Shaking the Traditional Order: Women's Conversion to New Christian Churches in Sub-Saharan Africa *

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Abstract

In sub-Saharan Africa, women constitute the majority of new Christian membership (including Evangelical and Pentecostal denominations), and this gender gap exceeds that of any other religion. Existing explanations for conversion to these churches emphasize demand for mutual help or informal insurance. We instead show that emancipation is central: these churches provide services that support women's economic advancement and help them challenge patriarchal norms. Using experimental data from Benin, we find that women randomly offered an economic opportunity become more likely to convert, partly because these churches help counter witchcraft threats, a risk that disproportionately targets economically successful women. To assess external validity, we combine large African datasets with local variation in exposure to positive economic shocks - using exogenous changes in cash crop prices and the implementation of world bank projects with a gender focus. Women are more likely to join new Christian churches following such shocks, especially where witchcraft beliefs are widespread. There, women work more, have fewer children, and exercise greater decision-making power, while both women and men reject traditional beliefs, rituals, and authorities.

Keywords: Religious conversion, Sub-Saharan Africa, Gender, Kinship

JEL Classification: O12, Z12, J16

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1. Introduction

The rapid expansion in both poor and rich countries of new Christian churches that include Evangelical and Pentecostal denominations has received widespread press coverage (see, e.g., The Economist 2021, 2023) and has become the focus of a growing body of scholarly research (Auriol et al. 2020; Hersey 2024; Alfonsi et al. 2024; Costa et al. 2022). Yet, despite the noticeable gender gap in membership observed in some regions – women are far more likely than men to join these churches in sub-Saharan Africa (SSA) and South East Asia, and the gap is much larger than for any other major religion – it is puzzling how little the gender dynamics of conversion has remained explored to this date.

In sub-Saharan African countries with a new Christian presence, women are 6 percentage points more likely than men, on average, to be members of the affiliated churches, which amounts to a 20 percent gap when compared to the average male membership rate. This gap is much higher than in any other Christian denomination. Such statistics are especially surprising in the light of the fact that, in several countries including the United States, evangelical movements are associated with gender conservatism (Smith et al. 2025: 244; Becker et al. 2025).[1]

The present paper aims to understand the gender gap in conversion in SSA, a region with particular interest because it accounts today for most of the global growth in the membership of Christian churches (Hackett et al., 2025) and where individuals are most likely to stress the important role of religion in their life (Barro et al. 2025; Lowes et al. 2025). It bears strong emphasis that new Christian churches in SSA are decentralized organizations emerging in a bottom-up rather than top-down manner, competing not only with mainline denominations but also with traditional (animist) religions.

A good starting point for our inquiry is the economists' view of religious conversion as a rational decision whereby individuals dynamically compare the costs and benefits of such a change. The costs typically consist of a fixed cost of entry into a religious community often conceived as a club (Iannaccone 1992, 1994), or the cost of switching and deviating from one's ideal religion (Barro et al., 2010; Barro and McCleary, 2024). As

[1] Interestingly, the latest estimates show that, in the United States of America, the gender gap in Evangelism is smaller than in other brands of Protestantism and roughly similar to what it is in Catholicism (Smith et al. 2025: 98).

for the benefits, they include economic, spiritual, and psychological aspects (Binzel and Carvalho, 2017, and for reviews, see Aldashev and Platteau 2014; Iyer 2016; Carvalho et al. 2019).

In regard of new Christian churches (NCCs), the economic literature pays a lot of attention to the economic services they provide to the poor, insurance and mutual help benefits in particular. In an experimental setting in Ghana, Auriol et al. (2020) thus show that investment in these churches declines when alternative insurance mechanisms expand. Moreover, Hersey (2024) highlights the risk-sharing role of new Christian churches among urban migrants in Ghana while Alfonsi et al. (2024) establish that higher levels of education are associated with lower conversion rates in Kenya. In the same perspective, Costa et al. (2022) find that conversion is counter-cyclical: economic hardship triggers conversion in Brazil. Taken together, this evidence suggests a natural explanation for the gender gap in conversion: women being poorer, more exposed to negative shocks, and more likely to lack insurance than men, they place greater value on the poor-specific services offered by new Christian churches.

A different perspective emerges from research in other social sciences, however. There, non-economic dimensions that matter for individuals seeking economic empowerment are brought to center stage. These include: (i) the rejection of traditional and patriarchal authority structures and rituals (Platteau 2019; Onyinah 2009); (ii) the promotion of values aligned with wealth accumulation, such as the doctrine of God-ordained prosperity (Haynes 2012; Heuser 2016); and (iii) spiritual services offering healing and protection against "spiritual attacks", which are often attributed to malevolent forces and frequently targeted at economically successful individuals (Ellis and Ter Haar 2004; Platteau 2014, 2019), particularly women (Federici 2018; Miguel 2005). These observations suggest another possible rationale for the gender gap in membership for new Christian churches: women aspiring to economic emancipation but facing constraints within the prevailing social order may turn to new Christian churches for supportive services, new values and modes of conduct. The implication is that conversion moves are not necessarily counter-cyclical but may become more prevalent in the presence of new economic opportunities. This said, there is no systematic incompatibility between the two approaches to female conversion: insurance and other economic services offered by new Christian churches may also directly support women's economic dynamism when alternatives are scarce.

In this endeavor, we assess whether the gender gap in conversion to new Christian churches is at least partly driven by women's search for economic emancipation in the context of a constraining social order. We begin by presenting first-hand evidence from a randomized controlled trial (RCT) in Benin, which suggests that new Christian churches offer services supportive of effective responses to new economic opportunities: women who were randomly offered one such opportunity are significantly more likely to convert to new Christian churches. However, we find no clear advantage of these churches in terms of strictly economic services. Instead, they appear to be particularly valued for their capacity to provide healing and protection against spiritual attacks in a situation where economically successful women are considered especially vulnerable to magical threats. When a woman achieves economic success and begins to challenge traditional gender roles, she often encounters household and family resistance, frequently expressed through the stress and psychosomatic disorder inflicted on her by spells or curses alleged to be magical. Religious conversion supplies a convenient response to these threats insofar as new Christian churches claim to possess effective cures to dispel interpersonal acts of hostility disguised under spiritual attacks.

The broader relevance of our findings for SSA is established on the basis of cross-country data. More precisely, we investigate whether the success of new Christian churches among women can be attributed to improved economic prospects. As measures of the latter we use 1) increases in the international price of locally suitable crops and 2) the deployment of World Bank projects that aim to improve women's material well-being. On the basis of both indicators and difference-in-difference estimations, we show that women are more likely to become members of new Christian churches when and where they are exposed to new economic opportunities. Revealingly, the two effects are stronger in regions where witchcraft beliefs prevail.

In addition, systematic data from cross-country surveys support the view that new Christian churches facilitate individual economic emancipation, particularly among women. Female members of these churches thus exhibit higher agency through increased labor force participation, lower fertility, and greater decision-making power. It is also striking that more than other believers or members of other Christian denominations, members of new Christian churches tend to reject traditional supernatural beliefs, rituals, and authority structures. Finally, they report a feeling of security under the protection of the

Holy Spirit and they embrace a doctrine of God-ordained prosperity.

Our effort in this paper partakes of three main strands of literature. First, it contributes to the body of studies dealing with the (economic) determinants of religious participation and conversion, and their gendered aspects (e.g., Auriol et al. 2020; Hersey 2024; Costa et al. 2022; Montero et al. 2024; Sinding Bentzen 2019; Iannaccone 1992, 1994). In their recent survey paper, Becker et al. (2025) review the evidence accounting for between-gender differences in religiosity. They do not systematically compare gender gaps across strands of Christianity, but seek to explain differences in religiosity overall (while distinguishing between Christianity and other religions). Also, their emphasis is on the dynamic of religious gender patterns as gender roles evolve in societies. Our focus is different: we argue that conversion to new Christian churches in Africa may help women escape from patriarchal control thanks to the availability of both material and spiritual services. The dimension of conflict within the family is therefore a core aspect of the (female) conversion dynamic.

Second, we offer insights into the effects of religion on long-term development (growth, education, state formation), an issue which has been largely investigated with reference to the Protestant Reformation in Western Europe (Van Zanden 2009; Becker and Woessmann 2008, 2009; Cantoni 2015; Becker et al. 2016; Iyer 2016; Cantoni et al. 2018; see also Becker et al. 2021 for a survey and Squicciarini 2020 for a study of 19th century France). Our work is an addition to the narrow literature devoted to contemporary developing countries (e.g., McCleary and Barro 2019; Buccione and Mello 2020; Bernardelli et al. 2025; Solá 2025). It suggests that the spread of new Christian churches in sub-Saharan Africa may have more in common with the spread of Protestantism in Europe than previously thought and, in particular, it supports the view that new Christianity helps dynamic individuals to prosper economically and to distance themselves from kin-based social structures.

Thirdly, our paper relates to the work of social scientists who attempt to explain surges of witchcraft accusations (see, e.g., Evans-Pritchard 1937, 1940; Geschiere 1994; ter Haar 2007). A dominant explanation is that witchcraft beliefs emerge to provide a culturally acceptable account of misfortune or inequality, frequently rooted in jealousy, envy, and social tensions within closely knit communities. Several studies have also documented that the vast majority of witchcraft attacks target women, who are often marginalized or

oppressed members of their community (Miguel, 2005).[2] Similar to Federici (2018), we find that through the intimidation of women willing to change their condition, witchcraft practices aim to preserve gender-based differences in social status. The magical cover serves to conceal the identity of concrete persons behind the attacks, who are frequently jealous relatives against whom open accusations would have devastating effects on the stability of the local social order.

The outline of the paper follows from the above-described progression of the argument. Section 2 highlights the significance of the shift from traditional to new Christian strands of religion in SSA and the main characteristics of new Christianity. In Section 3, we present the results of the RCT implemented in south Benin and their interpretation. In Section 4, relying on exogenous shock to (women) income, we show that these results are generalizable to the whole SSA region. We then investigate whether membership to new Christian churches is associated with higher levels of women empowerment and more distancing from the traditional social order in Section 5. Finally, Section 6 concludes and draws broader implications regarding the issue of the role of religion in institutional change.

2. The changing picture of religion in Sub-Saharan Africa

2.1. *The dramatic rise of new Christianity*

Since a few decades, SSA has undergone a massive movement of religious conversion. It includes both a growing estrangement from African traditional religions and a noticeable shift from "mainline" (e.g., Catholic, Protestant) to new ("post-colonial") Christian churches (e.g., Evangelical, Pentecostal), which some authors refer to as the "New Reformation" (Jenkins, 2002; Thelen, 2017). Thus, when comparing the data reported in all the Demographic and Health Surveys before 2000 with those conducted after 2015, we find that the share of people reporting Catholicism as their main religion has remained rather stable (20% after 2015 against 17% before 2000), while the share of adherents to a new Christian church has shot up six-fold (19% after 2015 against 3% before 2000). A recent study contends that as many as 40% of the continent's Christians identified

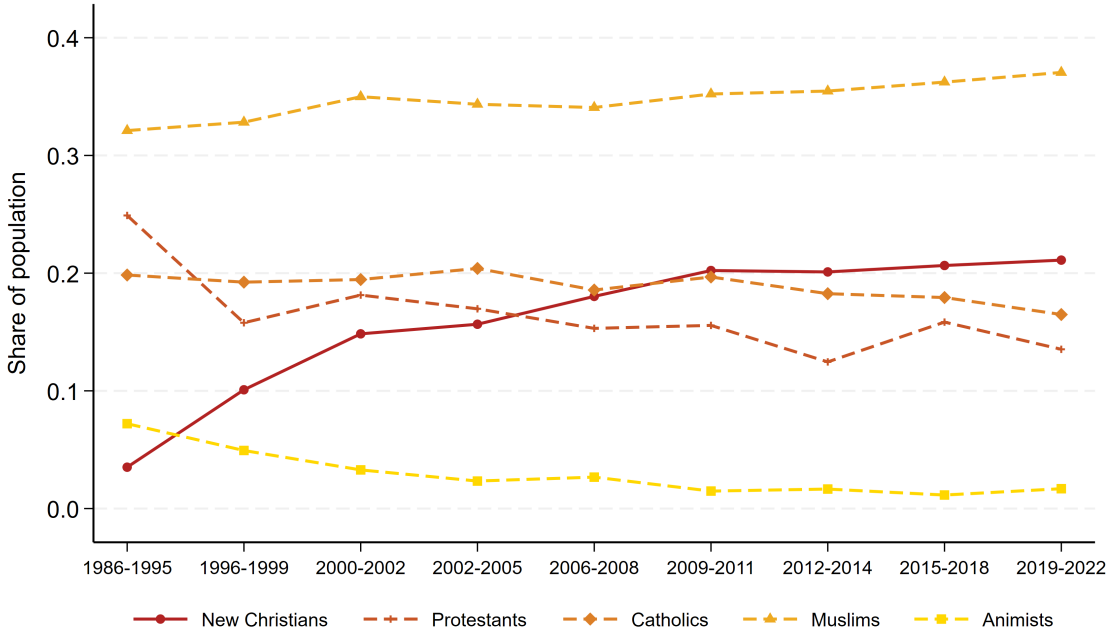
[2]For example, in the traditional camps that welcome (and protect) people accused of witchcraft in Northern Ghana, 498 out of the 539 people registered in 2021 were women (The Sanneh Institute, 2021).

as new Christians in 2020, not much below the share of mainline Catholic movements (Zurlo and Johnson, 2024). In this regard, Figure 1 shows the predicted probability of belonging to a given denomination/religion (new Christian, Protestant, Catholic, Muslim or Animist) over time.[3]

Unfortunately, in a context where conversions are frequent, the existing large-scale survey data do not capture the full dynamic of the religious landscape. Our own data, composed of a representative sample of pineapple producers in Southern Benin (N= 1798, see 3.1 for details) shows that about 35-40 percent of the population have converted to another religion at some stage of their life. In converting, most of them leave a traditional religion (41% of women and 58% of men) or a mainline missionary church (40% of women and 28% of men). The gender differences in these proportions reflect the important gender gap existing among followers of traditional religions prior to conversion (detailed in the next section). Looking at the other end of conversion, we find that most of the new converts join a new Christian church (57% of women and 54% of men), while a much smaller fraction of them join missionary churches (28% of women and 26% of men).

