

State Reach and Gender Norms: Examining the Uptake of Equitable Land Rights *

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Abstract

The state's reach has been shown to impact civil conflict, democracy, and the power of local authorities. In this paper, we reveal that it also affects the social institutions that govern gender and property rights. Governments in many developing countries have implemented laws that promise equal land rights to men and women, thus attempting to change social institutions governing land management. However, success varies. We draw on an original household-level survey in Malawi to show that state reach is associated with variations in gendered property rights at the community and household level, even when considering land values, migration, market access, ethnic heterogeneity, education, wealth, and lineage systems. Evidence from 32 focus groups highlights the impact of state information dissemination combined with access to state forums. This has implications for the study of the state and social institutions, as well as for property rights and gender equality policies in Africa.

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1 Introduction

To protect their citizens and promote equitable development, governments throughout the world design policies to replace or reform social institutions.¹ They enact laws that prohibit ethnic, religious, or racial discrimination, in hopes of altering the social “rules of the game.” State governments revise labor laws in attempts to eliminate child labor or indentured servitude (Nogler, Pertile and Nesi 2016; Rossi 2016) and implement measures to replace community practices such as open defecation, home births, and female genital cutting, in order to improve public welfare (Greeson et al. 2016; Gbadegesin and Akintola 2020; Rahman and Toubia 2000).

In recent years, fueled by global movements to empower women, governments have sought to shape social institutions related to gender. Laws governing domestic violence, girls’ education, and marital age all pursue the same goal: changing existing gender practices (e.g., Htun and Jensenius (2022)). Gender quotas are particularly prevalent policies devised to disrupt social institutions (Bhavnani 2009; Hannah et al. 2021; Beath, Christia and Enikolopov 2013; Clayton 2018). In agrarian economies of the Global South, governments also attempt to reform social institutions around women’s rights by reshaping who has the right to own, manage, profit from, and inherit land.

Yet, government laws and policies do not necessarily alter social institutions. Actual practice matches the de jure law in some cases and follows historically-rooted rules at odds with state law in others. When, then, do state efforts succeed in promoting gender equality? We examine how *state reach* affects the adoption of state-supported practices. Scholars have previously revealed how the state’s ability to penetrate society throughout its territorial boundaries impacts state-society relations, economic development, the relative powers of local authorities, and the growth of violent insurgencies (Herbst 2000; Mann 2008; Pierskalla et al. 2017; Soifer and Vom Hau 2008). We advance scholarship on

¹We use ‘social institutions’ to refer to the roles, rules, and rewards that “govern social interactions within a community” (Lust and Rakner 2018). We distinguish social institutions from social norms, which are a broader class of expectations over engagement, including, as Nyborg et al. (2016, 42) notes, “a predominant behavioral pattern within a group, supported by a shared understanding of acceptable actions and sustained through social interactions within that group.” Social institutions are thus akin to prescriptive social norms but not descriptive ones.

the state by testing whether state reach impacts community's social institutions governing gender. We propose that proximity to state administrative offices should increase the likelihood communities comply with state rules and that state reach exerts its effects through two key channels: increased accessibility of state forums and information provision.

We study the effects of state reach on gendered land institutions in Malawi. Like other African countries, with prompting by civil society, Malawi's government implemented laws aimed to promote gender-equal land rights. Yet the Malawian state is "weak", or under-resourced, and like other countries categorized as having "low state capacity" (Thies 2009), it faces challenges implementing its agenda. Furthermore, like other post-colonial states, its government struggles to gain citizen trust; the majority of its citizens reported little to no trust in the President, Parliament, Electoral Commission, and District Council in Afrobarometer's 2022 survey (Afrobarometer 2022).

Despite these challenges, we uncover a strong association between the state's geographic reach and gendered land management powers, which we take as evidence of how the state affects social institutions. Proximity to district administrative capitals predicts the likelihood respondents report gender-equal decision-making powers over land in their communities. It also predicts self-reported land management practices within households. District offices, known colloquially as "BOMAs,"² house the lowest level of the state's administration, including land officers, who are the first contact for citizens seeking *statutory* land dispute resolution. Our analyses of original surveys of more than 3800 land users find consistent evidence that proximity to the district capital impacts community and household practices, even when taking into account land values, migration patterns, ethnic heterogeneity, education, household income, and lineage systems.³ Furthermore, as modernization theory predicts that urbanization erodes traditional social institutions, our models disentangle the effects of proximity to administrative offices and urban markets, highlighting that the changing norms often associated with urbanization appear better explained by state reach. Focus group discussions (FGDs) with smallholder farmers find communities nearer to their capitals have more visits by state actors and dis-

²This acronym for British Overseas Military Administration is a holdover from the colonial era.

³On Malawi's matrilineal and patrilineal institutional systems, see Matchaya et al. (2009); Chanock (1985); Chiweza (2008); Holy (1986); Kishindo (1995); Phiri (1983).

cussions about gender, suggesting state reach influences social institutions by projecting state information.

This study has important theoretical and policy implications. It contributes new insights into foundational questions in political science about the state, exploring how and why state reach impacts social institutions around gender equality. It also shows how social institutions governing land management in many developing countries (Baldwin and Holzinger 2019; Onoma 2009; Ostrom 1990) can become more inclusive, even without being replaced. Importantly, our approach helps overcome conceptual and measurement issues within research on women’s “land ownership” (Doss et al. 2015) by using an indicator of land management power that recognizes the complexities of land rights in practice. This paper thus sheds light on the determinants of women’s land rights, an enduring concern for both scholars and policymakers, and charts a path for future work.

The paper proceeds as follows. First, we introduce a theoretical framework explaining how state reach impacts social institutions. We then provide an overview of state attempts to influence gendered land management institutions in Malawi. Next, we present our main research approach. We report our main statistical findings from Malawi and then present insights into the mechanisms based on the FGDs. The final section discusses implications of these results and proposes paths for continuing research.

2 State Reach and Social Institutions

The post-colonial state is classically depicted as “suspended over society”⁴; yet, in fact, the distance between state and society varies in important ways. This distance, or “state reach,” can impact social institutions via increased access to forums and the diffusion of state-sanctioned information.

Our conceptualization of state reach draws upon the definition of the state’s infrastructural power as the capacity of the state to “penetrate society” throughout its territory (Mann 2008).⁵ In this, we follow the call of Soifer and Vom Hau (2008, 226) to sepa-

⁴Hydén (1980, 16) draws on this quotation from Hindess and Hirst (1977, 197) to highlight rural African communities’ autonomy from the state.

⁵We treat governance as an outcome and thus define state reach more narrowly than Yashar (2005, 6),

rate state reach (or infrastructural power) from the outcomes associated with state power, particularly “the ability to implement decisions and put policy to work.” Our outcome of interest is conformity to state policy (actual gendered land practices in a community), while state reach is the state’s ability to engage with communities.

The territorial component of infrastructural state power is critical, as scholars have long highlighted the uneven nature of the state’s administrative apparatus in post-colonial, developing countries (Pierskalla, De Juan and Montgomery 2019; Giraudy and Luna 2017; Boone 2003; Nathan 2023). Research on infrastructural power thus has focused primarily on its spatial component, or state reach (Kelemen and Pavone 2018; Krönke, Mattes and Naidoo 2022; Soifer and Vom Hau 2008; Koss and Sato 2016). For Mann (1993, 55), states “embody centrality, in the sense that political relations radiate to and from a center.” Similarly, Herbst (2000) focuses on the state’s ability to “broadcast” power from administrative cores, arguing state influence should be strongest near its administrative center(s) and weakest in peripheral border zones. These spatial approaches to the concept of state reach are the starting point for examining when and where communities practice the state’s rules of gender-equitable land management.

State reach impacts violence, regime types, and power relations among authorities, among other outcomes. Scholars have argued state reach explains the likelihood of civil conflict (Peic and Reiter 2011; Holtermann 2012) and state taxation (Koss and Sato 2016). They also use it to explain country-level outcomes, including differences between democracy and feudalism (Mann 2008), and sub-national or individual-level differences, such as support for redistribution in Latin America (Holland 2018).

State reach is a core concept within research on the state, but its impacts on household and community practices have not been well-established. Examining the effects of state reach on land rights is not only important for human rights; it also contributes insights into the nature of the state, social institutions, and authority. We conceptualize state reach as a continuum, arguing the state’s tentacles can penetrate into society even where authorities with the most contact with citizens (e.g. chiefs) draw legitimacy from outside of the state. The state may even be able to impact social institutions when authority includes “capacity to govern society” and “actual penetration throughout the country.”

ities governing through them compete with the state in other domains ([Lust 2022](#)). How and whether the broadcast of state power applies to social institutions the state seeks to change thus requires further attention.

We predict state reach affects social institutions by shaping citizen-state interactions. There are two key pathways through which state reach may impact social institutions. First, by affecting citizens' accessibility to state forums where they can advocate for themselves when facing social institutions that contradict state law. Second, by affecting the diffusion of information about state-sanctioned, "appropriate" behaviors to non-state authorities and citizens. We examine each of these two mechanisms in turn.

