.695*** (0.067)	-0.465*** (0.129)	-0.908*** (0.076)
Religious Attendance	-0.104*** (0.039)	-0.196*** (0.039)	-0.127*** (0.039)	-0.336*** (0.062)	-0.074 (0.047)
Polity	0.826*** (0.095)	0.223** (0.089)	-0.704*** (0.090)	1.798*** (0.179)	1.238*** (0.124)
/					
cut1	0.146 (0.211)	-1.277*** (0.199)	-3.016*** (0.208)	-0.734** (0.366)	-1.988*** (0.263)
cut2	0.724*** (0.211)	0.680*** (0.200)	-1.209*** (0.206)	1.270*** (0.366)	-0.174 (0.263)
cut3		2.101*** (0.201)	-0.084 (0.206)	2.739*** (0.367)	1.263*** (0.263)
Pseudo R2	0.060	0.023	0.027	0.022	0.066
Obs	13675	13329	13538	4834	9598

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A8: Ordered Logit: Patrilineal Land Inheritance

	(1)	(2)	(3)	(4)	(5)
	Job Scarcity	Housewife	University Attendance	Mothers Guilt	Men Executives
main					
Patrilineal Inheritance	-0.165*** (0.051)	0.221*** (0.047)	-0.050 (0.049)	0.372*** (0.113)	0.138** (0.061)
Plough	-0.753*** (0.048)	-0.518*** (0.045)	-0.324*** (0.044)	-0.381*** (0.133)	-1.097*** (0.060)
Settlement Patterns	0.022 (0.019)	-0.041** (0.018)	-0.068*** (0.019)	-0.193*** (0.037)	0.040 (0.025)
Political Hierarchy	-0.189*** (0.031)	-0.119*** (0.031)	-0.359*** (0.031)	0.580*** (0.064)	-0.268*** (0.040)
Agricultural Suitability	-0.051 (0.106)	0.933*** (0.100)	-0.013 (0.106)	-0.669*** (0.223)	-0.314** (0.133)
Age	-0.002 (0.002)	0.002 (0.001)	-0.001 (0.001)	-0.003 (0.002)	-0.001 (0.002)
Has a Child	0.224*** (0.044)	0.178*** (0.041)	0.082** (0.041)	0.078 (0.064)	0.022 (0.048)
Male	0.863*** (0.036)	0.211*** (0.033)	0.464*** (0.033)	0.092* (0.055)	0.590*** (0.038)
Middle Class	-0.105*** (0.038)	-0.075** (0.035)	-0.010 (0.035)	-0.097* (0.057)	0.065 (0.041)
Upper Class	0.087 (0.118)	-0.248* (0.127)	-0.011 (0.127)	0.059 (0.180)	-0.084 (0.142)
Primary Education	-0.261*** (0.059)	-0.009 (0.056)	-0.395*** (0.055)	-0.207* (0.126)	-0.392*** (0.064)
Secondary Education	-0.529*** (0.061)	-0.139** (0.057)	-0.608*** (0.056)	-0.389*** (0.125)	-0.696*** (0.066)
Tertiary Education	-0.496*** (0.071)	-0.272*** (0.069)	-0.696*** (0.068)	-0.486*** (0.130)	-0.868*** (0.078)
Religious Attendance	-0.158*** (0.039)	-0.206*** (0.039)	-0.161*** (0.039)	-0.336*** (0.062)	-0.114** (0.047)
Polity	0.622*** (0.104)	0.451*** (0.100)	-0.786*** (0.100)	2.161*** (0.215)	1.105*** (0.138)
/					
cut1	-0.461** (0.208)	-1.282*** (0.200)	-3.404*** (0.209)	-0.178 (0.401)	-2.575*** (0.264)
cut2	0.118 (0.207)	0.679*** (0.200)	-1.599*** (0.207)	1.827*** (0.403)	-0.762*** (0.263)
cut3		2.102*** (0.202)	-0.486** (0.206)	3.298*** (0.406)	0.680*** (0.263)
Pseudo R2	0.056	0.023	0.025	0.022	0.064
Obs	13493	13150	13362	4834	9475

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A9: Ordered Logit:Patrilocal Residence