[3]These estimates come from regressing religious affiliation on survey year with country fixed effects. The sum in each period does not add to one because no all religious categories are included. For example, we do not show the categories "no religion", "orthodox", "other religion" or "Christian". Appendix A shows alternative graphs that yield very similar conclusions. We first use estimates from the World Christian Database (Zurlo and Johnson, 2024) and then, based on DHS surveys, we depict religious affiliation at the time of the survey by year of birth (note that this last approach takes into account conversion, so it may not be ideal to examine trends).

Figure 1: Religious affiliation over time in Sub-Saharan Africa



Source: Authors' calculations using data from 115 Demographic and Health Surveys (DHS) in 39 Sub-Saharan African countries. The figure shows the predicted probability of being a member of a new Christian church by year. Declared religion is measured at the time of the survey. Countries include: Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, DRC, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, The Gambia, Togo, Uganda, Zambia, Zimbabwe.

2.2. *The gender bias of evangelical church membership*

Motivated by our qualitative research in southern rural Benin and the existing literature on women's prominent role in new Christian churches, this section evaluates whether the rise of these churches masks significant gender disparities in religious affiliation.

Table 1 examines the correlation between gender and religious affiliation. Panel A focuses on countries where new Christians have a positive share of the religious market and are clearly identified in the Demographic and Health Surveys (DHS) (see Table C1 in the appendix for average gender gaps by country). This panel therefore excludes countries for which the DHS does not distinguish between missionary Protestant churches and new Christian churches.[4] Panel B increases coverage by looking at the full sample of SSA countries. In those countries where new Christian churches are not distinguished from Protestant churches, we consider both as new Christian.

[4]These countries are: Central African Republic, Cote d'Ivoire, Ethiopia, Kenya, Liberia, Nigeria, Togo, and Zambia. See Appendix B for more details about variable definitions.

As mentioned in the Introduction, women's propensity to adhere to a new Christian church is almost 6 percentage points higher than men's, corresponding to a 20 percent difference relative to men's average propensity (panel A column (1) of Table 1). These patterns remain unchanged when we include DHS cluster fixed effects as well as an extensive set of individual-level covariates such as age, age squared, education, labor market participation, marital status, and urban/rural residence (column 2), suggesting that demographic factors alone do not account for the observed gender gap in religious affiliations.

In stark contrast, women are less likely to adhere to an African traditional religion by about 1.2 percentage points, a reduction of about 30% relative to the male adherence rate (panel A, columns 3 and 4). Similarly, women are less likely to be Muslim (column 9, 1 percentage point, a reduction of 7% relative to men) or Catholic (column 5, 0.7 percentage points, a reduction of 4% relative to men), although this last difference disappears once geographic and demographic controls are included (column 6). Finally, women are also more likely to be Protestant than men (by about 1-1.6 percentage points), which may be partly explained by the fact that new Christian movements are related to Protestant Christianity.

When we include countries where new Christian and Protestants are clubbed together in a single category and we consider them as new Christians (panel B), the patterns are similar, yet absolute gaps are smaller. This is because the sample includes several countries with a large share of Muslims, which mechanically decreases the share of Christians, and because the new Christian category now includes some mainstream Protestant for which gender gaps tend to be smaller (according to panel A).[5]

[5]We show in Appendix, Table C2 that the patterns displayed in Panel B of Table 1 are robust when we exclude from the category "new Christian" respondents from DHS waves where new Christian churches are not distinguished from missionary Protestant churches (yet - in contrast with Panel A - the estimates include all the country waves instead of restricting attention to those where new Christians are not in the same category as Protestants.

Table 1: Gender gaps in religious affiliation

	New Christian		Traditional		Catholic		Protestant		Islam	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Countries with positive share of well identified New Christians										
Female	5.749***	5.524***	-1.163***	-1.195***	-0.702***	0.0260	1.053***	1.588***	-1.047***	-1.604***
	(0.133)	(0.132)	(0.0671)	(0.0631)	(0.118)	(0.116)	(0.103)	(0.105)	(0.101)	(0.0829)
Mean Y	0.285	0.284	0.0444	0.0440	0.250	0.248	0.156	0.157	0.145	0.146
R-squared	0.153	0.338	0.107	0.394	0.0486	0.269	0.106	0.277	0.162	0.583
N	780659	759283	780659	759283	780659	759283	780659	759283	780659	759283
Panel B: Full sample (grouped definition)										
Female	2.393***	2.701***	-0.681***	-0.692***	-0.677***	-0.163***	0.937***	1.415***	-0.355***	-1.485***
	(0.0652)	(0.0609)	(0.0317)	(0.0307)	(0.0620)	(0.0613)	(0.0501)	(0.0510)	(0.0631)	(0.0449)
Country-round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
DHS cluster FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Mean Y	0.224	0.225	0.0260	0.0259	0.189	0.189	0.105	0.105	0.330	0.328
R-squared	0.301	0.532	0.104	0.391	0.150	0.365	0.222	0.391	0.503	0.799
N	2214449	2094501	2214449	2094501	2214449	2094501	2214449	2094501	2214449	2094501

Note. Data: Demographic and Health Surveys. The table reports OLS estimates. The coefficients have been multiplied by 100. Panel A restricts the sample to country-waves where new Christians can be properly identified and with positive share of new Christian churches. Panel B includes the full DHS sample. The outcome variable is an indicator that equals one if the respondent's religion is New Christian columns 1 and 2 (or Protestant in surveys where new Christians and Protestants come together), Traditional (columns 3 and 4), Catholic (columns 5 and 6), Protestant (columns 7 and 8), Islam (columns 9 and 10). Individual controls include age, age squared, education, marital status, labor market participation and urban/rural place of residence. Country and year fixed effects are always included. Robust standard errors clustered at the DHS cluster level are reported in parenthesis.

These patterns replicate when different datasets are used (Afrobarometer, PEW Research Center, World Value Surveys, and our own first-hand data): women are significantly more likely than men to report membership of new Christian churches. The difference ranges from 15 percent (in most large-scale datasets) to 70 percent when we compare them to the male average in rural contexts where traditional religions remain dominant (Appendix C.1, Table C3).

These gender differences in religious affiliations suggest that husbands and wives of a same couple may be of different religion, and that wives may convert to new Christian churches before their husband. Data from Benin (whether our first-hand data or those extracted from DHS) confirm this pattern: in general, spouses have different religions in more than 25% of the couples present in the DHS sample (the proportion for our first-hand data is quite close at 22%). Furthermore, female members of new Christian churches have more often a spouse who is NOT a member (35% in the DHS sample) than male members of these churches (20% only).[6] In Figures A3 and A4, the reader will find detailed cross-tabulations of husbands' and wives' religions based on both our first-hand data and the DHS for Benin.

[6]The corresponding figures are 22 and 4% in the first-hand data.

2.3. *The new Christian churches as a social game changer*

To better understand the rising success of new Christian churches, we first need to get a better idea of their specific features, especially when we compare them to both traditional (animist) religions and conventional Christianity. The first thing to note is that, in contrast to the imported, mainstream missionary churches, the new post-colonial Christian churches usually emerge locally, and are mostly founded by Africans. According to Mwaura (2013), new Christian movements are "an attempt by Africans to forge new identities for themselves experimenting with and breaking down traditions. In theological terms they are regarded as processes of inculturation of Christianity in the African context [...]. They can simply be defined as autonomous church groups with an all-African leadership and an all-African membership" (p. 415).

Although there may be subtle differences among existing new Christian movements, they share much in common. They are mostly related to Protestant Christianity and its individualistic ethics. They also emphasize the role of charisma, the importance of a direct relation to God through spontaneous prayer (often accompanied by singing and dancing), and a strong feeling of community backed by a plenitude of congregational activities. Last but not least, they evince a strong belief in the Holy Spirit and its ability to counter traditional evil spirits through the activation of spiritual gifts, mainly divine healing. Finally, they tend to promote individual salvation in the Hereafter and, at the same time, prosperity in this world (Caldwell and Caldwell, 1987; Meyer, 1998; Brown, 2011; Auriol et al., 2020).

An immediate consequence of the indigenization of Christianity in the new Christian churches is their recognition of the existence of spirits. Instead of denying it, they accept the ontological reality of witchcraft and evil spirits, but only to offer protection against their malevolent influence by invoking superior supernatural forces. They also stress the importance of supernatural phenomena such as miracles and, sometimes, they put forward a Manichean theology and an apocalyptic vision of warfare between good and evil that match traditional fears of sorcery Platteau (2009, p. 679). In the Pentecostal doctrine, the descent of the Holy Spirit is described as a trance, through which it comes to penetrating an individual in order to chase the evil spirit that has taken possession of her (Fancello, 2006).

If, in conformity with the individual ethics inherited from Protestantism, the new Christian churches accord a great importance to the nuclear family, they simultaneously give a central place to community life. This is partly reflected in their liturgy, which typically integrates African music and dances, thereby ensuring the authenticity of the religious experience for all church members.[7] In reality, the church congregation has come to replace the extended family, a major turning point in African social life (Caldwell and Caldwell, 1987: 429; Fancello, 2006: 128). Indeed, unlike the traditional village societies anchored in the local clans, the new religious communities are based on the idea of equal membership in status (all members are "brothers and sisters in Christ"), implying that no distinction should be made between men and women, elders and youngsters, natives and immigrants, masters and slaves, or different castes or social ranks.

The main message is therefore that despite the existence of lines of continuity between the old and the new orders, a fundamental break with the past is occurring under the new wave of religious conversions. What new Christian churches are encroaching upon is no less than the body of tradition and its associated authority structure. Revealingly, necessary conditions to become a member of a new religious community are the renunciation and condemnation of one's past cultural and religious beliefs, as well as disobedience to, or distancing from, the clan elders in charge of implementing the associated rituals. In particular, the customary practice of ancestor worship with demands for abundance of children or good health is substituted by prayers to Jesus and the Christian Saints. Estrangement from the traditional universe also involves bans on the abuse of alcohol and the use of fetishes, as well as condemnation of the waste of time and money in ancient feasts and rituals, the absorption of traditional medicines and visits to traditional healers, and polygamous unions.[8] Represented as the hallmarks of backwardness, these "sinful behaviors" must be abandoned to have access to modernity and prosperity (see, e.g., Mildnerova 2014). In short, by adhering to a new church, an individual "joins a new family, one bound together by faith" (Caldwell and Caldwell (1987): 97-8) and becomes a "native outsider" or an "internal stranger" in the community of origin (Hagen, 1975;

[7]The new churches can thus be said to have reclaimed the erstwhile charismatic experience which was suppressed by mainline Christianity although it resonated well with African spirituality and its emphasis on healing, the use of African symbolism, and music (Mildnerova, 2014; Mwaura, 2013).

[8]Traditional feasts include puberty rites, traditional weddings, mortuary rituals and the pouring of libation to the ancestors.

Kennedy, 1988; Platteau, 2000, 2014).

3. Impact of economic opportunities on female conversion: motivating evidence from an experimental study in Benin

Whether new Christian churches offer complementary economic services or favor the emancipation of women from constraining social structures, we expect new economic opportunities to stimulate conversions to their brand of Christianity. To probe this intuition with facts, we use first-hand data from a randomized controlled trial. The trial is about an intervention designed to incentivize women in Benin to cultivate a profitable cash crop. Although conversion was not a pre-registered outcome, the extensive survey questionnaire and additional qualitative fieldwork provide unique insights into the dynamics of conversion and the motivations driving women to shift their religious allegiance. This exploratory evidence will help to frame and motivate the subsequent cross-country investigation.