State reach impacts citizens' opportunities to use state law. Law may apply evenly to all citizens within a territory, but proximity to the state apparatus determines citizens' abilities to challenge existing social institutions. It is easier to draw upon state policies to threaten to sanction those who violate state law if state actors, such as representatives of the administration, district land officers, land tribunal courts, or police, are physically closer. Similarly, a more proximate administrative apparatus and state actors also likely promote greater knowledge of state laws and processes. Such information should impact individuals' abilities to use these policies to advocate for gender equity and defy established social institutions.

Consider a household in which there is a gap between state policies and social institutions – state law says men and women have equal land rights while the established social institution privileges men. How might state reach condition changes in patriarchal social institutions? First, family members (including the wife) may draw on state policies to advocate for modifying practices. The opportunity to appeal to state laws to change discriminatory practices, such as the husband's family lineage retaining full rights over a widow's land, should increase with greater access to the state.

This mechanism may also work indirectly. Challenging one's family members and bringing a case to the court system is financially and socially costly, but the possibility of using the state's law to advocate for gender equality can have a latent effect on social institutions, even if rarely executed. [Aldashev et al. \(2012\)](#) theorize state laws can increase women's bargaining power, making them a "magnet" for customary rules to change, even

without actually using the state's courts.

State policies may also change local social institutions by introducing and supporting an idea of "good" or "proper" behavior while delegitimizing practices that undermine gender equality. Therefore, a second mechanism by which state reach can change social institutions is informational. Individuals may change institutionalized practices in their households, or leaders change them in their communities, because they receive state message about appropriate behavior. State policies provide a signal that increases the desirability (or social benefits) of behavior that deviates from dominant social institutions. This diffusion of state-endorsed ideas may occur indirectly through regular interactions with state actors or through active attempts to "sensitize" communities to gender equitable practices. State agricultural extension agents, land officers, and other state employees may actively discuss gender-equal land rights, as do employees of non-governmental organizations, with the consent, oversight, or support of the state. State reach affects the likelihood these ideas are diffused within a community.

These theoretical insights ground our expectation that state reach impacts land management practices within communities. In the analyses that follow, we are interested in the respondents' perceptions of the dominant practice within the community as well as their household's behaviors. Behavioral changes may happen at the individual level, but the community is a key arena for examining changes in social institutions, as they are created, communicated, and enforced by social interactions. Both the horizontal interactions among community members of the same status and the vertical interactions between local non-state leaders (e.g., chiefs) and their "subjects" forge these institutions. As [Nyborg et al. \(2016\)](#) highlighted, institutional change occurs through community-level tipping points, in which a sufficient number of community members adopt a behavior that deviates from the prior pattern. The dominance of a given pattern of behavior therefore shapes households' costs when deviating from extant social institutions. In short, perceptions of community practices are not merely an aggregation of household practices, but they are our key outcome because they are themselves influential determinants of gendered land rights in the community. We hypothesize that:

Hypothesis 1 *Spatial proximity to seats of the state's administrative power should be associated with gender-equitable land practices.*

It is important to note the core outcome of interest is gender equity, not stronger women's rights, as joint land management more closely reflects state's rules. Empirically, these outcomes are similar since communities rarely see women having stronger rights than men.⁶ Generally, equity has resulted from women gaining greater rights, but joint land management powers is the more precise operationalization of the state's ability to impact norms.

In advancing a theory of state reach, we respond to some alternative explanations for changes in social institutions. First, modernization theory anticipates urbanization weakens traditional social institutions, replacing them with "modern" rules of the game (for a classic statement, see [Lerner \(1958\)](#).) In this approach, proximity to markets, not seats of state power, promotes gender equitable social norms. Second, an interdisciplinary literature highlights increasing land values as a source of endogenous changes in social institutions governing land. New opportunities to profit from land and agricultural labor – such as the introduction of cash crops, land titling, or irrigation projects – and increasing land values can transform the balance of power between men and women, youth and elders, and among those with different positions within a lineage ([MacLean 2010](#); [Chanock 1985](#); [Tripp 2004](#); [Carney and Watts 1991](#); [Platteau 1996](#)) . This does not, however, establish clear expectations regarding social institutions over land management. The argument that increasing land values weakens the rights of family elders would anticipate greater joint land management, as neither the man's nor the woman's family has stronger claims over the land than the spousal pair; however, research also shows land values and scarcity contribute to increases in men's rights, predicting male-dominated land management practices, not joint management (e.g. [Holy \(1986\)](#); [Lancaster \(1984\)](#)). In our analyses, we thus consider these alternative drivers of institutional change, using measures of urbanization, population density, and crop values to explore the effects of state reach on the likelihood community practices reflect state policies.

⁶In some matrilineal communities, women have historically had greater power than men while in others, power was vested in male members of the female lineage, such as a woman's brother or uncle.

3 Gender in Malawi's Statutory and Customary Land Institutions

3.1 State Institutions

The Malawi state's land management institutions are *designed* to transform existing social institutions, promoting gender equality. Efforts have focused particularly on land and agriculture given their importance to the economy. An estimated 76% of the labor force was engaged in agriculture in 2019, and it is the primary economic activity for women (World Bank 2019). The government began introducing gender-equitable land laws in the 1960s and 70s and accelerated its efforts to promote women's land rights in recent years, particularly due to the influence of donors and civil society.

Following independence in 1964, Malawi's land management regulations focused on spousal rights in cases of death or divorce. Malawi's 1967 Wills and Inheritance Act targeted preventing husbands' families from expropriating widows' land following their death. A 2011 amendment to the Act made it a criminal offense for family members to dispossess widows or widowers of their land (Semu 2002, 11). The prevailing 1994 Constitution also includes provisions related to gender. For example, Section 13 on the Principles of National Policy begins with a commitment to advancing gender equality by addressing discriminatory practices related to property rights and domestic violence, among others. Section 20 on "equality" prohibits gender discrimination, while Section 24 delineates a range of prohibitions on discrimination against women, including their property rights, regardless of marital status. The country's constitution mandates legislative policies to protect women from discriminatory customs (Ndulo 2011, 99).

At the end of the twentieth century, the women's rights agenda advanced by domestic and global civil society fostered new legal institutions promoting gender equitable practices. The 1985 United Nations Women's Conference in Nairobi accelerated gender-equity efforts (Ngwira 2010) by providing domestic civil society actors a global framework and discourse by which to advance their agenda (Caron 2018). In 1997, the Southern African Development Community (SADC) issued a declaration that cited "deep con-

cerns” about “disparities between women and men” in “access to and control over productive resources” ([Southern African Development Community 1997](#), 2). Malawi’s president signed on to the declaration, committing the government to: “promoting women’s full access to, and control over productive resources such as land, livestock, markets, credit, modern technology, formal employment, and a good quality of life in order to reduce the level of poverty among women” and “repealing and reforming all laws, amending constitutions and changing social practices which still subject women to discrimination, and enacting empowering gender sensitive laws” ([Southern African Development Community 1997](#), 4). More recently, Malawi’s Women’s Legal Resources Centre (WORLEC) and LandNet organizations advocated for gender equitable policies ([Zamchiya and Gausi 2015](#)).

The Malawian state then created a National Gender Policy of 2000-2005, which included a section on natural resources and the environment, as did their 2004-2009 National Gender Program. By the 2006-2011 Malawi Growth and Development Strategy, the connection to social institutions was unambiguous: “Breaking the cultural/traditional factors which create and perpetuate gender inequalities” was a priority ([Government of Malawi 2006](#), 52). Increasing women’s access to land and security of tenure was similarly prioritized in Malawi’s 2002 National Land Policy ([Ministry of Lands and Housing 2002](#)).⁷ Most recently, the National Gender Policy, as revised in 2015, paid particular attention to increasing women’s decision-making powers and expanding women’s control over productive resources.

That Malawi’s government has created official rules providing equal rights to women does not imply the state treats men and women equally in practice or that other state regulations have not inadvertently undermined women’s rights. For example, the practice of providing fertilizer subsidies to “the head of household,” understood as the husband in a married couple, can weaken women’s rights over agricultural decision-making. In addition, the Malawian government has sought to advance land titling and registration of customary land through its Customary Land Act of 2016, and implementation of land registration or titling without *careful* attention to including female landusers’ names

⁷See Sections 1.3.7; 1.4.2A; 4.7.2; and 5.7

on documents can undermine women's influence over the land they use (Zuka 2019; Meinzen-Dick and Mwangi 2009). Formal institutions of gender equity are no guarantee of outcomes as implementation and practice remains highly uneven. Nevertheless, "the law remains the essential starting point" for advancing women's rights (Daley and Englert 2010, 100), as these laws are a tool that can be engaged in the struggle for equal power.