	(1) Job Scarcity	(2) Housewife	(3) University Attendance	(4) Mothers Guilt	(5) Men Executives
Patrilocal Residence	-0.045 (0.055)	0.524*** (0.052)	0.112** (0.057)	0.652*** (0.126)	0.258*** (0.072)
Plough	-0.759*** (0.049)	-0.596*** (0.046)	-0.349*** (0.044)	-0.537*** (0.133)	-1.146*** (0.060)
Settlement Patterns	0.025 (0.019)	-0.050*** (0.018)	-0.066*** (0.018)	-0.184*** (0.037)	0.050** (0.024)
Political Hierarchy	-0.176*** (0.030)	-0.148*** (0.030)	-0.357*** (0.030)	0.565*** (0.064)	-0.209*** (0.038)
Agricultural Suitability	-0.110 (0.110)	0.569*** (0.106)	-0.148 (0.115)	-0.986*** (0.225)	-0.401*** (0.146)
Age	-0.002 (0.002)	0.001 (0.001)	-0.002 (0.001)	-0.003 (0.002)	-0.002 (0.002)
Has a Child	0.230*** (0.044)	0.177*** (0.041)	0.083** (0.041)	0.072 (0.064)	0.018 (0.048)
Male	0.873*** (0.035)	0.212*** (0.033)	0.475*** (0.033)	0.094* (0.055)	0.597*** (0.038)
Middle Class	-0.107*** (0.038)	-0.066* (0.035)	-0.007 (0.035)	-0.077 (0.057)	0.073* (0.041)
Upper Class	0.087 (0.118)	-0.227* (0.126)	-0.004 (0.127)	0.065 (0.177)	-0.075 (0.141)
Primary Education	-0.305*** (0.058)	0.045 (0.055)	-0.411*** (0.054)	-0.211* (0.126)	-0.436*** (0.062)
Secondary Education	-0.590*** (0.059)	-0.095* (0.056)	-0.634*** (0.055)	-0.436*** (0.127)	-0.764*** (0.064)
Tertiary Education	-0.562*** (0.070)	-0.255*** (0.068)	-0.728*** (0.067)	-0.558*** (0.132)	-0.950*** (0.077)
Religious Attendance	-0.143*** (0.039)	-0.195*** (0.039)	-0.151*** (0.039)	-0.329*** (0.062)	-0.084* (0.047)
Polity	0.754*** (0.105)	0.676*** (0.102)	-0.633*** (0.105)	2.418*** (0.215)	1.354*** (0.156)
/					
cut1	-0.314 (0.206)	-1.272*** (0.198)	-3.283*** (0.207)	-0.061 (0.386)	-2.190*** (0.257)
cut2	0.261 (0.206)	0.690*** (0.199)	-1.483*** (0.205)	1.950*** (0.387)	-0.380 (0.257)
cut3		2.117*** (0.200)	-0.364* (0.205)	3.425*** (0.390)	1.056*** (0.257)
Pseudo R2	0.057	0.024	0.025	0.023	0.065
Obs	13675	13329	13538	4834	9598

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A10: Ordered Logit:Matrilineal Kinship