3.1. Data and experimental design

The experiment was conducted in Southern Benin in collaboration with the Belgian Development Agency (ENABEL).[9] Consisting of a pro-women agricultural intervention, it is comprised of a business training program and an in-kind subsidy aimed at encouraging the start or the expansion of a pineapple production enterprise. Beneficiary women were randomly selected from a pool of households who had expressed their interest for a previous intervention of the agency (yet had not benefited). The in-kind subsidy consists in the preparation of the soil and the planting of pineapple over an area of 0.5 ha.[10] As for the training program, it was made up of seven sessions (2-4 hours each, every two weeks) dealing with topics such as management and accounting, goal setting, gender issues, and a technical session on pineapple production. Training sessions were organized

[9]The main evaluation of the agricultural intervention, which does not examine the outcomes used in this paper, can be found in Álvarez-Aragón et al. (2026). The RCT was pre-registered in the AEA RCT Registry (AEARCTR-0008898).

[10]It includes the supply of workers for the start-off steps of a new pineapple production (clearing the land, stump removal and plowing) and the provision and planting of pineapple shoots. In addition, a plastic film is delivered to be stretched above the land parcel so as to reduce the amount of labor required at the later stages of production and to accelerate the growth of the crop. Beneficiary women were mandated to make a contribution representing 5 percent of the total cost (50-73$).

in set groups of about 8 people, on average, based on the location of respondents.

Randomization was done at the individual level. The selected subjects of the experiment were randomly assigned to the control group or one of two treatment arms with each group comprising one third of the original sample. In one treatment arm, husbands were invited to join their wife to the seven training sessions while in the other arm, husbands were invited only to the session on gender issues. Travel costs for men and women were covered by the program. Randomization and data collection were intended to provide a rigorous measure of the impacts of the program on beneficiary women and their households. In a context where women often rely on their husband for access to land, management of the labor force or negotiation of sale contracts, the two arms were designed to test whether the involvement of husbands helps to leverage their support for the new activity of their wife.

The timeline was as follows. A baseline survey of 1,009 households (877 men and 1,009 women) was carried out in 2020, and it included questions regarding the religion of the respondents. Two years later, in 2022, the randomized assignment to the control and treatment groups was realized and the intervention was implemented. In 2024, a first follow-up survey was conducted to measure a number of post-intervention outcomes, including questions on religious conversion. Finally, we conducted another follow-up survey in 2025 to gather additional information on the potential mechanisms behind the results uncovered on the basis of the 2024 data. Appendix B includes additional information regarding the details of the intervention, including summary statistics and balance tests, and the analysis of attrition rates. Note that, as expected from randomization, there are no significant differences between the treatment and control groups at baseline.

3.2. Results

Thanks to the RCT setting, we are able to assess the causal impact of the new, women-focused economic opportunity not only on the latter's proclivity to convert and join a new Christian church, but also on their husband's potential opposition to their conversion drive, and the channels through which opposition may emerge.

Table 2 shows the RCT results. Panel A reports the average treatment effect (intent to treat estimates) of the program on several outcomes: the religious conversion of the

targeted woman (column 1); the conversion to a new Christian religion (column 2); the conversion to a mainline (missionary) Christian religion (column 3); opposition against conversion to new Christianity from husbands (column 4) or from the broader family (column 5); and whether the woman believes that her husband has contacted a witch-doctor to hinder her business by resorting to magic means (column 6).[11] In panel B, we distinguish between the two treatment arms: full engagement (participation in all the program's training sessions) versus partial engagement (participation in only one training session) of the husband.[12]

In column 1, the outcome of interest is captured by a binary variable equal to one if the respondent has ever converted. This measure has the advantage of capturing the cases of women who converted but had to later reverse course under the pressures of antagonistic forces, mainly the husband's opposition. Our qualitative work revealed that such cases, far from being anecdotal, have occurred in all the study villages: all the women interviewed are thus aware of situations in which husbands (or the husband's extended family) have opposed their wives' religious conversion. Because of this pushback possibility, our measure of conversion to new Christianity, such as shown under column 2, is likely to be an underestimation: women who rescinded their initial conversion decision may not have reported new Christianity as their "new religion". All the specifications include a control indicating whether the respondent was a new Christian at baseline.[13]

Results reveal that the targeted women in the aggregate treatment are more likely to have converted to a new religion by more than 6 percentage points corresponding to a 19% increase from the control group mean (column 1). This is true, in particular, for conversions to a new Christian church (column 2, +5 percentage points). Targeted women are also more likely to admit to having faced opposition from their husband when they considered conversion to new Christianity, or to say that they would have faced opposi-

[11] Due to the sensitivity of the topic and potential enumerator or social desirability bias, the question about the husband's use of witchcraft was asked in audio computer-assisted self-interview (ACASI) mode.

[12] Point estimates on conversion, resistance and the use of witchcraft, as well as the differences across arms, are larger and more significant if we measure the impact of the intervention on women who actually benefited from the training and subsidy (treatment on the treated, Table C5 and Table C6 in Appendix C.2).

[13] In our main specification, we also include the following predetermined controls measured at baseline: age, education, marital status, and whether the respondent was a new Christian. Table C4 in Appendix C shows that the results remain virtually the same when only outcome variables at baseline are included as controls (when they are available).

tion if they had wished to convert. The difference is 8pp, corresponding to a significant 20 % increase from the control group (column 4).[14] Other family members may also oppose conversion, although the estimated impact of the intervention (5 pp) is not statistically significant (column 5). Finally, treated women are more likely to believe that their husband has recourse to supernatural means to throttle their economic activities (a 4pp increase amounting to a 53% departure from the control group average). These results suggest that, when offered a new economic opportunity, women seek religious conversion, yet face opposition from their husband, implying that the latent demand for conversion coming from women is probably stronger that what observed rates of conversion indicate. Women's acknowledgment of magical tricks used by their husband to counter their plan confirms their perception of a strong resistance from close quarters.

Turning to the difference between treatment arms, we find that, perhaps paradoxically, when husbands were invited to all the sessions of the training program, their opposition to conversion and recourse to magic devices were stronger, and women conversion rates were actually lower. One possible explanation for this asymmetric reaction between treatment arms is that husbands invited to the training have gained a better understanding of the stakes involved in the external pro-women intervention, meaning the technical and management skills imparted to the beneficiaries as well as the importance of the additional incomes that their acquisition could allow. If participation of husbands in the training module of the program has this effect of raising their awareness, it may well instill in them the fear that their wife will become more independent, prosperous and assertive, thereby undermining erstwhile male predominance in social and economic relations. Their reaction may then consist of sabotaging her involvement in the new economic activity and hampering her religious conversion.

[14]When the respondent had converted, we asked if their husband (initially) opposed conversion whereas when she had not converted we asked whether their husband would oppose her conversion move.

Table 2: Treatment effects: religious conversion, opposition and witchcraft

	Endline 1					Endline 2
	Women's conversion			Opposition by:		Witchcraft
	Ever	To new Xty	To old Xty	Husband	Other family	Used by husband
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A: Aggregated treatment						
Treatment	0.0644**	0.0472*	-0.00502	0.0788**	0.0510	0.0409*
	(0.0325)	(0.0254)	(0.0217)	(0.0321)	(0.0316)	(0.0219)
R-squared	0.0851	0.257	0.0572	0.159	0.149	0.0256
Panel B: By treatment arm						
Partial husband involvement	0.0758**	0.0615**	-0.0199	0.0547	0.0449	0.00927
	(0.0378)	(0.0298)	(0.0245)	(0.0367)	(0.0364)	(0.0239)
Full husband involvement	0.0530	0.0330	0.00988	0.102***	0.0570	0.0716***
	(0.0373)	(0.0290)	(0.0254)	(0.0371)	(0.0364)	(0.0271)
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y control	0.341	0.203	0.115	0.365	0.342	0.0789
R-squared	0.0855	0.258	0.0587	0.161	0.149	0.0325
N	936	936	936	924	924	835

NOTE. Data: First-hand data collected in southern Benin. The table reports OLS estimates. The sample in column 6 is restricted to married women. The outcome variables are indicators with unitary value if: the respondent has ever converted to any new religion (column 1), to a new Christian religion (column 2), or to an "old" Christian church (column 3). In columns 4 and 5 the outcome variables are indicators equal to one if the husband (column 4) or another family member (column 5) has opposed woman's conversion to a New Christian church. The outcome variable in column 6 is an indicator that equals one if the respondent reports that her husband (in the last 5 years) went to see a witch-doctor to slow down his wife's activities or reduce her resources. Panel A shows treatment effects of the aggregated treatment. In Panel B, "Partial husband involvement" is an indicator equal to one if the woman (or the wife of the man when the sample is restricted to men) has been assigned to the treatment group where business training was reserved for women. "Full husband involvement" is an indicator equal to one if she has been assigned to the treatment group where women attended the business training together with their husband. Controls include age, education and marital status at baseline, whether the respondent was a new Christian at baseline, and department fixed effects. Robust standard errors are in parenthesis.

3.3. Impact of economic opportunities on women's conversion: an interpretation

To interpret our RCT results, it is useful to review the types of benefits that women can expect to receive upon joining a new Christian church. In the following, we successively examine the economic and non-economic benefits of religious conversion for women and the role of their husbands in the process.

3.3.1. Economic services

A first question to ask is whether women are more attracted to churches supplying economic services that are supportive of their new economic activity. We are thus interested in knowing whether new Christian churches are more likely than old Christian churches to provide such services.

In the followup survey of 2025, we collected data which can help us assess this conjecture since sampled women were queried about the type of services they could avail themselves of in their (current) church. The first three columns of Table 3 display the

results of simple regressions indicating the correlation between the religion of the respondents and the availability of three economic services – loans for emergency or production purposes, and access to ROSCAs – in their religious community. In Panel A, the comparison group includes all the women professing to adhere to so-called other religions, while in Panel B the reference category includes members of a missionary church, whether Catholic or Protestant.[15] The category "Non-Christian" includes women belonging to traditional religions (about 10% of all women), Islam (2.7%), and other religions/no religion (3%).

From the correlations shown in Panel A, it is evident that new Christian churches organize rotating credit and savings groups more often than other religious communities. They are also more liable to mediate solutions to intra-household conflicts. On the other hand, they are not more predisposed to grant loans for emergency or investment purposes. When compared to missionary (mainline) churches, however, new Christian churches do not appear to be more ready to supply economic services (Panel B). In contrast, the latter are 6 percentage points more likely than the former to facilitate conflict resolution among household members. This last finding fits well with an important lesson drawn from our RCT study: religious conversion to new Christian churches often involves tensions and conflicts at the close family level.

Overall, the results of Table 3 do not support the view that converts to new Christianity prefer this religion to missionary churches because of the (direct) economic advantages in the form of credit, insurance and savings, in particular. It is true that other advantages, such as assistance in the access to manpower, modern inputs and marketing channels, are not featured in the table's list of economic services even though they may have proven critical for cash crop production. However, these were never cited by women when we investigated the matter with them.

[15]This category also includes the Celestial Church of Christ which, in Benin, was founded in the 1950s and shares much more in common with missionary Christian churches than with the new wave of Christianity emerged in the late 80s and 90s (Henry, 2008). In fact, some of our enumerators believed it was a branch of Catholicism and classified it as such. In-depth qualitative interviews revealed that, in contrast to the wave of new Christianity and more in-line with the Catholic church, the Celestial church tends to adopt a tolerant attitude vis-à-vis consultations of a traditional sorcerer (the fa/bokono) or the recourse to traditional rituals, such as yearly pilgrimages to the seaside where converts communicate with the spirits of the sea. It is also telling that people may decide not to shift between a traditional religion and a Celestial church precisely because, on their own admission, important practices or rituals are rather similar in the two affiliations. It is noteworthy that such testimonies are consistent with systematic accounts according to which Evangelic and Pentecostal churches strongly criticize Celestial churches which they blame for their syncretism (Henry, 2008).

Table 3: Supply of economic services and mediation as per religious affiliation

	Current church provides:				
	ROSCAs	Emergency loans	Investment loans	Mediation	Use of ROSCAs
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Panel A: New Christians compared to all other denominations					
New Christian	0.0488*	0.0280	0.0152	0.116***	-0.00622
	(0.0291)	(0.0227)	(0.0154)	(0.0260)	(0.0259)
R-squared	0.0411	0.0162	0.00982	0.167	0.0611
Panel B: New Christians (and non-Christians) compared to missionary churches					
New Christian	0.00979	0.0161	0.0180	0.0625**	-0.00903
	(0.0316)	(0.0247)	(0.0166)	(0.0271)	(0.0276)
Non Christian	-0.167***	-0.0508*	0.0121	-0.229***	-0.0102
	(0.0349)	(0.0302)	(0.0257)	(0.0462)	(0.0397)
Controls	Yes	Yes	Yes	Yes	Yes
Mean Y	0.232	0.127	0.0534	0.771	0.811
R-squared	0.0558	0.0184	0.0101	0.195	0.0611
N	899	899	899	899	905

NOTE. Data: First-hand survey data from southern Benin. The outcome variable is an indicator that equals one if the respondent says that her church provides the following services: ROSCA's (Column 1), loan for an emergency (2), loan to invest (3), or mediation in case of conflict within the family (4). In column 5, the outcome variable is an indicator equal to one if the respondent is a member of at least one rotating savings and credit association. Individual controls include age, baseline education and marital status. Department fixed effects are always included. Robust standard errors are reported in parenthesis.