3.2 Social Institutions

The practices that the state's policies seek to change are embedded in social institutions that regulate everyday life in Malawi's rural communities, including access to land. The majority of land used by Malawi's citizens is outside of direct state control and property rights. Recent estimates indicate that 65% of land in Malawi lacks state titles and is governed instead by indigenous, customary, and community institutions (Wily 2015). "Customary Land" is used by smallholder farmers and governed by customary authorities (CAs) known as chiefs.

Malawi's chiefs draw their legitimacy from tradition, as well as connections to the state. In Malawi, the term "chief" denotes a range of hierarchically-organized customary authorities, from village heads and group village heads to the official "Traditional Authority" for a bounded territorial zone. Malawi's 1967 Chief's Act recognizes the position of chiefs and their roles, and the state endows some chiefs with the titles of Paramount or Senior chief.⁸ Chiefs and the state are collaborators in many domains, starting with colonial indirect rule through contemporary decentralized governance policies (Chiweza 2007), but chiefs also derive authority from distinct sources of legitimacy and institutional rules. As Chinsinga (2006) describes, Malawi's chiefs carefully guard their role as autonomous authorities and protectors of custom.

Chiefs have a number of governance roles that increase their influence over community practices. As "custodians" of customary land, they interpret and implement the land tenure rules in the community. Obtaining land through family lineages remains the pri-

⁸As of 2022, the Ministry of Local Government recognized 364 chiefs, in the categories of paramount chiefs (6), senior chiefs (101), other chiefs/TAs (162) and sub-chiefs (STAs) (95).

mary mode of access for most Malawian smallholder farmers. For example, in a 2016 nationally-representative survey of 6,854 land users in Malawi, 87% accessed their land through inheritance (Lust et al. 2016). Rentals, sales, and being allocated land from a chief are far less common modes of land access. Land inheritance may pass through male or female lineages, a defining element of patrilineal and matrilineal systems, respectively. Malawi features both types of kinship structures, with ethnic groups like the Chewa historically classified as matrilineal and the Ngoni and Tumbuka as patrilineal (Murdock 1967). Yet contemporary matrilineal and patrilineal practices may not be consistent with the historical coding so prominently used in social sciences research. As we argue and show in this paper, social institutions change.

Another important role of Malawi's chiefs is conflict resolution. Just as land officers (or "Land Clerks") are the lowest level of Malawi's statutory dispute resolution regime, village heads are the lowest level within the customary system. Malawians overwhelmingly turn to village heads first for assistance with disputes (Funjika and Honig 2023). Chiefs adjudicating conflicts can impact community norms and practices around land management and, therefore, whether state policies take root.

The rules of gendered land rights that the state seeks to impact are thus deeply embedded in community social relations. Consequently, they are reinforced (or changed) as a result of decisions by citizens and customary authorities. Moreover, these institutions draw legitimacy from tradition, making it challenging to change them. Thus, although the Malawian state has mandated gender equality in land rights, actual outcomes diverge from these designs. As Chiweza (2008, 206) explains regarding land rights in Malawi, "despite the conceptual and rhetorical lip service made to many concepts supporting gender equality enshrined in the Constitution and key country documents such as the national gender policy, the gap between theory and practice is striking." The rest of this paper investigates this puzzle.

4 Research Design

Our empirical analyses rely on two key data sources. First, we draw upon the 2019 Local Governance Performance Index (LGPI) (Lust et al. 2020) to explore the relationship between state reach and gendered land management institutions. Our sample of interest is drawn from districts within 100 km of Malawi’s border with Zambia (see Appendix for details on the survey methodology). We focus on this rural sample because the theory applies to citizens whose livelihoods depend on land access. Moreover, focusing on rural areas allows us to retain significant variation in state reach. Within this sample, we examine the sub-sample of 3886 landowning, married households for our individual-level indicators and a smaller sample of 1327 land users who received our community-level question of interest. See also Appendix B.

Second, we use 32 FGDs with Malawian land users in 8 districts to gain insights into the mechanisms surrounding state reach. We selected the FGD sites to provide variation in both proximity to district capitals and lineage systems. We operationalized “far from the district” as communities 35km or farther from the capital and “near the district” as communities 5-10km from the capital.⁹ We selected 8 districts, 4 historically matrilineal districts and 4 historically patrilineal. While the quantitative sample is limited to the North and Center regions of the country within 100km of the Zambia border, the qualitative sample includes districts in all 3 regions (see the Appendix C for the FGD questionnaire).

4.1 Quantitative Analyses

Outcome Variables

Landed property rights reflect a bundle of different entitlements: the right to pass land on to one’s children, the right to rent or sell land, and the right to manage how land is used, among other rights. Management is a particularly critical (and often overlooked)

⁹We selected the 35km buffer based on the survey data, paralleling the median distance of 35 km to the BOMA in the primary subsample. We used a fixed distance instead of a relative distance within any given district because this more closely related to our theoretical conceptualization of state reach. One limitation of this approach, however, is small districts without a significant population outside of 35km from the sample were not eligible to be sampled.

property right because it affects the economic usage of the land within a household, with implications for agricultural yields and the distribution of family labor. The right to manage also has critical political consequences: As Libecap (1993, 1) highlights, "By allocating decision-making authority, [property rights institutions] also determine who are the economic actors in a system and define the distribution of wealth in a society." To measure the community-level land management outcome, we draw on responses to the survey question, "In general, who has more power to make decisions about land in this community, women or men?" If the respondent indicated that both men and women are responsible, then we code *Joint Management* as one and zero otherwise. As described earlier, we first examine this social institutions outcome and the dominant institutional system at the village level, given the importance of a community for generating and enforcing social institutions.

Overall, we find 16% of respondents indicate joint land management is the dominant land management system in their community. However, only 9% of those who report contemporary patrilineal practices indicate joint land management in their community compared to 17% among those who engage in matrilineal practices and 38% of those who report neither system is dominant. Furthermore, we find a relative degree of agreement among community members over their community's dominant practice. When considering all localities for which we have at least 10 respondents, in 76% of localities (n=203), at least 2/3 of respondents indicate no joint land management. In 2% of localities (n=4), at least 2/3 of respondents indicate joint land management. Thus, in 22% of localities (n=38), there is a relative lack of agreement regarding the locality's dominant practice.

In addition, we also examine household-level land management practices. For this individual-level outcome measure, we use responses to the question "Who makes the primary decisions regarding the use and management of the land?" among households with spouse pairs. Our *Household Joint* variable is coded as one if the respondent indicated that decisions were made by the head of household and spouse jointly and zero otherwise. This outcome also offers a larger sample for exploring management practices, as the question was posed to 3886 land users.

The associations between these community perceptions and household practices are

revealing. The correlation between these variables is low ($r=.2136$). Figure 1, the cross-tabulation of these two variables, reveals that 61% of respondents report practicing what they perceive to be dominant in their community (joint and joint or not joint, not joint); 30% practice joint when it is actually not their community’s most common practice, and 9% practice uni-management (predominantly male management) while reporting that joint management is dominant in their community.¹⁰

Table 1: Household and Community Practices

	Community Not Joint	Community Joint
Household Not Joint	.45 (727)	.09 (141)
Household Joint	.30 (492)	.16 (262)

Explanatory Variable: State Reach

We conceptualize state reach as spatial proximity to the state, which facilitates access to statutory forums and diffusion of state-endorsed information. Our primary focus is distance to the respondent’s district administrative capital (BOMA), the headquarters of district commissioners and their land officers, lowest level of the state’s administration, and first contact for citizens seeking statutory conflict adjudication. We measure this in two ways: First, a continuous “as-the-crow-flies” measure of the distance from the household to the capital, calculated as the kilometers between the two GPS points.¹¹, and second, a measure of the travel time it takes each household in the sample to visit their district capital based on google maps’ estimates. The latter measure takes into account that road quality varies considerably throughout Malawi, much like other developing countries, and more closely approximates the costs for citizens visiting state offices and/or

¹⁰In an exploratory test, we measure community practice as the proportion of respondents reporting that the dominant practice in their community is joint. We compare this to the respondent’s reported practice. We find the majority report the same practice as other communities members have identified as the dominant practice. Nevertheless, there are clusters of respondents who practice joint management when the community practice is uni-(male)management. There are also clusters of respondents who live in minimally-to-moderately joint-management-practicing areas (more than 0 but less than .5) who do not practice joint management. These analyses highlight the importance of examining outcomes at both the individual and community levels.

¹¹This is a standard measure of proximity (Pierskalla et al. 2017; Campante and Do 2014; Weidmann 2009).

state actors visiting the community to disseminate information.¹²

Travel time to the district is our primary measure of state reach, but the main effects are robust to the “as-the-crow-flies” measure, as reported in the Appendix. The average (mean) respondent is 68 minutes from their administrative capital, with a range of 1 to 216 mins or 1km to 98km in distance. This is the first point of contact with the state’s administration, given that the distance to the national capital is on average 232km away for respondents, reaching a maximum 499km.