	(1)	(2)	(3)	(4)	(5)
	Job Scarcity	Housewife	University Attendance	Mothers Guilt	Men Executives
Matrilineal Kinship	-0.280* (0.151)	-0.346** (0.144)	-0.337** (0.149)	0.000 (.)	-1.114*** (0.177)
Plough	-0.763*** (0.048)	-0.489*** (0.045)	-0.323*** (0.043)	-0.430*** (0.131)	-1.077*** (0.059)
Settlement Patterns	0.018 (0.019)	-0.061*** (0.018)	-0.076*** (0.019)	-0.230*** (0.036)	0.022 (0.025)
Political Hierarchy	-0.194*** (0.031)	-0.163*** (0.032)	-0.377*** (0.031)	0.544*** (0.063)	-0.283*** (0.039)
Agricultural Suitability	-0.127 (0.102)	1.076*** (0.094)	-0.021 (0.100)	-0.176 (0.168)	-0.029 (0.117)
Age	-0.002 (0.002)	0.003** (0.001)	-0.001 (0.001)	-0.002 (0.002)	-0.001 (0.002)
Child	0.233*** (0.044)	0.175*** (0.041)	0.084** (0.041)	0.065 (0.064)	0.019 (0.048)
Male	0.873*** (0.035)	0.206*** (0.033)	0.475*** (0.033)	0.086 (0.055)	0.595*** (0.038)
Middle Class	-0.108*** (0.038)	-0.081** (0.035)	-0.012 (0.035)	-0.131** (0.057)	0.049 (0.041)
Upper Class	0.087 (0.118)	-0.255** (0.127)	-0.011 (0.127)	0.023 (0.180)	-0.102 (0.141)
Primary Education	-0.301*** (0.058)	0.067 (0.055)	-0.401*** (0.054)	-0.216* (0.125)	-0.408*** (0.063)
Secondary Education	-0.587*** (0.059)	-0.039 (0.056)	-0.616*** (0.056)	-0.366*** (0.125)	-0.705*** (0.064)
Tertiary Education	-0.564*** (0.070)	-0.162** (0.068)	-0.704*** (0.067)	-0.443*** (0.129)	-0.880*** (0.076)
Religious Attendance	-0.143*** (0.039)	-0.223*** (0.039)	-0.159*** (0.039)	-0.341*** (0.062)	-0.109** (0.047)
Polity	0.784*** (0.095)	0.190** (0.089)	-0.742*** (0.090)	1.771*** (0.179)	0.995*** (0.111)
/					
cut1	-0.384* (0.211)	-1.676*** (0.205)	-3.461*** (0.212)	-0.711* (0.365)	-2.737*** (0.264)
cut2	0.191 (0.210)	0.276 (0.206)	-1.661*** (0.210)	1.291*** (0.365)	-0.925*** (0.263)
cut3		1.695*** (0.207)	-0.542*** (0.210)	2.758*** (0.367)	0.516** (0.263)
Pseudo R2	0.057	0.022	0.025	0.021	0.066
Obs	13675	13329	13538	4834	9598

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A11: Ordered Logit: Matrilineal Land Inheritance

	(1) Job Scarcity	(2) Housewife	(3) University Attendance	(4) Mothers Guilt	(5) Men Executives
Matrilineal Inheritance	-0.070 (0.060)	-0.505*** (0.056)	-0.095 (0.061)	-0.685*** (0.124)	-0.391*** (0.074)
Plugh	-0.753*** (0.048)	-0.600*** (0.046)	-0.335*** (0.044)	-0.566*** (0.134)	-1.134*** (0.060)
Settlement Patterns	0.016 (0.019)	-0.054*** (0.018)	-0.072*** (0.019)	-0.184*** (0.036)	0.017 (0.025)
Political Hierarchy	-0.209*** (0.031)	-0.130*** (0.031)	-0.369*** (0.031)	0.601*** (0.064)	-0.283*** (0.040)
Agricultural Suitability	-0.208* (0.110)	0.650*** (0.106)	-0.128 (0.116)	-1.048*** (0.226)	-0.665*** (0.151)
Age	-0.002 (0.002)	0.001 (0.001)	-0.002 (0.001)	-0.003 (0.002)	-0.002 (0.002)
Has a Child	0.226*** (0.044)	0.168*** (0.041)	0.081* (0.041)	0.072 (0.064)	0.024 (0.048)
Male	0.865*** (0.036)	0.214*** (0.033)	0.465*** (0.033)	0.093* (0.055)	0.592*** (0.038)
Middle Class	-0.096** (0.038)	-0.063* (0.035)	-0.005 (0.035)	-0.074 (0.057)	0.077* (0.041)
Upper Class	0.102 (0.118)	-0.224* (0.126)	-0.001 (0.127)	0.063 (0.177)	-0.069 (0.142)
Primary Education	-0.266*** (0.059)	0.003 (0.056)	-0.398*** (0.055)	-0.193 (0.126)	-0.374*** (0.064)
Secondary Education	-0.551*** (0.060)	-0.143** (0.057)	-0.619*** (0.056)	-0.414*** (0.126)	-0.695*** (0.065)
Tertiary Education	-0.530*** (0.071)	-0.302*** (0.069)	-0.714*** (0.067)	-0.544*** (0.131)	-0.897*** (0.078)
Religious Attendance	-0.148*** (0.039)	-0.189*** (0.040)	-0.155*** (0.039)	-0.327*** (0.062)	-0.103** (0.047)
Polity	0.820*** (0.107)	0.710*** (0.105)	-0.659*** (0.107)	2.493*** (0.220)	1.474*** (0.158)
/					
cut1	-0.448** (0.211)	-1.723*** (0.203)	-3.455*** (0.214)	-0.566 (0.366)	-2.990*** (0.272)
cut2	0.130 (0.211)	0.244 (0.203)	-1.650*** (0.212)	1.446*** (0.367)	-1.174*** (0.271)
cut3		1.672*** (0.205)	-0.536** (0.212)	2.922*** (0.369)	0.271 (0.271)
Pseudo R2	0.056	0.025	0.025	0.024	0.064
Obs	13493	13150	13362	4834	9475