3.3.2. Spiritual protection and the banning of traditional beliefs

The quantitative evidence presented above is in line with the evidence gathered in semi-structured interviews conducted in southern Benin where women were asked about their motivation to convert and about the differences they see between various churches. It is again telling that economic services were not cited as distinctive features of new Christian churches. Instead, two key factors were consistently mentioned: superior protection against "spiritual attacks" (including the necessary healing process that follows the magical spells) and rejection of traditional rituals and beliefs. These aspects deserve careful attention inasmuch as spiritual attacks are narrowly linked to women's economic emancipation. Successful women may thus be the victims of bad spells and even witchcraft accusations, especially if their business is conspicuously prosperous. A woman fears bad spells or is blamed for being a witch on the ground that she has achieved her po-

sition by manipulating natural powers through witchcraft. In other words, economic emancipation makes protection services against (accusations of) witchcraft necessary.[16]

Our survey includes several questions designed to assess whether members of new Christian churches feel protected against "spiritual attacks" and whether they tend to question the power of traditional authorities. We thus asked women whether they feel threatened by spiritual attacks, they protect their crops with fetishes to avoid theft, they drank sodabi to fight against COVID[17], they consulted with a sorcerer (the "Bokono"), and they believe that the spirit of ancestors influences their life. Table 4 presents the results.[18]

Compared to women from other religions, members of new Christian churches are much less prone to traditional beliefs and practices. They are less likely to feel threatened by witchcraft (8pp, 19% of the sample mean), to use fetishes to protect their agricultural fields against theft (17pp, 50% of the sample mean), to drink a magical potion (called sodabi) to fight against COVID (6pp, 55% of the sample mean) and to consult with a wizard (called Bokono) (10pp, 71% of the sample mean). Finally, they are also less likely to believe in the power of ancestors (19pp, 61% of the sample mean), a defining feature of traditional religions in many African communities (Álvarez-Aragón, 2025).[19] In all these dimensions (except in the probability of consulting with a wizard), the differences remain strong and significant when the comparisons are made with members of missionary churches only.

[16]We initially intended to ask survey questions on witchcraft accusations and the associated fears of women. However, in the pretesting phase of the questionnaire, our survey teams strongly opposed the inclusion of these questions, testifying to the sensitivity of the topic. In their opinion, directly inquiring about the issue of witchcraft would compromise the survey because these questions would raise suspicions that the respondent stands accused of a malevolent role.

[17]Sodabi is a strong homemade alcohol obtained by distilling palm wine. It plays a fundamental role in the Voodoo religion, where it is repeatedly used in rituals.

[18]In this table, we look at the correlations using religious affiliation as recorded at baseline since some outcomes are measured at baseline (e.g., Bokono consultation or sodabi consumption), and reverse causality could potentially exist along other dimensions. For instance, if conversion following the intervention is (at least partly) motivated by the desire for protection against witchcraft, individuals with greater fear of witchcraft in 2025 may be more likely to have joined new Christian churches. This concern is mitigated by considering religion at baseline.

[19]In our sample, membership of an Evangelical church is actually the strongest negative correlate of beliefs in the influence of ancestor spirits on people's lives. Figure C1 in Appendix C.2 displays the correlations between beliefs in the power of ancestors and religion fixed effects (where no religion is the excluded category) as well as other socioeconomic characteristics.

Table 4: New Christian churches and traditional beliefs

	Fearing witchcraft	Using fetishes	Drinking magical potions	Consulting with wizards	Believing in ancestors
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Panel A: New Christians compared to all other denominations					
New Christian	-0.0770**	-0.167***	-0.0627***	-0.0975***	-0.190***
	(0.0322)	(0.0448)	(0.0213)	(0.0247)	(0.0293)
R-squared	0.148	0.0814	0.0195	0.0610	0.106
Panel B: New Christians (and non-Christians) compared to missionary churches					
New Christian	-0.0930***	-0.167***	-0.0570**	0.00924	-0.147***
	(0.0347)	(0.0483)	(0.0232)	(0.0222)	(0.0317)
Non Christian	-0.0533	0.00192	0.0169	0.313***	0.139***
	(0.0417)	(0.0685)	(0.0318)	(0.0416)	(0.0436)
Controls	Yes	Yes	Yes	Yes	Yes
Mean Y	0.426	0.337	0.110	0.142	0.310
R-squared	0.149	0.0814	0.0199	0.168	0.118
N	924	439	876	767	936

Note. Data: First-hand data collected in southern Benin. The table reports OLS estimates. The sample is restricted to women. The sample in column 2 is restricted to pineapple producers. The outcome variables are: an indicator equal to one if the respondent feels threatened by spiritual attacks in column 1 (we interpret it as a proxy for protection against witchcraft), an indicator equal to one if the respondent has used a fetish to protect his/her pineapple field against theft (column 2), if the respondent has drunk sodabi (traditional alcoholic drink) to prevent coronavirus (column 3), if the respondent has consulted a "bokono" (sorcerer) or has used a fetish to prevent coronavirus (column 4), or an indicator that equals one if the respondent believes that the spirits of his/her ancestors influence his/her life (column 5). Individual controls include age, whether the respondent attended school, marital status, whether the respondent cultivated pineapple in 2020, and whether the respondent had electricity at home in 2020. Department fixed effects are always included. Robust standard errors are reported in parenthesis.

3.4. Wrapping up: conflict brought to center stage

The interpretation of our results, when they are all put together, is at odds with the idea of a strictly economic calculus in which women decide to convert if the expected *economic* benefits exceed the costs. This approach presents two basic limitations. First, it ignores the "spiritual protection" component that is critical in the case of conversion to new Christian churches and, second, it assumes that individuals (women) have full agency in the sense that their decision is unhampered by adversarial forces. In reality, what appears as purely economic decisions by women generates wide repercussions because they disturb the traditional social order. It is therefore not surprising that women's initiatives are often regarded as hostile behavior by their close relatives. Conversion to a new Christian community may be a way to neutralize the latter's resistance, yet there is no guarantee that it will succeed. Indeed, women may choose to abandon plans to convert, or to rescind a past conversion decision, not because the economic benefits are insufficient, but because they face such a strong marital opposition that the integrity of the family is at risk.

There is an obvious link between a substantial body of mainly anthropological lit-

erature and our finding that in Benin many women and men view the new Christian churches as a source of defense against magic threats and witchcraft accusations directed against aspiring women. Dating back to the pioneer work of Evans-Pritchard (1937, 1940) duly followed by multiple case studies (see, in particular, Geschiere 1994; Meyer 1998; ter Haar 2007; Nyaga 2007), evidence has accumulated to show that witchcraft accusations or magical harassment are often sparked by feelings of envy and jealousy reflecting serious tensions within the (extended) family. Revealing of this situation is the suspicion among people suffering from a witchcraft attack that "some close relative is to blame" (Geschiere, 1994, p.336). The targeting of women seems to be a tactic used to prevent them "from effectively competing in male-dominated areas", such as divination, healing, and cash cropping (Ntloedibe-Kuswani, 2007, p.223). In Ghana, for example, "many women do not want to go beyond their respective (gender) roles, for fear of becoming the object of witchcraft accusations, including by other women who may be jealous of their success" (Akrong, 2007, p.63).

When women try to emancipate from the traditional order by pursuing their own ends distinct from those of their husband and close relatives, they invite the grave criticism that they struggle to cut the ties linking a person with the family (Meyer, 1998). In our survey, 62% of respondents declared that spiritual attacks are more likely against economically successful individuals. In semi-structured interviews, revealingly, women who had converted to new Christian churches explained that they suffered from violent headaches or other physical pains and disturbances which traditional healers as well as modern doctors were unable to cure. The women affected are often said to be bewitched but the key point is that they are in psychological and physical pain. A large literature in medicine and social sciences discusses how health symptoms, in particular mental health symptoms, are often attributed to malevolent spirits in the African context (Ventevogel et al., 2013; Mayston et al., 2020). According to the stories told in Benin, return to normalcy can only be secured by the intervention of a supernatural force deemed more powerful than the ancestors' spirits. In the words of Mwaura (2013, p.422), it is only when "a source of power stronger than the traditional sources, ancestors, spirits and magicians was offered" to women that they could be liberated "from everything that oppressed them". This force is provided by the new Christian churches in the form of a special intervention of the Holy Spirit acting on behalf of God. It responds to calls

for help expressed through intense prayers said in the church by the entire congregation of believers. Here, we cannot miss the parallel with the experiences of conversion to Islam among the Giriama people of coastal Kenya (Parkin, 1972, Chapters 2-5). Kennedy (1988) summarized it vividly:

> "...the conversion of some young entrepreneurs to the Islamic faith might follow a long period of psychological tension and physical illness induced by the possibility of conflict with the elders whose status and power were threatened by the younger men's activities. Such "illness" could be diagnosed as caused by powerful Islamic spirits whose appeasement required nothing less than the religious conversion of those unfortunate enough to become possessed. Once this had occurred, the Islamic ban on the consumption of alcohol and certain foods, as well as the need to follow a partly separate ritual and social life, all provided the opportunity for entrepreneurs to reduce their level of involvement in traditional society. Yet this behavior no longer incurred community displeasure since it was now judged to be religiously determined rather than the result of selfish individualism. (Kennedy 1988, p.142)".

In sum, to emancipate from the traditional order, dynamic individuals need effective "spiritual protection" which a monotheist religion claiming a superior God can provide (see also Haugerud (1995), and Sarro (2009)). When such a religion explicitly and forcefully rejects rituals and beliefs liable to hinder the economic success of these individuals, its protective power becomes even more compelling.

4. Economic opportunities, magic threats, and women's conversion to new Christianity: causal evidence from SSA

We now turn to the question of whether our results are specific to the context of Benin where the dominant traditional religion, the voodoo cult, is particularly strong and known for its reliance on magic threats to enforce social discipline. In this section we mobilize all available rounds of the DHS surveys conducted in SSA to evaluate whether economic opportunities, for women in particular, trigger their conversion and thereby contribute to the rise of new Christian churches. We use two measures of economic opportunities: the rise in the international price of locally suitable crops and the presence of World Bank-financed development projects that explicitly target women. In both cases, we rely on difference-in-difference estimations, exploiting variations over time in these indicators of opportunities, and capturing the effect of time-invariant geographical characteristics by including grid-cell fixed effects.

Furthermore, making use of an indicator of witchcraft beliefs, we explore whether

the presence of these beliefs amplifies the effect of new economic opportunities on the appeal of new Christian churches. Experimental results from Benin indeed suggest that for women new Christian churches represent a shelter against the hostile use of magic against them. Because ambitious women are more likely to be victims of magic spells and accused of using witchcraft, we expect the spiritual services offered by these churches to be particularly valuable to them in areas where they are exposed to the risk of traditional aggressiveness.

On the basis of cross-country evidence, we cannot evaluate the relative importance of supply and demand shifts for the overall effect of positive economic shocks on religious conversion. We cannot rule out the possibility that an increase in local incomes – driven, for instance, by favorable cash-crop prices – attracts religious entrepreneurs and shifts the supply of new Christian Churches. What is critical for our argument is that such changes lead to a disproportionate rise in the numbers of new Christians, particularly among women, and that this rise reflects a latent demand for the (women-) specific services these churches provide. In the case of the RCT in Benin, by contrast, we are confident that the conversion decisions of treated women were demand-driven: the intervention was too small in scale and too geographically dispersed to raise local incomes significantly.

4.1. Economic opportunity I: Shocks to crop prices and new Christian churches

We start by examining the effects of a rise in locally suitable crop prices on the presence of new Christian converts.

4.1.1. Main estimations

We test this hypothesis by exploiting local exposure to changes in international world prices of agricultural commodities, which have been shown to affect local incomes (McGuirk and Burke, 2020; Berman et al., 2025). We first divide the African continent into cells of $0.5° \times 0.5°$ (approximately 55×55 km^2 at the equator).[20] Then, for each cell,

[20]The choice of 55×55 km^2 cells is standard in the literature (see, for example, Berman et al. 2017; McGuirk and Nunn 2024; McGuirk and Burke 2020; McGuirk and Nunn 2025). Still, we report in Appendix C.3.4 robustness tests to the main results using instead $0.25° \times 0.25°$ cells. For this analysis, we take the cash-crop suitability measure of Roessler et al. (2022), which uses information on the nine most important export crops: banana, cocoa, coffee, cotton, palm oil, groundnut, sugar, tea, tobacco.

we compute the suitability of its land to crops for which world prices are available, that is, banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, and wheat. The suitability index is extracted from the FAO's Global Agro-Ecological Zones (GAEZ). It is estimated for each crop and cell using information on the location (i.e., temperature, humidity, length of days, sunlight, or rainfall), soil and crop characteristics. Our baseline results use crop suitability rather than actual production since it is exogenous to changes in local conditions and world demand. Figure C4 in Appendix C.3.1 shows the spatial distribution of the suitability index across African cells.