Proximity to the BOMA should not be conflated with urbanization, however. Respondents in the nearest quartile (less than 36 mins from their district capital) are slightly wealthier, more educated, and more likely to have migrated than respondents in the farthest quartile (more than 89 mins), but they also live in communities where customary authorities have slightly *more* influence. For example, 64% of respondents in near villages reported that customary authorities have “a lot” of influence, relative to 56% in far villages and are slightly more likely to report an obligation to comply with chiefs.¹³ Accordingly, all analyses include controls for education, wealth, and migration. Communities nearer to the district are not outside of the realm of customary authorities, but they are more likely to interact with the state. A survey of village heads finds 2.6 % of village heads reported the district commissioner (DC) by the community in the past year, compared to 8.1 % in near communities. Similarly, 15% of village heads in far villages reported visiting DCs, compared to 27% in near ones. This increases our confidence that the state reach measure is capturing differences in state-society interactions.

Additional Variables

We construct two variables to measure urbanization. First, we consider proximity to commercial market centers, known in Malawi as “trading centers.” Trading centers are concentrated clusters of local businesses that connect producers and traders to national markets, often along major transport routes. To construct this measure, we scraped Google Maps data for the location of trading centers in our sampled areas and used re-

¹²This follows the logic of other state reach measures using travel times, such as time to reach medical attention (Holland 2018) and for police to arrive (Luna and Soifer 2017).

¹³Means by near and far are: economic vulnerability (2.1; 1.9 on a scale of 1-4), education (2.35; 2.19 on a scale of 1-4), not born in the village (dummy) (.72; .68), influence of Customary Authorities (CAs) (3.47; 3.34 on a scale of 1-4), obligation to comply with CAs (dummy) (.20; .17).

spondents' geographic coordinates to measure distance to the nearest center. As with state reach, we use travel time measures in the main models and distance as-the-crow-flies measures in robustness checks. Second, we employ the [GeoNames \(2023\)](#) data set used by [Brinkerhoff, Wetterberg and Wibbels \(2018\)](#) to estimate the effects of proximity to urban areas. Following their approach, we construct a variable of kilometers to the nearest city. Importantly, however, GeoNames includes cities in their dataset based on population size or because they are administrative capitals. Taking into account the feature "type" allows us to examine the effects of proximity to an urban area as distinct from administrative centers.

We also consider the effects of land values, which may shift social norms related to land usage. We use population density to gauge land desirability, as scholars have described increased competition over land as driving institutional change ([Platteau 1996](#)). Whether land is used for cash crops or subsistence agriculture also approximates the value of the land. Thus, we construct a measure of the proportion of the agricultural production in that district under cash crop cultivation by hectareage.¹⁴

Our main models also include a measure of ethnic fractionalization and migration within the locality. We use the ethnicity of our respondents in each square kilometer to create an ethnolinguistic fractionalization (ELF) score for each square kilometer. This score approximates the ethnic diversity in the village, which could potentially impact respondents' perceptions of the dominant lineage institution. Our locality-level migration variable is a measure of the number of respondents in the square kilometer who reported moving to the village in the past 5 years. The main results are unchanged when using alternative migration specifications based on a 10 year cut off or being born in the village.

To account for differences between kinship institutions, we construct measures of contemporary and historical lineage practices. Our primary measure is the best available indicator of contemporary matrilineal and patrilineal kinship institutions, based on the respondents' perceptions of their community's dominant practice. This measure is drawn from the survey question: "In this community, is land generally inherited through the

¹⁴We code cash crops based on [Maggio and Sitko \(2021\)](#) and the Malawi National Census of Agriculture and Livestock (2006/2007) categories.

man or the woman's lineage or both?" Matrilineal is coded as 1 if the respondents reported mother's side, and 0 if they reported both or the man's. The same coding rules apply for patrilineal.

Our historical patrilineal/matrilineal measures reflect practices for the ethnic group as [Murdock \(1967\)](#) documented in the middle of the 20th century. This is a dichotomous variable. For matrilineal, it takes a value of 1 if the respondent's ethnic group was categorized as matrilineal and 0 if it was patrilineal or mixed. The same coding rule applies to patrilineal.¹⁵ Within the subsample of respondents receiving the community power question, 59% are from historically matrilineal groups, yet only 3% report contemporary matrilineal practices in their communities. By comparison, 72% report patrilineal as the contemporary inheritance system in their community, with the remaining 25% reporting that it is mixed. This reinforces the importance of using contemporary indicators instead of Murdock's data to measure contemporary practices.

We then used these contemporary and historical patrilineal/matrilineal measures to construct separate village-level proportional indicators of each. The "Prop. Pat. (Now)" measure reflects the proportion in the respondent's community who reported patrilineal as the dominant institution type. The same coding rules apply for "Prop. Mat. (Now)." The "Prop. Pat. (Hist.);" indicates the dominant historical practice in that community based on the contemporary make-up of the sampled respondents' ethnicities in that community. For example, if the community's sampled respondents were exclusively Ngoni and Tumbuka, two ethnic groups coded as historically patrilineal, then the "Prop. Pat. (Hist.);" indicator would be 1, the highest patrilineal proportion.

Finally, our models include respondent characteristics that could influence their reported perceptions of gender equity in the community as control variables. Our education measure approximates the years of citizen-state interactions through schooling, with dummies for no schooling (reference category in the regressions below), completed primary, completed secondary, and any post-secondary school. We anticipate that the respondent's age and gender may also impact their responses to the question of whether

¹⁵We also used the Murdock data to measure the marriage settlement patterns of matrilocality (husband moves to wife's village) and patrilocality (wife to husband's village). These are highly, but not perfectly, correlated with matrilineal/patrilineal.

men, women, or both hold power over land in their communities and households and thus include control variables for both. Finally, we control for wealth with a scale ranging from income more than meets needs to income does not meet needs.

5 Findings

5.1 State Reach and Gendered Land Management

Our findings provide evidence state reach impacts the likelihood of joint land management within communities. We estimate multi-level models for our main specifications to accommodate the mix of variables at the village and individual levels. For our main specifications, we chose logit rather than OLS given our dichotomous dependent variables.¹⁶

The results reveal travel time to the respondent's BOMA predicts joint land management at the community and household levels. Model 1 in Table 2 presents the full results for the community-level outcome. The negative coefficient indicates that communities farther from the seats of state power and forums for statutory land adjudication are less likely to have joint land management practices. The effect of state reach is robust to the inclusion of our indicators of urbanization (distance to markets), population density, and land values (cash crops).

Importantly, these models also reveal state reach is a significant predictor of powers over land in communities with matrilineal and patrilineal institutions. The main model specification includes the lineage systems as reported by the respondent. This highlights the fact that state reach affects gendered land management practices, even when accounting for differences in contemporary lineage practices.

The second model in Table 2 tests our hypotheses at the household level. It provides additional evidence that proximity to the BOMA impacts the likelihood that joint land management. The results, from analyses on a larger sample (n=3886) than that for the community outcome, show that travel time to the state's administrative offices has a statistically significant, negative impact on the likelihood that respondents reported men

¹⁶The main results are consistent when using OLS. However, OLS picks up some additional significant effects, making logistic regression the more conservative choice.

Table 2: Multi-Level Logit Regressions Predicting Joint Land Management

	Comm.	HH	Comm.	HH
Travel Time to Admin Capital	-0.009*** (0.003)	-0.006*** (0.001)	-0.009*** (0.003)	-0.007*** (0.001)
Travel Time to Trading Centre	0.009*** (0.003)	0.005*** (0.002)	0.009*** (0.003)	0.004** (0.002)
Cash Crops	-4.226* (2.162)	0.063 (1.324)	-3.769* (2.183)	0.245 (1.320)
PopulationDensity	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Patrilineal (contemp.)	-1.943*** (0.186)	-0.304*** (0.094)	-1.938*** (0.195)	-0.330*** (0.097)
Matrilineal (contemp.)	-0.986** (0.426)	-0.817*** (0.257)	-0.787* (0.439)	-0.643** (0.262)
Age	0.016*** (0.005)	0.003 (0.003)	0.017*** (0.005)	0.003 (0.003)
Male	0.044 (0.180)	-0.430*** (0.078)	0.038 (0.180)	-0.424*** (0.078)
ELF	-0.261 (0.438)	0.456 (0.284)	-0.322 (0.447)	0.306 (0.285)
Prop. Migrants (5yrs)	0.530 (0.713)	0.216 (0.394)	0.591 (0.714)	0.276 (0.399)
Prop Pat. (contemp.)			-0.412 (0.616)	0.003 (0.394)
Prop Mat. (contemp.)			-3.234* (1.784)	-4.125*** (1.279)
Education Controls	Y	Y	Y	Y
Income Controls	Y	Y	Y	Y
Constant	-1.375** (0.673)	-0.173 (0.320)	-0.938 (0.765)	0.044 (0.427)
Variance (Square Kilometer)	0.114 (0.175)	0.561*** (0.091)	0.093 (0.172)	0.531*** (0.087)
N	1327	3886	1327	3886