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table A12: Ordered Logit: Matrilocal Residence

	(1)	(2)	(3)	(4)	(5)
	Job Scarcity	Housewife	University Attendance	Mothers Guilt	Men Executives
Matrilocal Residence	-0.086 (0.060)	-0.481*** (0.055)	-0.099 (0.061)	-0.685*** (0.124)	-0.412*** (0.074)
Plough	-0.779*** (0.048)	-0.563*** (0.046)	-0.341*** (0.044)	-0.566*** (0.134)	-1.157*** (0.059)
Settlement Patterns	0.022 (0.019)	-0.069*** (0.018)	-0.070*** (0.019)	-0.184*** (0.036)	0.031 (0.025)
Political Hierarchy	-0.182*** (0.030)	-0.173*** (0.030)	-0.362*** (0.030)	0.601*** (0.064)	-0.235*** (0.038)
Agricultural Suitability	-0.218** (0.110)	0.638*** (0.106)	-0.130 (0.115)	-1.048*** (0.226)	-0.616*** (0.149)
Age	-0.002 (0.002)	0.002 (0.001)	-0.002 (0.001)	-0.003 (0.002)	-0.002 (0.002)
Has a Child	0.230*** (0.044)	0.166*** (0.041)	0.081** (0.041)	0.072 (0.064)	0.020 (0.048)
Male	0.873*** (0.035)	0.211*** (0.033)	0.476*** (0.033)	0.093* (0.055)	0.598*** (0.038)
Middle Class	-0.102*** (0.038)	-0.059* (0.035)	-0.005 (0.035)	-0.074 (0.057)	0.079* (0.041)
Upper Class	0.096 (0.118)	-0.217* (0.126)	-0.002 (0.127)	0.063 (0.177)	-0.068 (0.141)
Primary Education	-0.305*** (0.058)	0.067 (0.055)	-0.407*** (0.054)	-0.193 (0.126)	-0.414*** (0.062)
Secondary Education	-0.598*** (0.059)	-0.071 (0.056)	-0.629*** (0.055)	-0.414*** (0.126)	-0.749*** (0.064)
Tertiary Education	-0.579*** (0.070)	-0.226*** (0.068)	-0.722*** (0.067)	-0.544*** (0.131)	-0.951*** (0.076)
Religious Attendance	-0.137*** (0.039)	-0.198*** (0.039)	-0.153*** (0.039)	-0.327*** (0.062)	-0.083* (0.047)
Polity	0.865*** (0.106)	0.633*** (0.104)	-0.647*** (0.107)	2.493*** (0.220)	1.551*** (0.156)
/					
cut1	-0.350* (0.208)	-1.911*** (0.202)	-3.418*** (0.211)	-0.566 (0.366)	-2.702*** (0.265)
cut2	0.225 (0.208)	0.048 (0.202)	-1.618*** (0.209)	1.446*** (0.367)	-0.890*** (0.264)
cut3		1.472*** (0.203)	-0.499** (0.209)	2.922*** (0.369)	0.549** (0.264)
Pseudo R2	0.057	0.024	0.025	0.024	0.065
Obs	13675	13329	13538	4834	9598

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$