Finally, we combine this information with the evolution over time of the international price of each crop, as published by the World Bank. Figure C3 in Appendix C.3.2 shows the evolution of international prices for the crops under concern. Our main treatment variable to proxy for the potential value of cash crops in cell c and year t is given by the following suitability-weighted price index (as in McGuirk and Burke (2020) and Berman et al. (2025)):

$$\text{Cash-crop price index}_{ct} = \sum_{j=1}^{n} (\pi_{jt} \times \text{Suitability}_{jc}),$$

where $j = 1, .., n$ represents a crop in our list. Index of suitability_{jc} represents the average cash-crop suitability of crop j in cell c (ranging from 0 to 1) and π_{jt} the global price index for the same crop in year t. This global price index sets the price of the crop to 1 in year 2010.

We then combine the cash-crop price index at the grid-year level with geolocated individual-level information coming from the Demographic and Health Surveys (DHS). We assign to each respondent in the DHS the cash-crop price index in year t-1 of the grid-cell in which their DHS cluster falls in. Overall, our full sample includes almost 2 million respondents. The baseline specification we consider is:

$$Y_{i,c,t} = \beta \, \text{Cash-crop price index}_{c,t-1} + FE_c + FE_t + X'_{i,t}\Phi + \epsilon_{i,c,t}, \tag{1}$$

where Y_{ict} is an indicator that equals one if respondent i in cell c and year t is a new Christian, and zero otherwise. To increase coverage, we include countries where the category "New Christian" is not distinct from missionary Protestant churches (and con-

sider them all new Christian in that case).[21] Cash-crop price index$_{c,t-1}$ is the suitability-weighted price index measured in $t-1$, as described above. FE_c and FE_t denote grid-cell fixed effects and year fixed effects, respectively. Finally, X'_{it} is a vector of individual-level controls such as age, age squared, gender, education, labor market participation, marital status, and rural-urban residence. The inclusion of grid-cell fixed effects implies that the coefficient of interest is identified by time variations in the cash-crop price index within cells.[22]

Columns 1-3 of Table 5 displays the basic results while sequentially including control variables. There is a strong, stable, positive and statistically significant relationship between the crop price index and new Christian membership. These results indicate that local exposure to higher crop prices leads to higher rates of conversion to new Christian churches. The size of the estimated coefficients is quite large: thus, the point estimate in column 3 (7.46 pp) implies that a one standard deviation increase in the lagged cash-crop price index leads to a 1.8 percentage points increase in the probability of being a new Christian, corresponding to almost 10% of the sample mean.[23]

As expected, the effect of positive shocks to crop prices on new Christian membership is stronger for women than for men (column 4): the probability to be a new Christian increases by 6.2 pp for men and by 8 pp for women for a one-unit increase in the price index (or 1.5 pp and 1.9 pp for a one-standard deviation increase). This gap supports the hypothesis that new Christian churches are particularly suited to women's demands in the face of new economic opportunities.

Finally, we investigate whether the effect of shocks to economic opportunities on the appeal of new Christian churches is amplified in regions where witchcraft beliefs are prevalent. As suggested by our in-depth study of Benin, the demand for spiritual protection rises when new economic opportunities emerge, especially if they come from women who are relatively vulnerable to witchcraft attacks and accusations. Therefore, we expect a stronger effect on religious conversion in places where witchcraft beliefs are

[21] See Appendix B for details about how the new Christian variable is defined. Table C9 in Appendix C.3.3 shows the main results of this section when using the restricted definition of being new Christian.

[22] This identifying variation requires more than one DHS round per country. In our sample, this implies dropping about 89.000/2.000.000 respondents (4.2%).

[23] The effect of a one-standard deviation increase is obtained by multiplying the point estimate by the value of one standard deviation (0.236).

widespread, for women in particular.

For this analysis, we use information from the DHS on witchcraft beliefs for about one million respondents across sub-Saharan Africa. To measure witchcraft beliefs, we use the answer given by respondents to the following question: "Do you believe that HIV can be caused by witchcraft?". We build an aggregate measure defined at the grid-cell level corresponding to the (standardized) mean of respondents who answered positively in the $0.5^\circ \times 0.5^\circ$ grid-cell which the DHS cluster of the respondent has been assigned to.[24]

Columns 5 and 6 show the results. As hypothesized, the incidence of conversions to new Christian churches is larger in areas where witchcraft beliefs are widespread. Column 5 indicates that, in grid-cells where the prevalence of witchcraft beliefs is one-standard deviation above the sample average, a one-unit increase in the cash crop price index leads to a 9.7 pp increase in the probability of being a new Christian (corresponding to 2.3 pp for a one-standard deviation increase in price).[25] Column 6 reveals that, it is for women but not for men that witchcraft beliefs amplify the conversion response to cash crop shocks. Thus the total marginal effect of a unit increase in price on women's conversion approximates 11 percentage points in areas where witchcraft beliefs are one standard deviation above the mean (corresponding to 2.6 pp for a one-standard deviation increase in price). This effect is roughly 43% larger than the effect on women in average-witchcraft areas (7.7 pp), and 66% larger than the effect on men in the same high-witchcraft areas (6.7 pp)[26]

[24]There is significant variation in witchcraft prevalence across space. The sample mean is 0.17, the median is 0.12, and the standard deviation is 0.15 (10th percentile is 0.033; 90th percentile is 0.41).

[25]The effect of 9.7 pp is obtained by summing the coefficient on cash-crop price index and the coefficient the interaction with witchcraft. To obtain 2.3 we multiply this effect by the value of a standard deviation in cash crop price (0.236).

[26]The effect of 11 pp is obtained by summing the coefficients on the Cash Crop Price Index, Cash Crop PI × Female, Cash Crop PI × Witchcraft, and Cash Crop PI × Female × Witchcraft. To obtain the corresponding effect of a one-standard deviation increase in cash-crop price, we multiply it by the value of a standard deviation (0.236).

Table 5: Shocks to cash crops and conversion to new Christian churches

	Respondent is New Christian					
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Crop Price Index	0.0707***	0.0711***	0.0746***	0.0621***	0.0742***	0.0661***
	(0.0134)	(0.0134)	(0.0133)	(0.0135)	(0.0141)	(0.0144)
Female		0.0250***	0.0298***	0.0120***	0.0302***	0.0189***
		(0.00118)	(0.00126)	(0.00398)	(0.00133)	(0.00405)
Cash Crop Price Index x Female				0.0185***		0.0112***
				(0.00420)		(0.00416)
Cash-crop PI x witchcraft (cell)					0.0231***	0.000384
					(0.00430)	(0.00526)
Cash-crop PI x Female x witch.						0.0327***
						(0.00481)
Mean Y	0.234	0.234	0.231	0.231	0.240	0.240
R-squared	0.429	0.430	0.429	0.429	0.429	0.430
Basic controls	No	Yes	Yes	Yes	Yes	Yes
Full controls	No	No	Yes	Yes	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1961792	1958050	1857296	1857296	1709570	1709570

NOTE. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is the sum across fifteen crops (banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, wheat) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability. "Witchcraft (cell)" is the standardized mean prevalence of witchcraft in a given grid cell. The sample is restricted to grid-cells for which "Witchcraft (cell)" has been computed using at least 50 observations. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). Basic controls include age, age squared and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the cell-year level are reported in parenthesis.

In line with what was found for Benin, the cross-country results appear to be very specific to new Christian churches: an increase in suitability-weighted crop prices leads to a *decrease* in the probability of being a member of a *mainline* Christian denomination (Catholic or Protestant) and has no effect on traditional religion (from a very low average prevalence of 2 percent) (see the results in Appendix C.3.5).

Throughout the section, we have assumed that positive shocks to the crop price index translate in a positive local income shock, as other papers have documented (McGuirk and Burke, 2020; Berman et al., 2025). We verify in Appendix C.3.6, Table C13, that this is the case in our context too. Positive shocks to the cash crop price index are

associated with increases in the wealth index as reported in the DHS or with increases in nightlights.[27]

4.1.2. Alternative measures of cash crop income shocks

Women's involvement in cash-cropping. Because we expect women to be in special need of the sort of support provided by new Christian churches when their own economic prospect improves, we further investigate whether cash-crop price shocks have a greater effect in situations where women are more involved in cash-crop production. To measure the latter we exploit information from the DHS and compute the proportion of women who earn cash or in-kind payments from their work *and* whose primary occupation is agriculture in each grid cell. Contrary to the cash-crop price index, this measure may admittedly suffer from endogeneity: unobserved characteristics may thus simultaneously affect women's involvement in cash-cropping and their religious affiliation. Hence, our results should be interpreted with caution.

We re-estimate Equation 1 by interacting the cash-crop price index with the measure of women's involvement in cash-crop production. We therefore exploit variations in the cash crop price index to examine the heterogeneous effects of crop prices on women's conversion to new Christian churches, depending on their level of involvement in cash crop production. Table C14 in Appendix C.3.7 shows the results. The main finding is that the positive impact of crop prices on women's religious conversion (but not men's) appears to be especially significant in cells where women play a significant role in cash crop production. Religious conversion among women living in cells with a one standard deviation increase in women's cash crop participation increases by an additional 2 percentage points (column 3, 25% of the initial effect), suggesting that new economic opportunities seized by women specifically give rise to higher rates of conversion to new Christian churches among them.[28]

[27] We conduct both analyses at the cell-year level, focusing on cells within countries for which we have DHS data. Wealth measures are computed using responses from all individuals within a given cell-year. The DHS creates a wealth score using principal component analysis of household asset ownership within each country-year survey. The nightlights data come from the adjusted luminosity series of Chiovelli et al. (2026).

[28] However, although column 4 shows that women's conversion is much higher in cells where witchcraft beliefs are widespread, we are not able to detect any additional increase in religious conversion for the triple interaction between price index, witchcraft beliefs and women involvement in cash crops. Still, conversion to new Christianity is highest when the three components of the interaction are at play.

Alternative measure of cash crop potential. Using the M3-CROP dataset from Monfreda et al. (2008), we test for the robustness of our central result to different measures of crop potential. This dataset contains information on the estimated harvested area in hectares for 137 different crops for grid-cells of 5 arc minutes x 5 arc minutes resolution for the year 2000. In contrast with our baseline measure, M3-crop data reports actual harvested areas rather than degrees of soil suitability. In this case, prices are weighted by the crop share of harvested area in 2000 in the cell (limiting attention to crops for which price data are available). Table C15 in Appendix C.3.8 shows that the findings are very similar to those in our baseline specification: the effect on conversion to new Christian churches is positive and strong, particularly for women and for areas where witchcraft beliefs prevail.

4.2. Economic opportunity II: Development aid projects

4.2.1. Main estimation

A second setting allows us to test whether new economic opportunities spark conversion to new Christian churches, particularly among women. It exploits the deployment in certain areas of development aid projects targeted on them. Towards this purpose, we rely on geo-coded data on development aid projects funded by the World Bank during the years 1995–2014 (AidData, 2020). There are as many as 1,717 such projects distributed in 15.268 geo-coded project sites for the SSA region.

A gender-related or women-focused project is one whose main theme is gender according to the World Bank classification. The official definition of "gender theme" is as follows: "[it] encompasses World Bank Group activities that – irrespective of sector – address and/or close gaps between males and females (for example: gaps in financial inclusion, agricultural productivity, occupational sex segregation, gaps in participation in local service delivery management, etc.) and other gaps that may be identified in the systematic country diagnostic at the country level (e.g., low female labor force participation relative to male labor force participation)" (The World Bank Group, 2016, p. 57). Almost 200 project sites have gender as their main theme (1.25%).

To measure the influence of exposure to women-focused development projects on new Christian membership, we combine the data on development projects with the

geo-located individual-level information from the DHS, using $0.25^\circ \times 0.25^\circ$ grid-cells. We consider an individual treated if at least one women-focused World Bank project is localized in the grid cell where the DHS cluster of the respondent lay at the time of the survey.[29] In our final sample, 3% (3.3% for men and 3.4% for women) of the respondents lived in grid-cells with varying exposure to World Bank women-focused projects (56,000 respondents in 37 cells).[30]

Results are displayed in Table 6. The central message is clear: new income-earning opportunities created within the ambit of World Bank projects for women tend to promote membership of new Christian churches. While the opening of a World Bank gender-related project has no significant average effect on men's conversion, women's propensity to be new Christian increases by 1.4 percentage points when exposed to such World Bank project (column 2, 6% of the sample mean). This effect is not uniform but is concentrated in areas with high witchcraft prevalence: in a cell one standard deviation above the mean in witchcraft beliefs, the differential effect of a gender project on women compared to men amounts to approximately 2.4 percentage points (column 4, 10% of the sample mean).[31]

[29]Our preferred specification is at the $0.25^\circ \times 0.25^\circ$ (28x28km at the equator) cell-level since the impact of World Bank gender-related projects might not be strong enough to be detected if we take larger geographical units such as 55x55km cells. Still, we show in Appendix C.4 that our results are robust to alternative definitions of grid-cell sizes such as 55x55km.