Significance levels: * : 10% ** : 5% *** : 1%

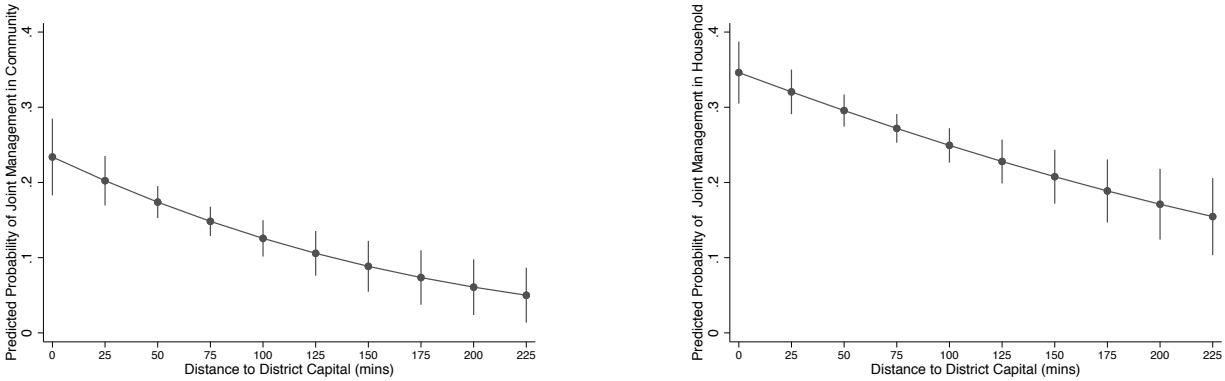


Figure 1: Predicted Effects of State Reach for Powers over Land Management
 Figures report the predicted likelihoods of joint land management at the community level (left) and household level (right) based on Models 1 and 2 in Table 2.

and women have equal land management powers within their households.

The household model also reveals a strong effect of gender among the married respondents in this subsample. Husbands (male respondents) are significantly less likely to report that household heads and spouses have joint powers in their households than are wives (female respondents). This gender effect is not present for the community-level outcome, suggesting some potential gendered social desirability effects for female respondents answering questions about their own households.

Figure 1 visualizes the models' predictions about the likelihood of joint powers over land, by variations in state reach. Whereas the community model predicts a likelihood of men and women having joint powers at only 5% in the farthest communities from the state's administration (225 mins), this increases to 20% in communities closest to the state's offices (25 mins). The predicted effect is even larger for the household model, shifting by 16 percentage points from 47% at 25 mins to 22% at 225 mins. Given these low bases, these are substantively large effects on the probability of joint land management powers.

Models 3 and 4 in Table 2 add village-level indicators of patrilineal and matrilineal institutions. In the same models as the individual-level lineage indicators, they confirm the validity of the individual-level perceptions of the dominant institutional systems in their communities and reinforce the importance of these systems for land tenure outcomes. In models that exclude the individual-level lineage variables, they are highly predictive.

A few alternative specifications further confirm the effects of state reach, while accounting for urbanization and differences in lineage institutions. First, we examine the effects of distance to urban areas categorized by GeoNames, as discussed earlier. Distance to the nearest GeoNames urban locality alone does predict joint powers, as modernization theory would anticipate. However, when we separate out whether these urban localities are administrative centers or not (GeoNames type of "Town"), the basic modernization story becomes more complex. In interaction, Town and distance to the urban center has a significant positive effect, in both the community and household level models (reported in Table A3). This indicates that whether the urban area is an administrative center or a town without state administrative offices is key to understanding the impacts of distances. It suggests that the effects of urbanization on these gender norms may be via state reach as opposed to urbanization more generally.

Furthermore, the results for our cash crops indicator are inconsistent. In the main specification, it is only significant in the community outcome, indicating that higher rates of cash cropping are associated with less equitable land management within that sample. This is the direction of effects the scholarship on commercialization anticipates (Holy 1986; Lancaster 1984; Carney and Watts 1991; Platteau 1996). Population density, an additional indicator of land values and urbanization, has no effect on either outcome. In addition, in the household and community level models, the market distance measure has significant associations in the *opposite* direction modernization theory predicts. Proximity to a trading center has a significant and positive effect on the adoption of gender equitable norms in the both fully-specified models, but not in bivariate regressions (in contrast to the significant effects of distance to the admin capital for both outcomes). These measures are not the ideal tests of these alternative explanations, but they nevertheless improve our confidence that the effects of our state reach indicator are related to the state's administration and not land values or urbanization.

Table A4 reports the results from alternative measures of state reach and distance to markets, using "as-the-crow-flies" distance, instead of travel time (Models 1 and 2). The results are consistent, as we would anticipate since the two operationalizations of state reach are highly correlated. Models 3 and 4 report additional measures of state reach that

have weaker or null effects but have been used in other research. Distance to a paved road has a significant negative effect in the household model, as would be anticipated, but not in the community level model. The results suggest distance to the nearest school and the national capital (Lilongwe) are not appropriate measures of state reach for rural Malawi. Instead, in rural Malawi, state reach in relation to gender and land rights emanates from district level BOMAs where land clerks, agricultural technicians, district commissioners, and other government officials are concentrated. The following section draws on our FGDs to provide examples of these dynamics.

Finally, changing our outcome of interest from gender-equal land rights to patriarchal management, in which men have the sole power over land in a community, reveals that the main impact of the state's reach is in advancing the inclusion of women. As reported in Table A5, our measure of state reach is also a strong predictor of male-dominated land management, even when controlling for the effects of patrilineal institutions. Communities that are farther from their district administrative capital are more likely to have powers over land concentrated in men.¹⁷ Similarly, respondents who live farther from their district capital are more likely to report that men alone make the primary decisions about use and management of land in their households.

6 Evidence from Focus Group Discussions

6.1 Mechanisms

We hypothesized that two key mechanisms may drive the state reach effect. First, proximity to the state could increase the likelihood of gender-equitable land powers due to increased access to the state's conflict resolution forums, and second, proximity to the state could bolster its impacts through information-provision about state-sanctioned practices and policies.

The FGDs reveal a strong association between the state's forums and advancing women's

¹⁷By contrast, state reach does not predict the likelihood that powers over land in the community are concentrated exclusively in women, a rare outcome described by only 3% of respondents.

rights.¹⁸ For example, a male participant explained how the police are seen as a forum for protecting women: "So you know these days, if you are not agreeing on something, women say there is this organization at the Police Station...Victim Support. With that, even if you do a slight thing, it is the husband who is seen to have committed the offence. If you go, the husband, to seek help, your case will not make sense at all...So to avoid that, you just have to accept the wife's wish" (Village 1 Men, Near).

The respondents referred to the district council, police, courts, and government (in general) as a venue for women to seek stronger rights. One explained: "However, the government is now emphasizing on the land rights despite the gender, it's saying that even the female children are also entitled to owning land and that is helping in a way that it is slowly dissolving the power of men on land management issues" (Village 16 Women, Near). Another stated: "Sometimes it looks like the woman has no rights and your husband's relatives abuse you and grab land from you. Yet there are others that are courageous enough to take the issue to the government and things progress well" (Village 6 Women, distance other).¹⁹

On the other hand, while the state was understood as advocating for women's rights, not all respondents trusted it. In a discussion among women in Village 12 (far), for example, some stated that they believed the state would simply side with the village head, while others described their "fear" of the state.²⁰ Similarly a men's focus group (Village 6, distance other) expressed skepticism of the state's "pro-women" agenda: "With the smallest of arguments, [women] run to big courts to complain. Since men do not really have authority in such laws now...The government in this case is influencing such kind of disagreements in different families with the laws that they made as they made one gender

¹⁸Protecting women's rights promotes equal land management powers in the context of patrilineal systems, but the FGDs provide no evidence that the state's forums were associated with protecting a husband's rights in matrilineal systems.

¹⁹One of the districts in our sample had moved its district administrative offices, limiting our ability to accurately categorize the village FGDs as near or far. In any discussion of near and far villages in the sample, the results from this district are omitted.

²⁰Participant B: "It's like what others have said, it is fear that makes people not to go to the government, that's why they opt for the village head. We think that what the village head has said is final, so even if we go to the government, it will be the same judgement." Participant C: "This is like an eye opener; we just suffer here without knowing because we think that when you go to the government to seek for help you will be arrested. This has helped us to know that if something like this [a land grab] happens to us, we should run to the government to seek for help."

to have more power and authority towards another.” Another participant agreed: “Yes, so I think that the government is giving the women too much authority and rights just like what [P8] said.”