[30]Increasing the size of grid-cells to 55x55km also increases variation: six percent of respondents lived in grid-cells with varying exposure to World Bank women-focused projects (116,000 respondents in 64 cells).

[31]Table C17 in Appendix C.4 shows that the results do not change if we look instead at the strict definition of new Christians (excluding Protestants from the category new Christian in country-waves where they are clubbed together).

Table 6: New Christians and World Bank gender-related projects

	New Christian (broad def.)			
	(1)	(2)	(3)	(4)
Female	0.0259***	0.0278***	0.0278***	0.0301***
	(0.000900)	(0.000814)	(0.000827)	(0.000882)
Female x Witchcraft (cell)			0.00723***	0.00749***
			(0.000950)	(0.000942)
WB gender project	-0.000928	0.0141	0.00193	0.00188
	(0.0105)	(0.00975)	(0.00815)	(0.00828)
WB gender project x Female	0.0160**	0.0137**	0.00249	0.00196
	(0.00629)	(0.00602)	(0.00383)	(0.00381)
WB gndr project x Witch. (cell)			0.0262***	0.0272***
			(0.0101)	(0.0102)
WB gndr x Female x Witch. (cell)			0.0218***	0.0219***
			(0.00437)	(0.00433)
Total number of WB projects	0.00776***	-0.000592	-0.00115	-0.00101
	(0.000903)	(0.00118)	(0.00125)	(0.00127)
Mean Y	0.239	0.239	0.246	0.245
R-squared	0.294	0.464	0.466	0.463
Country and year FE	Yes	Yes	Yes	Yes
Grid-cell FE	No	Yes	Yes	Yes
Individual	No	No	No	Yes
N	1781810	1781809	1672681	1602447

Note. Data: Demographic and Health Surveys and AidData research lab (2020). "WB gender project" is an indicator that equals one if there is a WB gender-related project before the month of the interview in the grid-cell where the individual lives. "Witchcraft (cell)" is the (standardized) mean prevalence of witchcraft in a given grid cell. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). The total number of World Bank projects before the month of the interview in a given cell always included as a control. Individual controls include age, age squared, gender, education, labor market participation, marital status and urban/rural residence. Country and year fixed effects are always included. Robust standard errors clustered at the cell-month level are reported in parenthesis.

4.2.2. Robustness to an alternative measure of gender-related project

Relying on a project's main theme to measure its pro-women orientation may be too restrictive. Therefore, we broaden our definition to include projects that provide income-earning opportunities for women, even if their main theme is not "gender." Towards that

purpose, we inspected project documents made available by the World Bank.[32], which enabled us to classify 344 additional project sites as being gender-focused.[33] Based on this broader definition, 7% of the respondents (130,000 in 107 grid-cells) have been exposed to a woman-focused project.[34] The direct effect of new economic opportunities on women's conversion has now vanished: there is no significant increase in new Christian church membership when female respondents were exposed to a project. What is striking, however, and deserves to be emphasized, is that this effect remains strong in areas where witchcraft beliefs prevail: there, exposure to a project increases women's likelihood to have joined a new Christian church by more than 4pp (column 4, Table C18 in Appendix C.4). This finding gives even more credit to the idea that new Christian communities play a special role in combating the intervention of malevolent supernatural forces.

5. New Christianity, women's empowerment and escape from the traditional order: empirical regularities in SSA

This section mobilizes cross-national data from SSA with a view to uncovering empirical regularities and verify whether they are consistent with the central argument of this paper: women convert to new Christian churches not so much to protect their livelihood and insure themselves against the hazards of life but to change the course of their lives and emancipate from the traditional social order. In other words, they look at new Christian churches as loci of liberation where they can find support for their economic independence and personal autonomy so as to be able to effectively seize new economic opportunities.

The reader is referred to Appendix B for details regarding the sampled countries, the sampling procedure, the total number of surveys and respondents in each survey, and the way the main variables were precisely constructed, including how we define membership of a "new Christian" church in the different datasets.

There are two possible angles from which the available data can throw light on the

[32]See Appendix C.4.1 for a detailed definition of this alternative measure.

[33]In Appendix C.4.1 we provide evidence that our measure of gender-focused projects is meaningful: for the projects which we checked manually, the number of words mentioning women in the description of women-focused projects is much higher than the number of words found in the other projects.

[34]The proportion goes up to 13% (244,000 in 138 grid-cells) when larger grid-cells are used.

role of new Christian churches in the above perspective: women's empowerment and distancing vis-a-vis the traditional order. We examine these two aspects successively.

5.1. New Christian churches and women's empowerment

Is membership of new Christian churches associated with outcomes reflecting women's empowerment? If, indeed, these churches facilitate individual emancipation, that of women in particular, we would expect female members to exhibit relatively greater agency. No causality can be inferred, however, since we cannot rule out that, instead of conferring greater decision-making power upon their female members, new Christian churches tend to attract women who have strong characters and are determined to resist adversarial pressures exerted by their husband or their community. In the present context, we should not be too much worried about the causality problem. Not only are the two above possibilities likely to be simultaneously at play, but also the key point is that for women willing to change the course of their life and better master their destiny there exists a space where customary constraints limiting their actions are ignored or fought against.

To explore the relationship between new Christianity and women's empowerment, we look at labor market and reproductive outcomes, two pivotal dimensions of personal autonomy, and at participation of women in decision-making, both at home and in the church. Based on DHS (columns 1-5) and PEW (columns 6 and 7) data, Table 7 reports the results. Panel A shows that, compared to women professing other religions, women in new Christian churches exhibit better labor market and reproductive outcomes: they are 5.4 percentage points more likely to work, 5pp more likely to use contraceptives[35], and they report a smaller number of children, whether ideal (-0.6) or actual (-0.4). These correlations remain significant when we compare new Christians to women belonging to missionary Christian churches (Panel B), even if the differences are smaller in size.[36]

Column 5 highlights the correlation between women's participation in decision-making and new Christianity. The outcome variable is an index computed as the simple average

[35]In the context of Benin, we were told that in many cases contraceptives are supplied by the new Christian churches themselves.

[36]The results are similar when we use the alternative definition of new Christians, that is, when we exclude Protestants from the new Christian category in surveys where new Christians and Protestants are grouped together in the "Protestant" category – see Table C20 in Appendix C.5.

of all the non-missing answers to questions related to four matters: decisions about the way women's earnings are used, and about healthcare, large household purchases, and visits to relatives. For each dimension, we construct an indicator equal to one if the woman takes part in the decision, alone or jointly with the husband. Although we only report the index, positive relationships are observed in virtually all components of the index. Disaggregated results by category are available in Appendix C.5, Table C21.[37][38]

Table 7: New Christian churches and women's labor and reproductive outcomes, and decision-making

	Labor market	Reproductive			Decision-making		
					At home	In the church	
	Working status	Contraceptives	Ideal nr of children	Children ever born	Decision-making Index	Respect for women	Female leadership
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: New Christians compared to all other denominations							
New Christian	0.0542***	0.0495***	-0.591***	-0.412***	0.0694***	0.0968***	0.185***
	(0.00207)	(0.00133)	(0.0120)	(0.0145)	(0.00181)	(0.00570)	(0.00686)
R-squared	0.0926	0.112	0.244	0.155	0.271	0.0859	0.197
Panel B: New Christians (and non-Christians) compared to missionary churches							
New Christian	0.0140***	0.0119***	-0.101***	-0.0822***	0.0219***	0.0234***	0.0571***
	(0.00205)	(0.00132)	(0.00974)	(0.0141)	(0.00169)	(0.00795)	(0.00975)
Non Christian	-0.0966***	-0.0928***	1.250***	0.789***	-0.110***	-0.113***	-0.197***
	(0.00234)	(0.00134)	(0.0133)	(0.0152)	(0.00192)	(0.00917)	(0.0107)
Country-round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y	0.766	0.217	5.154	5.568	0.578	0.791	0.460
R-squared	0.0985	0.117	0.269	0.164	0.280	0.0921	0.210
N	624192	1549400	1387105	441793	961925	24605	23839

Note. Data: All available DHS in columns 1-5, and PEW for columns 6 and 7. The sample is restricted to women. In column 1, the sample is restricted to women over 30 years old and in column 4 to women over 35 years old to approximate completed fertility. The table reports OLS estimates. "New Christian" is an indicator that equals one if the respondent reports one of the new Christian religions as their main religion. Outcome variables are: probability to work (column 1), use of contraceptives at the time of the survey (column 2), ideal number of children (column 3), total number of children ever born (column 4), decision-making index (column 5). This index is calculated as the average of all non-missing responses to four yes/no questions (indicators) that equal one if the respondent has some say – either the woman decides together with her partner/husband or she decides alone – in the following matters: (1) how a woman's earning are used, (2) healthcare, (3) large household purchases, and (4) visiting relatives. In column 6, the outcome variable is an indicator that equals one if the respondent associates attitudes of respect for women with Christianity. In column 7, the outcome variable is an indicator equal to one if the respondent thinks that women should be allowed to serve in religious leadership roles, such as pastor, priest or imam. Country-wave fixed effects always included. Controls include age, age squared, and rural/urban residence. Robust standard errors clustered at the DHS cluster level are reported in parentheses when using the DHS data.

The correlation between women's agency and new Christian churches reflects the latter's promotion of equality in all its forms, including gender equality. In the Pentecostal tradition, for example, men and women alike are allowed to experience the power of the Holy Spirit, a gift which endows them with the ability to dream, see visions, prophesy, preach, teach, exorcise, and even heal (Mwaura, 2013, p.–422; Lugazia, 2017, p.–308).

[37]These results do not change when using alternative definitions of the decision-making variables. For example, Lowes (2022) constructs an index that takes on three values: 1 when the respondent's partner or another person makes the decision, 2 when both the respondent and the partner decide, and 3 when the respondent alone is responsible for the decision. These results are reported in Appendix C.5, Table C22.

[38]Women affiliated with a new Christian church have a greater participation in decisions made about healthcare, large household purchases and visits to their family, although no relationship is observed when a woman's earnings must be allocated. More probing nevertheless reveals that the latter result is explained by a decrease in the probability of autonomous decisions by women, itself compensated by an increase in the probability of joint conjugal decisions (See Table C23 in Appendix C.5).

In some countries, women are increasingly involved in the foundation of Pentecostal churches, acting as bishops, evangelists and pastors, and filling special ministries such as counseling, service to the community, and mentoring fellow women in distress (Audu and Eregare, 2020). Prominent among other gender-equalizing mechanisms operating in new Christian churches are prohibitions against, or condemnation of, different well-anchored practices such as alcohol consumption, polygamy, and mobility restrictions for women. These rules are welcomed by many women because they are often harmed by the targeted practices: alcohol is mainly consumed by men and has been shown to be a strong predictor of domestic violence (e.g., Abramsky et al. 2011; Theiss 2024), polygamy creates room for intra-household conflicts and division between women (e.g., Barr et al. 2019), and mobility restrictions prevent them from leaving the space area traditionally earmarked for them, which may imply the impossibility to travel to the new churches (as much as they want or at the appropriate times).

The data confirms that prohibitions like the use of (excessive) alcohol consumption and the ban of polygyny are stronger in new Christian churches. Table C24 in Appendix C.6, thus shows that, compared to mainline denominations, new Christian women are more likely to say that their husbands do not drink alcohol (column 1: -9 percentage points, 24% of the sample mean) while new Christian male respondents are less likely to report drinking alcoholic beverages (column 2: 16 percentage points, 37% of the sample mean).[39] Regarding polygyny, we learn from Table C25 in Appendix C.6 that being a new Christian slightly decreases the probability of being in a polygamous union.[40]

Finally, columns 6 and 7 use the PEW data to test whether members of new Christian churches support a strong role for women in the church and whether they link up respect for women with the new creed. More specifically, respondents were asked whether "women should be allowed to serve in religious leadership roles, such as pastor, priest, or imam", and whether they associate attitudes of respect for women with Christianity.[41]

[39]In line with the DHS data, our own data from Benin confirm these findings since new Christians are less likely to say that they consume sodabi (a traditional alcoholic beverage).

[40]To explain the small magnitude of the coefficients associated with polygyny, we may bear in mind that, in the context of some Evangelical churches in Benin, for example, the ban only applies *after* an individual has become a member of the church. In other words, it is possible to join a Christian church while being in a polygamous union, but it is forbidden to become polygamous after joining.

[41]The first question imposed a dichotomous choice between two opinions: "women should be allowed to serve in religious leadership roles, such as pastor, priest, or imam" (in which case the outcome indicator is equal to one) versus "only men should be able to serve in religious leadership roles, such as pastor,

Compared to Christian respondents from missionary churches, new Christian women appear more likely to associate Christianity with respect for women (column 6 panel B, +2.3pp, 3% of the sample mean), and to think that women should be allowed to serve in religious leadership roles (column 7, +6pp, 14% of the sample mean). Here lies a radical difference between new Christianity, on the one hand, and social norms ruling in the traditional patriarchal order or prescriptions imposed in mainline Christian churches (where women are not allowed to act as leaders), on the other hand.

5.2. New Christian churches as escapes from the traditional order

To better understand the spiritual and social dynamics surrounding the rise of new Christian churches, we now turn to the relationship between the new religion and (1) traditional beliefs, (2) trust in customary authorities, and (3) practices such as miracles and exorcism. The positioning of these churches vis-à-vis traditional beliefs may appear paradoxical: for one thing, they strongly reject traditional animist rituals and the authority structures which sustain them but, for another thing, they seem to reckon with the ontological reality of witchcraft insofar as they claim to protect members against magic attacks with the help of collective prayers.

This dual stance reflects a form of syncretism, wherein new Christian churches introduce alternative spiritual practices, such as healing miracles, demon exorcism, and expressive worship (dancing and singing), that resonate with African traditional spirituality. At the same time, "rituals through which family links are symbolized and confirmed" (Meyer, 1998, p.324) are banished and replaced by new rituals centered around the cult of the Christian God.[42]

5.2.1. New and old religions vis-à-vis traditional beliefs

We start by examining the relationship between religious affiliation and traditional beliefs and rituals, using data from the PEW research center on more than 20,000 respon-

priest, or imam" (the indicator is equal to zero).

[42]Descriptively, our first-hand data clearly shows how the accommodation of the traditional frame of mind is much stronger in mainstream missionary churches than what is observed in new Christian churches. For instance, 60 percent of those whose second religion is Voodoo report Catholicism as their main religion, while only 15 percent report belonging to an Evangelical church. This is consistent with the local saying that people are "Catholics during the day, but followers of Voodoo at night".

dents from 19 SSA countries. Table 8 reveals that, in comparison to mainline denominations, followers of new Christianity are significantly less likely to: 1) participate in rituals to honor ancestors (4.3pp, 17% of sample mean); 2) believe that sacrifices to ancestors can prevent disturbances from happening (7pp, 21% of sample mean); 3) participate in initiation rituals (3.1pp, 12% of sample mean); and 4) have recourse to traditional religious healers (4pp, 10% of sample mean). These findings confirm the previous result obtained on the basis of our first-hand data from Benin: the rejection of traditional beliefs and rituals is a defining feature of new Christian churches, especially when compared to missionary churches.

At the same time, new Christian churches stick to beliefs in the intervention of supernatural agents (the Holy Spirit, in particular), thereby providing a dimension of continuity between the old and the new worldviews. Thus, members of these churches are much more likely to have experienced or witnessed a divine intervention to heal an illness or an injury (Column 5), or the expulsion of the devil and evil spirits from a possessed person (Column 6). They are also more likely to believe that God can directly intervene to ensure the material success and good health of the worshipers.[43] When they are compared with mainline denominations (Panel B), new Christians are 15.4 percentage points more likely to have experienced or witnessed a miracle (a 32% increase from the sample mean), 11 pp more likely to have experienced or witnessed an exorcism (a 26% increase from the sample mean), and 5 pp more likely to believe in God's ability to grant them material success and healthy condition if they worship him. These results are consistent with the extensive literature highlighting the role of divine healing in new Christian churches (Cox, 2011; Mildnerova, 2014).

[43]More precisely, the respondent is asked to choose between two alternative statements: "God will grant wealth and good health to all believers who have enough faith", and "God does not always give wealth and good wealth to believers who have deep faith".

Table 8: New Christians and attitudes toward tradition and supernatural power

	Traditional beliefs and practices				Beliefs in supernatural power		
	Rituals	Sacrifices	Initiation	Trad. healing	Miracles	Exorcism	God-ordained prosperity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: New Christians compared to all other denominations							
New Christian	-0.0492***	-0.0874***	-0.0534***	-0.0748***	0.205***	0.173***	0.0548***
	(0.00611)	(0.00643)	(0.00617)	(0.00691)	(0.00702)	(0.00696)	(0.00712)
R-squared	0.108	0.164	0.101	0.104	0.0747	0.0687	0.0718
Panel B: New Christians (and non-Christians) as compared to missionary churches							
New Christian	-0.0434***	-0.0704***	-0.0310***	-0.0407***	0.154***	0.108***	0.0525***
	(0.00886)	(0.00944)	(0.00901)	(0.00982)	(0.0100)	(0.0101)	(0.0102)
Non Christian	0.00882	0.0258**	0.0343***	0.0523***	-0.0778***	-0.0993***	-0.00354
	(0.00979)	(0.0104)	(0.00997)	(0.0108)	(0.0109)	(0.0109)	(0.0113)
Mean Y	0.263	0.329	0.267	0.424	0.477	0.420	0.571
R-squared	0.108	0.165	0.101	0.105	0.0766	0.0719	0.0718
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	24204	23458	24132	23587	24369	23694	23562

NOTE. Data: PEW Research Center. The table reports OLS estimates. "New Christian" is an indicator equal to one if the respondent reports one of the new Christian religions as their main religion. The outcome variable, also an indicator, is equal to one if the respondent has ever participated in an African traditional ceremony or performed rituals to honor ancestors (column 1), if s/he believes that sacrifices to ancestors can prevent disturbances from happening (column 2), if s/he has ever participated in an initiation ritual (column 3), if s/he has ever visited a traditional healer (column 4). In column 5, the binary variable is equal to one if the respondent answered "yes" to the question "have you ever experienced or witnessed a divine healing of an illness or injury?". In column 6, value one is obtained equal if s/he answered "yes" to the question "have you ever experienced or witnessed a situation where the devil or evil spirits were driven out of a person?". In column 7, the outcome indicator equals one if the respondent thinks that "God will grant wealth and good health to all believers who have enough faith in Him" rather than "God doesn't always give wealth and good health even to believers who have deep faith in Him". Individual controls include age, urban/rural place of residence, marital status, education, and whether the respondent has recently experienced a money shortage. Robust standard errors are reported in parentheses.

Finally, we want to know whether a gender divide exists with respect to the sort of beliefs and behavior patterns mentioned above. From Table C26 in Appendix C.7, it is evident that women are significantly less likely than men to hold "traditional" beliefs or follow "traditional" modes of conduct. For example, women are about 3 pp less likely than men to believe that sacrifices to ancestors can avoid bad outcomes (8% of the sample mean), or to participate in an initiation ritual (12% of the sample mean). The same difference is found in our first-hand data (Table C27 in Appendix C.7), where in addition to being less prone to report adherence to a traditional religion, women are 15 pp less likely to declare a belief in the influence of ancestral spirits (40% of the sample mean), 5.4 pp less likely to consult with a traditional sorcerer, and 10 pp less likely to drink highly alcoholic traditional beverages to fight against COVID. Such a strong gender difference is not coincidental. It is in line with the idea that the beliefs and rituals promoted by patriarchal structures tend to be called into question or rejected by

women whose scope for autonomy is severely restricted under the rules of the existing order. New Christian churches provide a community in which members – both men and women – distance themselves from these structures (see Table C28 in appendix for the absence of systematic gender gaps *among members of these churches*).

Taken together the results suggest that, since missionary churches (such as mainline Catholic or Protestant denominations) are generally more syncretic in the sense that they are not radical in their rejection of traditional rituals and beliefs, women tend to have a special attraction for the new Christian churches where they are able to participate in religious life and find an inclusive space to express themselves.

5.2.2. *Religious affiliation and trust in traditional authorities*

A second essential feature of new Christian churches highlighted in the specialized qualitative literature is their stress on the necessity to break away from the traditional clan-based society and its associated patriarchal structure (Caldwell and Caldwell, 1987; Meyer, 1998; Mildnerova, 2014). Using data from Afrobarometer, Table 9 examines the relationship between religious affiliation and trust in traditional leaders (male elders) or the family.[44] We see that new Christians tend to profess less trust in traditional leaders and in the family than members of mainline Christian denominations and other religions.[45] These differences are modest, amounting to approximately 2 to 3 percent of the average trust level observed in the sample.[46]

It is worth emphasizing that, while trust in the family and traditional authorities is lower among members of new Christian churches, this shift is accompanied by the formation of new communal ties expressed through vibrant celebrations that include singing, dancing, collective worship, more frequent religious services, and higher donations to charity or the church.[47] From Table 9 (columns 4-6, panel B), it is apparent that,

[44]Trust is measured as a discrete variable with four distinct values: 0 (no trust at all), 1 (just a little trust), 2 (a reasonable amount of trust) and 3 (a lot of trust).

[45]The new Christian indicator using data from Afrobarometer is based on a broader definition including people who declared to be "Christian" when asked about their main religion. Importantly, respondents who declared themselves to be Catholic or Protestant are excluded from this definition. This is because the Afrobarometer survey distinguishes between Catholic (or Protestant) and Christian believers, suggesting that the latter category might be capturing new Christians.

[46]Interestingly, the negative correlation between new Christianity and the trust in traditional leaders and the family is even stronger for women (see Table C29 in appendix).

[47]Gershman (2016) interprets the latter as a measure of prosociality, showing that holding witchcraft

when compared with missionary churches, members of new Christian churches are 12 pp more likely to participate in religious festivities (a 45% increase from the average), 16 pp more likely than other religious groups to attend religious services more than once a week (a 33% increase from the average), and 14 pp more likely to make donations to charity or the church (a 18% increase from the average).[48]

Table 9: New Christian churches and community identity: old vs new

	Afrobarometer data		PEW data		
	Trad. leaders	Family	Singing	High attendance	Charitable giving
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Panel A: New Christians as compared to all other denominations					
New Christian	-0.0932***	-0.0693***	0.121***	-0.0175**	-0.0567***
	(0.00554)	(0.00566)	(0.00623)	(0.00700)	(0.00620)
R-squared	0.128	0.122	0.0418	0.0746	0.104
Panel B: New Christians (and non-Christians) as compared to missionary churches					
New Christian	-0.0345***	-0.0335***	0.134***	0.193***	0.142***
	(0.00616)	(0.00619)	(0.00754)	(0.00818)	(0.00973)
Non Christian	0.154***	0.0984***	0.0237***	0.387***	0.355***
	(0.00707)	(0.00678)	(0.00873)	(0.00978)	(0.00920)
Mean Y	1.838	2.361	0.265	0.469	0.801
R-squared	0.130	0.123	0.0421	0.126	0.163
Controls	Yes	Yes	Yes	Yes	Yes
Country-Wave FE	Yes	Yes	Yes	Yes	Yes
N	197268	141462	24291	24273	21466

Note. Data: Afrobarometer Surveys 3,4,5 and 9 in columns 1-2 and PEW survey in columns 3-5. The outcome variables in columns 1 and 2 show the degree of trust in traditional leaders or in the family, respectively. They take value 0 (not at all), 1 (a little), 2 (a lot) and 3 (very much). In column 3, the outcome variable is an indicator equal to one if the respondent participates in religious chanting or singing gatherings and ceremonies at least once a week. In column 4, unitary value is obtained if s/he attends religious services more than once a week whereas in column 5, this is so if s/he donates a set percentage of his/her wealth to a charity or the church/mosque. In both datasets, controls include age, age squared, gender, and urban/rural place of residence. The explanatory variable is an indicator that equals one if the respondent's religion is New Christian. Country fixed effects are always included. With the Afroberometer data, wave FE are always included. Robust standard errors are reported in parentheses.

beliefs is negatively correlated with it. The strong, positive correlation between social attitudes and behaviors and new Christianity highlights the potentially high level of cooperation and solidarity within the church, which characterizes religions with moralizing high gods (Norenzayan and Shariff, 2008), and chimes well with previous research documenting strong sharing norms in Pentecostal churches (Kapepula et al., 2022).

[48]Interestingly, when compared to all other religions the correlation with high attendance and charitable giving is negative (panel A), because these aspects are even stronger among Muslims (hence the contrast with Panel B).

6. Conclusion: religious conversion and institutional change

The historical experience of Europe demonstrates how religious transformation can act as a powerful catalyst for social change, particularly in dismantling kinship-based structures and promoting women's emancipation (Goody, 1973). The Catholic Church's reforms, such as prohibitions on cousin marriage and inheritance practices, both of which worked to reinforce patriarchal control, gradually reshaped family norms and property rights, contributing to the emergence of a more individualistic society (see, for example, Goody, 1983; Schulz, 2022; Fukuyama, 2012: 231-8; Guirkinger and Platteau, 2020: 492-4; Henrich, 2020: 164-86). Crucially, these changes were not imposed by political authority but emerged through the Church's ability to establish cultural norms. As a result of its actions, however, "a far more individualistic European society was already in place during the Middle Ages, before the process of state-building began, and centuries before the Reformation, the Enlightenment and the Industrial Revolution" (Fukuyama, 2012: 239).