The FGD facilitators prompted participants to reflect on hypothetical spousal disagreements over which crop to plant and whether to rent out land. They were asked whether husbands and wives in their community could seek help to resolve these disagreements. The majority of respondents indicated spouses would seek help during land management disputes.²¹ The lack of accessibility was the primary reason why they thought a hypothetical respondent would not seek help, followed by the need for family harmony, culture, and then social stigma. Comparing the near and far villages, we find the near villages have a higher belief that men and women would seek help (relative to not seeking help) than the far villages. Furthermore, notably more respondents in near villages report women can seek help, with 39% of the references to help-seeking indicating women could or would seek help, compared to 31% in the far villages.

When asked whether they had ever heard of a case of community members turning to the state to resolve land disputes following a spouse’s death²², participants provided many examples. In every village except one far community, respondents could describe a case where a disputant sought help from the state. For example, in a near village, a woman reported: “Yes, I have heard of such in this community. The husband bought land, and they built a house. When the husband passed on, his family members wanted to take the house telling the children and the wife to go to their mother’s place. So, they went to the District Council Office to seek [help from] them and they were helped” (Village 1 Women, Near).

There was no indication of differences between near and far villages in types of land

²¹Man could/would: 307, Woman could/would 342; Man could/would not 186, Woman could/would not 179). The analysis also reveals male FGDs have a greater proportion of references to men *not being able* to get help and women *being able* to than the women’s groups. Each gender group identified their own gender as worse off for help-seeking.

²²This question allowed respondents to reflect on inheritance disputes or “widow/widower grabbing,” when the deceased spouse’s family claims the land as their own, forcing the widow/er to leave. Sometimes, a widow is expelled with their children; othertimes, a son becomes the landowner and allows his mother reside there. Although our sample was mixed matrilineal/patrilineal, there were no examples of widower grabbing discussed but many of dispossessed widows.

disputes or the authorities respondents had heard of community members engaging with. Village heads and chiefs (often used synonymously in Malawi) were the key authorities mentioned throughout the sample. Among references to any authorities in the discussions, the largest proportion was to customary authorities (45%). This likely underestimates their importance in FGD respondents' lives, as the questionnaire specifically prompted respondents to discuss the state's role in conflict resolution (28% of references).

When respondents discussed land management disputes, they described a two-pronged process: disputants first seek help from CAs and then escalate it to state forums if needed. They also described escalating land disputes or appeals within the customary hierarchy, starting from village head, to group village head, to Traditional Authority. For example, "Things are changing, have you not noticed a number of cases? If a child stops him or the wife [stops him] they go to the chiefs' court, it is possible. Some cases about the land even gets to the [government] court" (Village 11 Women, Near).

To study the effects of information emanating from state hubs, we asked participants to reflect on discussions of gender roles within the community, initiated by state actors, NGOs, or CAs. We specifically prompted for NGO involvement because these groups often work with the state on gender issues, first pushing for policy changes and then working to implement policies or raise awareness of them. The FGDs reveal differences between near and far communities' exposure to gender messaging. In the near villages, respondents could articulate many examples of state actors coming to their villages to discuss gender. For example, in Village 15 (near) a man described how the district council's director of planning and development visited for a different reason but "took advantage [of the visit] and talked about issues to do with sharing the land. They said that when sharing land it should involve both men and women. And they said that we are telling you this as people from the government." In Village 13 (near) a respondent described a visit from a state agricultural extension worker: "they said that we should not discriminate each other when we have developmental activities more especially between women and men" (Village 3 Men, near), while a woman in the same village reported that, "The police, they came and they said men and women are supposed to be having equal powers in decision making about the plants they want to be cultivating" (Village 3 Women, near).

Participants most often referenced state actors, such as police, district council agents, and agricultural extension agents, based in the district capitals as discussing gender.

To identify systematic response patterns, we coded whether respondents stated they had or had not heard of gender discussions occurring in their communities. In the far villages, only 16% of references to gender discussions were in the affirmative; the vast majority of comments about gender discussions were about how they had not occurred there (84%). By contrast, 47% of references to gender discussions in near villages were about those that had taken place (and 54% about those that had not). Moreover, 79% of reported discussions involving state actors were in near villages; there were 31 reports of state actors involved in gender discussions in the 13 near village FGDs, compared to 8 mentions (total) within the 15 far village FGDs. However, FGD participants also highlighted that NGOs play an important role facilitating these discussions. Overall, participants associated 41% of the gender discussions with NGOs and participants in the far villages reported a higher proportion of (their fewer) gender discussions involved NGOs.²³ Importantly, respondents were sometimes unaware of which authority organized discussions. For example, participants described the governmental Anti-Corruption Bureau, which organized gender discussions in some villages, as an NGO. Thus, we emphasize the exposure to messaging rather than the agent in interpreting these results. These results show state information provision is lower in far villages and suggest that when it does occur, it does so more through NGOs visiting communities, versus state representatives.

The third key set of actors providing community information about gender equity are customary authorities. There was no evidence of CAs initiating gender discussions on their own, but participants described them participating in the state-initiated discussions. Like other community members, CAs are subject to variations in state reach and exposure to state-sanctioned information. For example, when prompted about whether a customary authority had initiated discussions of gender, a participant explained that the chief never initiated messages about gender, but the Traditional Authority transmitted the

²³Among far villages, participants reported 46% of the gender discussions involved NGOs and 23% involved state actors. By contrast, among near villages 33% of referenced discussions included state actors and 36% NGOs.

government's message to the community: "So [the TA] is the first one who is called by the government and taught about these issues, and the traditional authorities come to tell us during such big ceremonies" (Village 15 Men, near). A participant in Village 13 (near) reported the same process: "the [Group Village Head (GVH)] gets the information from government. These rules come from government telling the TA who in return tell the GVH and the GVH invites the village heads to tell them information from government." Importantly, respondents also described the customary authority's role in amplifying the state's messages. For example, after recounting a discussion initiated by an agricultural extension worker about the importance of men and women working together, the male respondents in Village 3 (near) described their perception that the village chief and group village head "welcomed these ideas" and the "The TA also welcomed the initiative and was happy about it, and encouraged the villages to work without being gender insensitive."

The qualitative data suggest state forums generate opportunities for women's rights to be protected. Moreover, communities nearer the district capital are more exposed to positive information about gender equity and, consequently, to fairly explicit state attempts to push back against norms limiting women's powers over land management. These FGDs demonstrate variations in state reach occur via state representatives visiting villages and transmitting information through customary authorities. In addition, the discussions showed these issues are contested within communities, such that access to forums for resolving disputes is critical. Exposure to information about the value of gender equity was not, alone, changing norms. It was the combination of information and access to forums that prompted shifts in practice more closely matching gender-equal state institutions.

7 Discussion and Conclusions

These results provide evidence that state reach has explanatory power beyond what was previously understood: The projection of state power from administrative cores impacts social institutions. In this case, these are related to property rights and women's empow-

erment, historically enforced through social interactions in the community and customary elites. We find clear evidence of a pattern in gender equity in power over land. Communities closer to their state administrative capitals are more likely to practice joint land management. This is true both for respondents describing their community's dominant practices (n=1327) and the larger sample of respondents describing their household practices (n=3886). While the question wording used to measure the community outcomes cues gender, such direct references are absent in the household measure. The similar effect of state reach across these differences in question wording, community levels, and samples increases confidence in our findings. Proximity to the seats of the lowest levels of the state's representatives in land cases, those who are tasked with enforcing state laws, predicts whether those gender equitable norms are practiced.

We theorized state reach may have an effect both because of increased access to state forums and greater information about state-endorsed ideas. The qualitative evidence supports our expectation that information disseminated by the government and its (often donor-funded) partners advancing gender equality is more likely to reach the decision-makers in communities that are near the state hubs. Household and community practices change as customary authorities adjudicating land conflicts and influential elites serving as role models in communities gain exposure to state norms and information. Furthermore, the qualitative data reveal access to the state's forums serves as a key link in promoting women's powers over land.

For scholars of the state, these results shed light on the importance of the spatial extension of state information. Our findings reveal the importance of geography in information provision, highlighting how costs of traveling longer distances impact the interactions between state and society, with implications for the rule of state law. District commissioners, agricultural agents, and civil servants based in the administrative center more often engage with communities closer to state offices, versus more peripheral communities. The core-periphery dynamics of state power described by [Herbst \(2000\)](#) thus also apply within sub-national administrative units.

These findings also have important policy implications. Joint land management practices are one of many measures aimed at changing social institutions and improving

women's welfare. Implementation of policies, and expectations over their effects, should consider how state reach influences their uptake. Proximity to the district increases exposure to state agents' sensitization programs and access to state forums. Campaigns targeting distant villages, may need to use other approaches, such as messaging through radio or the use of mobile state courts and legal aid outreach. These findings suggest there may also be social benefits to administrative unit proliferation, which is often studied for its patronage or electoral implications (Boone and Wahman 2015; Hassan 2016). Finally, the results suggest customary and social institutions can become more gender equitable, without being erased. In our sample, the influence of CAs and reliance on customary land tenure did not differ according to state reach, but the practice of more gender equitable land powers did. State outreach, village head trainings, and other programs aimed to change social institutions around land management may promote gender equality, even in the absence of land tenure reforms.

The study also raises important new questions. Information-provision in rural Malawi appears to be transmitted primarily through person-to-person contact of state elites, NGO allies, and community members. Information can travel through other mechanisms as well, however, raising questions about how changing technologies shape the nature of state reach. Similarly, our findings reveal the importance of theoretically and empirically separating the effects of urbanization from proximity to the state; while proximity to district offices was associated with variation in land management practices, distance to other urban centers was not. This highlights the need for more research into if, how, and when urbanization may shape the state's ability to influence social institutions.

Finally, this study contributes to the study of social institutions and the state. Scholars have increasingly examined how social institutions affect citizens' voting, their willingness to pay taxes, and other political behavior (Bjarnegård 2013; Brulé and Gaikwad 2021; Cruz 2019; Lawson and Greene 2014; Lust 2022). They also recognize state efforts to shape social institutions through gender quotas, civic education, and other laws and policies (Clayton 2018; Hannah et al. 2021). Yet, much less is known regarding the conditions under which these policies succeed, and particularly why they may do so unevenly. Further research can be done to recognize the interplay of the state and social institutions,

shedding light not only on the temporal impact of institutions, but also on their change over time.

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Appendices

A Alternative Specifications

Table A3: Multi-Level Logit Regressions Predicting Joint Land Management: Considering Urbanization

	Comm.	HH
Km to nearest GeoName city	-0.018*** (0.006)	-0.017*** (0.004)
Type: Town	-0.712 (0.618)	-1.783*** (0.389)
Town x Km to nearest GeoName city	0.046* (0.025)	0.075*** (0.016)
Cash Crops	-5.963*** (2.241)	0.237 (1.349)
PopulationDensity	-0.000 (0.000)	-0.000 (0.000)
Patrilineal (contemp.)	-1.966*** (0.183)	-0.331*** (0.093)
Matrilineal (contemp.)	-0.982** (0.421)	-0.818*** (0.257)
Age	0.016*** (0.005)	0.003 (0.003)
Male	0.040 (0.177)	-0.424*** (0.078)
ELF	-0.265 (0.430)	0.427 (0.278)
Prop. Migrants (5yrs)	0.766 (0.703)	0.262 (0.384)
Education Controls	Y	Y
Income Controls	Y	Y
Constant	-0.859 (0.682)	0.107 (0.321)
Variance (Square Kilometer)	0.022 (0.164)	0.510*** (0.086)
N	1327	3886

Significance levels: *: 10% **: 5% ***: 1%

Table A4: Multi-Level Logit Regressions Predicting Joint Land Management: Alternative Distance Measures

	Comm.	HH	Comm.	HH
Distance to Admin Capital	-0.008** (0.004)	-0.008*** (0.002)		
Distance to Trading Centre	-0.003 (0.010)	0.010* (0.006)		
Travel Time to Trading Centre			0.008* (0.004)	-0.000 (0.002)
Distance National Capital			0.001 (0.001)	0.001 (0.001)
Distance to Nearest School			-0.251 (0.206)	0.038 (0.107)
Mins to Paved Road			0.002 (0.004)	-0.005** (0.002)
Cash Crops	-4.280* (2.194)	0.352 (1.351)	-4.840 (3.109)	0.617 (1.674)
PopulationDensity	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Patrilineal (contemp.)	-1.927*** (0.188)	-0.322*** (0.094)	-1.843*** (0.275)	-0.309** (0.128)
Matrilineal (contemp.)	-1.107*** (0.426)	-0.823*** (0.258)	-0.930 (0.604)	-0.887*** (0.320)
Age	0.017*** (0.005)	0.003 (0.003)	0.015* (0.008)	0.001 (0.004)
Male	0.021 (0.179)	-0.433*** (0.078)	-0.130 (0.257)	-0.321*** (0.108)
ELF	-0.316 (0.465)	0.610** (0.289)	-1.190 (0.738)	0.255 (0.398)
Prop. Migrants (5yrs)	0.666 (0.731)	0.286 (0.397)	0.059 (1.129)	0.441 (0.566)
Education Controls	Y	Y	Y	Y
Education Controls	Y	Y	Y	Y
Constant	-1.330* (0.703)	-0.389 (0.336)	-0.848 (0.976)	-0.179 (0.453)
Variance (Square Kilometer)	0.162 (0.191)	0.588*** (0.094)	0.081 (0.270)	0.430*** (0.117)
N	1327	3886	691	1979

Significance levels: * : 10% ** : 5% *** : 1%

Table A5: Multi-Level Logit Regressions Predicting Patriarchal Land Management

	Comm.	HH
Travel Time to Admin Capital	0.007*** (0.002)	0.004*** (0.001)
Travel Time to Trading Centre	-0.008*** (0.003)	-0.003** (0.002)
Cash Crops	4.349** (2.107)	1.487 (1.189)
PopulationDensity	-0.000 (0.000)	-0.000 (0.000)
Patrilineal (contemp.)	1.952*** (0.180)	0.355*** (0.093)
Matrilineal (contemp.)	-0.135 (0.343)	-0.104 (0.226)
Age	-0.015*** (0.005)	-0.003 (0.003)
Male	0.034 (0.174)	0.890*** (0.077)
ELF	0.337 (0.429)	-0.241 (0.255)
Prop. Migrants (5yrs)	-0.760 (0.695)	-0.724** (0.366)
Education Controls	Y	Y
Income Controls	Y	Y
Constant	1.450** (0.662)	-0.586* (0.302)
Variance (Square Kilometer)	0.135 (0.162)	0.376*** (0.070)
N	1327	3861

Significance levels: *: 10% **: 5% ***: 1%

B Quantitative Data Collection

The LGPI survey was carried out between May and October of 2019 in 2 regions of Malawi, where each region was an independent sample. The regions included the capital city (the urban sample was not used in this paper) and an area along the border between Zambia and Malawi. Samples were stratified. Border regions were divided into strata that were 0-50 km from the border and 50-100 km from the border, and each of these areas was divided into five subareas. Urban areas were divided into two concentric circles: 0-25 km from the urban center and 25-50 km from the urban center, and each was divided into four areas. The goal was to ensure that the respondents were distributed across the region and to include more and less urban and border areas. We aimed to divide the samples evenly across these regions and strata.

Sampling units were selected using satellite imagery. The sample was stratified into strata that were 0-50 km from the border and 50-100 km from the border, and each of these areas was divided into five subareas. The goal was to ensure that the respondents were distributed across the region. We then divided the regions/bins into 1 sq km areas. We selected these areas using a randomized, probability proportionate to size (PPS) method based on WorldPop estimates of population density. We further divided chosen areas into hectares. The hectares were randomly numbered, and enumerators were asked to begin interviewing in the 1 km sq areas in the hectares, moving from those with the lowest to highest numbers. They were asked to complete no more than 5 interviews in the hectare before moving on to the next one, and to complete 30 interviews in each square kilometer. This strategy aimed to ensure that enumerators spread out across the 1 km sq unit.

Enumerators were instructed to enter sampling units using tablets to track their locations and confirm they were in the correct area. They were asked to go to the center of each hectare and then to move outward, in separate directions to additional houses. Within each household, one participant was randomly selected using the Kish method. Survey weights were designed to take into account sampling and to correct for imbalances between the sample and census demographics for the area.

C Qualitative Data Collection

The qualitative data collection took place May 15-21 2023, following ethics approvals from the University of Malawi Research Ethics Committee (Protocol No. P.03/23/220) and REDACTED for review IRB. Qualitative data collection was implemented in collaboration with REDACTED for review.

Sampling The study sites include 16 locations, 2 communities in each of 8 districts. Districts are chosen to represent different regions and historical lineage systems. We drew upon the dominant historical practice for the entire district to select the sample, with the expectation that each district would be composed of many different institutional systems and that these are also prone to change. Once the districts were selected, we created maps with buffer zones of 5-10 kilometers (km) of the district capital and the second at least 35 km from the capital. We then randomly selected 5 square 2-kilometer squares from each region (1 primary location + 4 back up locations) with a probability proportional to the

estimated population in the 2 km square.

Recruitment To recruit focus group participants in the selected areas, enumerators first introduced themselves to local government officials and village heads, and shared the ethical approval letter from UNIMAREC. They then proceeded with a random walk through the village to recruit participants. Participants were recruited first through a mini survey (see below) of approximately 40 questions that takes about 10 minutes to complete. Our criteria for inclusion on the FGD were male and female household heads (broadly understood), above 18, who use agricultural land for their livelihoods. If the individual met the focus group participant criteria, they were invited to attend the focus group discussion the next day. In all, 402 respondents participated in the mini survey and 384 participated in the 32 focus groups. Focus groups took place the day following the mini-recruitment survey.

Qualitative Data Coding The focus group transcripts were each coded by a team of three research assistants using NVivo software. This approach was selected in order to increase intercoder reliability. The PIs/authors then analyzed the data. Although the sample strategy was designed to collect data in 16 near and 16 far sites, in one of the districts the capital had been relocated in 2019. This is a rare occurrence in Malawi. As a result, we opted to code these FGDs as "Other" distances.

C.1 Questionnaires

C.1.1 Mini Survey for FGD Participant Recruitment

Today, we would like to understand how different types of decisions about land are made within the community. Some of the different people who might have a role in these decisions are: the husband living on the land, the wife living on the land, another family member such as an uncle, mother, or father, children within the family, a village head, or others that we haven't listed here. For each of the following, please tell us who has the most power to make decisions regarding the land that you use— men within the household, men outside of the household, women in the household, and/or women outside of the household?

[Questions that follow, "in your household" or "within your household" includes all eating from the same pot.]

1) What crops to plant? 1a) Is this the same for most people in the community?

[If No] 1b) What is most common in the community?

2) Whether to let a plot of land lie in fallow? 2a) Is this the same for most people in the community?

[If No] 2b) What is most common in the community?

3) Whether to use fertilizers on a plot of land? 3a) Is this the same for most people in the community?

[If No] 3b) What is most common in the community?

4) Whether to rent out the land to someone? 4a) Is this the same for most people in the community?

[If No] 4b) What is most common in the community?

5) Whether to sell the land to someone? 5a) Is this the same for most people in the community?

[If No] 5b) What is most common in the community?

6) Whether or when to sell the harvest? 6a) Is this the same for most people in the community?

[If "No"] 6b) What is most common in the community?

7) Whether and how much land to give to your daughters and sons in order for them to build a house or plant crops? 7a) Is this the same for most people in the community?

[If "No"] 7b) What is most common in the community?

8) Within your household, are there other individuals beyond the husband and wife who get a share of the profits from farming on this land, even if they do not contribute to the farming?

8a) [If "Yes"] Who?

8b) Within your household, who has more power to make the decision about sharing profits from farming this land?

8c) Is this the same for most people in the community?

[If "No"] 8d) What is most common in the community?

9) Among these decisions about planting crops, fallowing land, using fertilizer, renting land, selling land, selling the harvest, and sharing the profits from the land, which decision does your household make most often/frequently?

9a) Which decision do you think is most important for your family's well-being?

10) Overall, would you say that men or women have more power over the decisions related to land in this community?

11) In this community, does the power of men and women over land management choices differ according to:

11a) Ethnicity? [Yes/No/DK/NA(We are all of the same ethnic group)] 11b) Religion? [Yes/No/DK/NA(We are all of the same religious community)] 11c) Whether the individuals in the household have moved into the area or were originally from the area? [Yes/No/DK/NA (no migrants here)] 11d) Age? [Yes/No/DK]

12) Have you ever heard of individuals in this community going to any of the following actors in order to resolve a dispute over land?

12a) Agricultural extension officer [Y/N]

12b) Village head [Y/N]

12c) The Traditional Authority [Y/N]

12d) Neighbor [Y/N]

12e) DC or Land Clerk at DC [Y/N]

12f) Government Courts [Y/N]

12g) Police [Y/N]

12h) A chief's court, not at the TA level

12i) A chief's court, at the TA level

12j) A Land Clerk at the TA level

13) What is your primary ethnic community, cultural group, or tribe?

C.1.2 Focus Group Questionnaire

1) In some communities in Malawi, land is inherited through the women's lineage and in others, it is passed through the man's lineage. In this community, which is most common?

[Follow-up if "both/mixed"]: Is this because there are multiple ethnic groups with different land inheritance rules, or because of differences in inheritance practices within the same ethnic group? Or is there another reason that you reported both?

2) Another practice that differs among communities in Malawi is whether the husband moves to the wife's community or vice versa. In this community, which is most common?

[Follow-up if "both/mixed"]: Is this because there are multiple ethnic groups with different marriage practices in the community, or because within the same ethnic group in the community, some people have different marriage practices? Or is there another reason that you reported both?

3) Do you think that the rules related to land inheritance or residence after marriage have changed since the time you were young? 3a) Do you think that younger people in your community have different practices than you did when you were their age?

4) Have there been any discussions in the community about husbands and wives having equal power to make decisions about what crops are planted on the land they use?

4a) Who did you hear discussing this? Who initiated the conversation?

4b) What did they say?

4c) [Prompt for other actors] What about the village head in this community? GVH? TA? NGO? Agricultural Technician? Other people from the state?

4d) Which members of the community agreed with [actor] that men and women should have equal power in decision-making about crops? [Note: if they give specific names of people, probe to see what position these people hold or what demographic groups they are from – men vs. women, old vs. young, members of royal family vs. others, etc]

4e) Why did they agree? [Note: try to identify if this agreement is about the actor making the claim or about the nature of the claim itself.]

4f) Which members of the community disagreed with [actor] that men and women should have equal power in decision-making about crops? [Note: if they give specific names of people, probe to see what position these people hold or what demographic groups they are from – men vs. women, old vs. young, members of royal family vs. others, etc]

4g) why did they disagree? [Note: try to identify if this disagreement is about the actor making the claim or about the nature of the claim itself.]

5) Have there been any discussions in the community about husbands and wives having equal power to make decisions about renting or selling the land that they use?

5a) Who did you hear discussing this? Who initiated the conversation?

5b) What did they say?

5c) [Prompt for other actors] What about the village head in this community? GVH? TA? NGO? Agricultural Technician? Other people from the state?

5d) Which members of the community agreed with [actor] that men and women should have equal power in decision-making about renting or selling land? [Note: if they give specific names of people, probe to see what position these people hold or what

demographic groups they are from – men vs. women, old vs. young, members of royal family vs. others, etc]

5e) why did they agree? [Note: try to identify if this agreement is about the actor making the claim or about the nature of the claim itself.]

5f) Which members of the community disagreed with [actor] that men and women should have equal power in decision-making about renting or selling land? [Note: if they give specific names of people, probe to see what position these people hold or what demographic groups they are from – men vs. women, old vs. young, members of royal family vs. others, etc]

5g) why did they disagree? [Note: try to identify if this disagreement is about the actor making the claim or about the nature of the claim itself.]

6) Beyond what we discussed above, have you ever heard about anyone from the government talking about men's and women's land rights? What did they say? What are some examples?

7) What about the chief, traditional leaders, or village head? Beyond what we discussed above, have you ever heard them talk about men and women's land rights? What have they done or said related to this?

8) Same question with NGOs: Have you ever heard of them coming to the community to talk about men and women's land rights, beyond what was just discussed? What have they done or said related to this?

9) Imagine a situation where a hypothetical household in this community is deciding what to plant. They have allocated one area for maize but are trying to diversify their crops in another area. The wife has heard good things about cassava; this is what she wants to plant. The husband prefers to try millet on that land. Which do you think will be planted, the millet or the cassava?

9a) Why do you believe that would be the case?

9b) [If "cassava,"] is there anyone that the husband could contact to get help having his preference for the crops considered? [Specify who in response and what type of actor these are (family, traditional leader, friend, government etc)]

[If "millet"] is there anyone that the wife could contact to get help having her preference for the crops considered?

9c) Is it likely that a husband or wife in this community would seek help for this type of problem? Why/Why not?

10) Imagine another situation where the husband wants to rent out a portion of the household's land. The wife disagrees. Can the wife prevent the husband from renting out a portion of the land?

10a) Why do you believe that would be the case?

10b) [If "no"] is there anyone the wife could contact to help her prevent the husband from renting out the land? [Specify who in response and what type of actor these are (family, traditional leader, friend, government etc)]

10c) Is it likely that a wife in this community would seek help for this type of problem? Why/Why not?

11) Now imagine the inverse. The wife wants to rent out the land but the husband disagrees. Is it possible for the rental agreement to proceed? Can the husband prevent the wife from renting out a portion of the land?

11a) Why do you believe that would be the case?

11b) [If “no”] is there anyone the husband could contact to help him prevent the wife from renting out the land? [Specify who in response and what type of actor these are (family, traditional leader, friend, government etc)]

11c) Is it likely that a husband in this community would seek help for this type of problem? Why/Why not?

12) In recent years, have there ever been cases in which a husband or wife in this community has gone to the government to seek help for a land issue following the death of their spouse? [if there are many cases, please focus on getting the information on the first 3. This is one of the most important questions in the research, please give them ample time to share their stories, perspectives, and experiences on this.]

12a) What were the cases about?

12b) How were they resolved? Who did they go to resolve the case?

12c) How did the people in the community react to this outcome? [probe for different reactions and opinions about the outcome]

12d) Has a case like this happened here since [past year]? [note: Yes or No there has a been a property grabbing case AND Yes or No they went to the government to resolve it]

13) That was our last question. Is there anything else that you would like to add to help us understand issues related to men’s and women’s land rights in this community?