A process that partly resembles the above may be presently unfolding in SSA. Under the impulse of local and endogenous new Christian churches, a growing number of Africans choose to follow a set of rules and practices radically different from those prescribed by the traditional clan-based order. These churches actively challenge customary norms centered on obligations to clan elders and the cult of ancestors, offering alternative spiritual frameworks that emphasize personal agency and divine protection. While rejecting traditional rituals, they maintain belief in supernatural forces capable of bringing healing and prosperity and countering magic spells, often perceived as obstacles to women's emancipation.

In this context, women emerge as central agents of change. As primary beneficiaries of the shift away from patriarchal and spiritual control, they form the majority of new converts and actively participate in religious practices that promise both spiritual empowerment and social liberation. Much like in Europe, where religious reform helped to loosen the grip of kinship structures and enabled female emancipation, the rise of new Christian churches in Africa appears to be fostering a similar transformation – one in which cultural change, rooted in spiritual renewal, may play a pivotal role in broader processes of development.

Our conclusion should not be read as contradicting findings from other settings where

the expansion of Neo-evangelical or Pentecostal churches has been associated with regressions in women's status or increases in far-right political orientations (for Brazil, see Buccione and Mello 2020; Solá 2025). The reason is that these studies examine contexts in which religious competition primarily occurs between new Christian churches and mainline monotheist denominations – settings where both types of churches tend to operate as centralized, hierarchical organizations. This configuration differs fundamentally from the environment we study, where new Christianity coexists with traditional religions and where their appeal hinges on a distinct set of spiritual services.

A fascinating question is whether the bottom-up movement toward women's emancipation observed in SSA today will have more immediate effects than the top-down reforms of the Catholic Church in Western Europe. The effects of the latter played out over several centuries due to the slow enforcement of new cultural norms. This is attested by the following finding: the significant negative correlation between the spread of Christianity and the absence of clans and lineages can only be observed over a long period (Korotayev, 2003).

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Online Appendix

Shaking the Traditional Order: Women's Conversion to New Christian Churches in Sub-Saharan Africa

March 21, 2026

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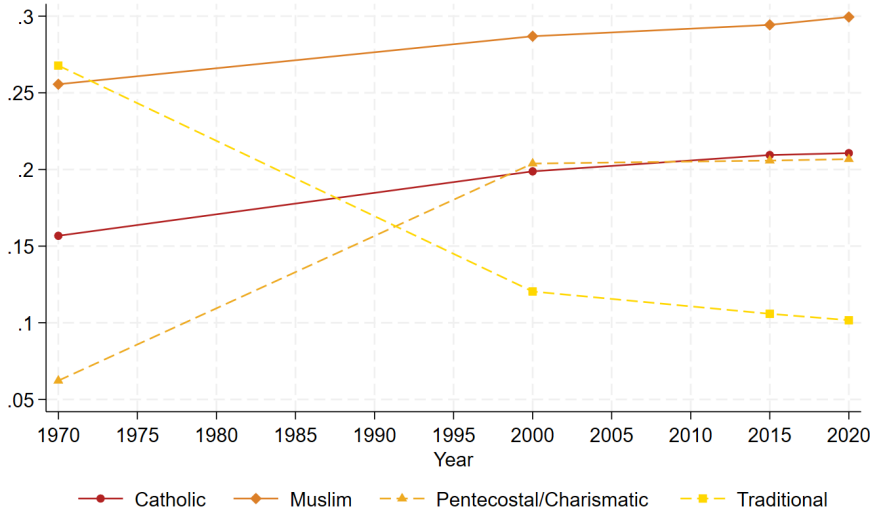
Appendix Contents

List of Appendix Figures

List of Appendix Tables

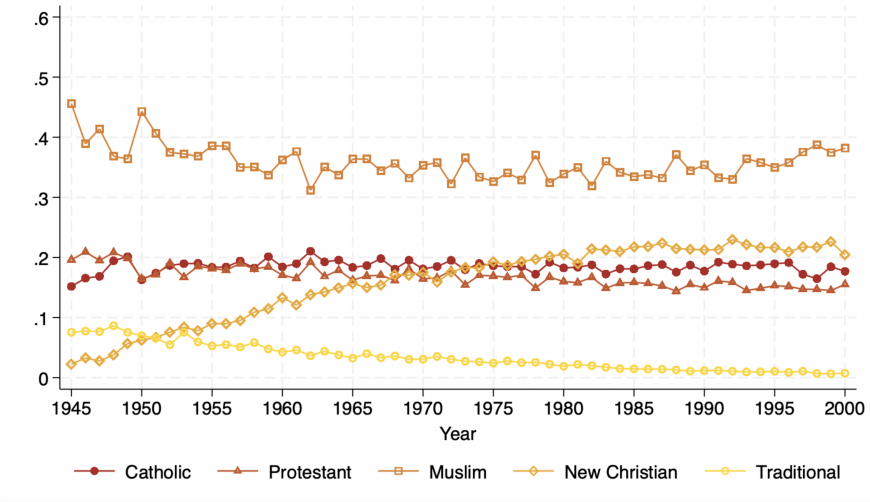
A. The New Reformation in Sub-Saharan Africa

Figure A1: Religious affiliation over time in Sub-Saharan Africa, World Christian Database



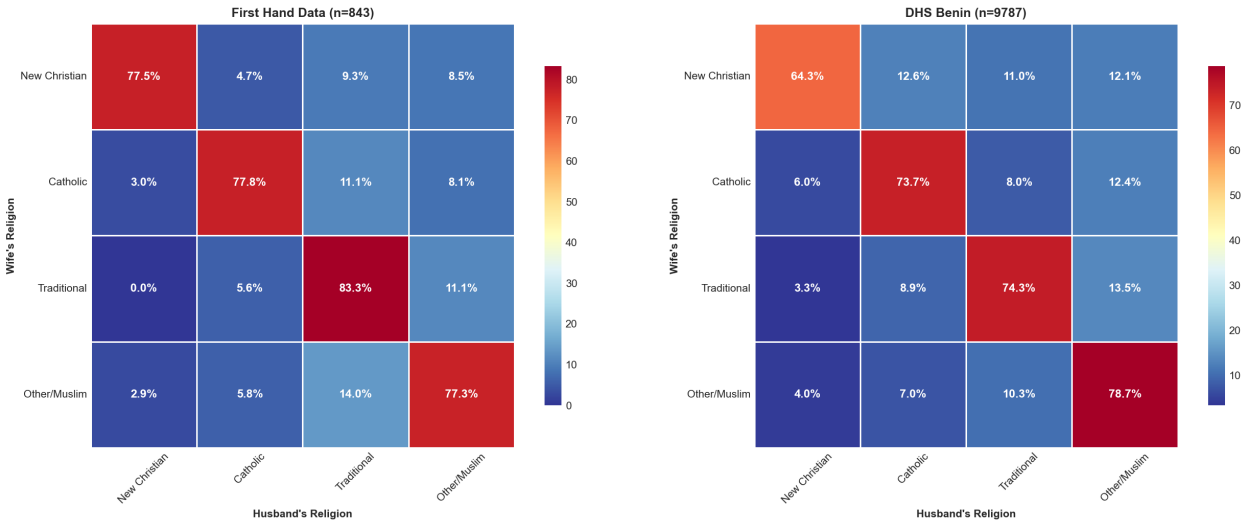
Note: Data comes from the World Christian Database. Countries include: Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, DRC, Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Rwanda, Réunion, Saint Helena, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

Figure A2: Religious affiliation by year of birth, 136 DHS surveys from 39 countries



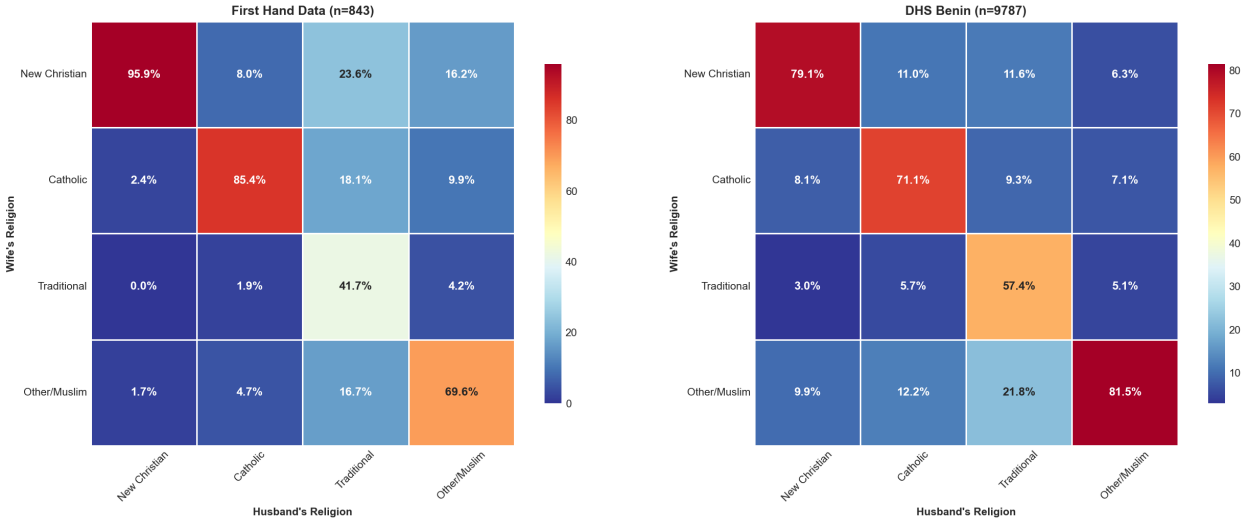
Source: Authors' calculations using data from 115 Demographic and Health Surveys (DHS) in 39 Sub-Saharan African countries. The figure shows the share of people belonging to different religious denominations by year of birth. Declared religion is measured at the time of the survey. Countries include: Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, DRC, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, The Gambia, Togo, Uganda, Zambia, Zimbabwe.

Figure A3: Cross-tabulation of husbands' and wives' religions (row proportions sum to 100%)



Notes: Each cell shows the percentage of husbands with a given religion conditional on their wife's religion (rows sum to 100%). First Hand Data comes from the 2025 survey conducted in Benin (N = 843 couples). DHS data comes from the Demographic and Health Survey for Benin (2021). Religious categories are mutually exclusive: "New Christian" includes [Pentecostal, Evangelical, etc.], "Catholic" includes Roman Catholics, "Traditional" includes Vodoun and other indigenous religions, and "Other/Muslim" includes Muslims and other unclassified religions.

Figure A4: Cross-tabulation of husbands' and wives' religions (column proportions sum to 100%)



Notes: Each cell shows the percentage of wives with a given religion conditional on their husband's religion (columns sum to 100%). First Hand Data comes from the 2025 survey conducted in Benin (N = 843 couples). DHS data comes from the Demographic and Health Survey for Benin (2021). Religious categories are mutually exclusive: "New Christian" includes [Pentecostal, Evangelical, etc.], "Catholic" includes Roman Catholics, "Traditional" includes Vodoun and other indigenous religions, and "Other/Muslim" includes Muslims and other unclassified religions.

B. Data Description and Variable Definitions

B.1. Large-scale surveys across Sub-Saharan Africa

B.1.1. Demographic and Health Surveys

We use data from 136 DHS surveys from 39 Sub-Saharan African countries. These are nationally representative surveys which, in addition to detailed information on the religious affiliation of individuals at the denomination levels, contain useful information on sociodemographic characteristics, fertility preferences, or contraceptive methods. In total, we have information on about 2,300,000 individuals living in more than 65,000 clusters.

Countries and survey years.– Angola (2011, 2015, 2023), Benin (1996, 2001, 2006, 2011, 2017), Burkina Faso (1993, 1999, 2003, 2010, 2021), Burundi (2010, 2016), Cameroon (1991, 2011, 2018), Central African Republic (1994), Chad (1996, 2004, 2014), Komoros (2012), Congo Brazaville (2005, 2011), Democratic Republic of Congo (2007, 2013, 2023), Côte d'Ivoire (1994, 1998, 2012, 2021), Eswatini (2006), Ethiopia (2000, 2005, 2011, 2016, 2019), Gabon (2012, 2019), Gambia (2013, 2019), Ghana (1993, 1998, 2003, 2008, 2014, 2022), Guinea (1999, 2005, 2012, 2018), Kenya (2003, 2008, 2014, 2022), Lesotho (2004, 2009, 2014, 2023), Liberia (1986, 2007, 2013, 2019), Madagascar (1997, 2008, 2021), Malawi (2000, 2004, 2010, 2015), Mali (1995, 2001, 2006, 2012, 2018, 2023), Mauritania (2020), Mozambique (2011, 2015, 2022), Namibia (2000, 2006, 2013), Niger (1992, 1998, 2006, 2012, 2021), Nigeria (1990, 2003, 2008, 2013, 2018, 2024), Rwanda (2005, 2010, 2014, 2019), Sao Tome and Principe (2008), Senegal (1986, 1992, 1997, 2005, 2010, 2012, 2014, 2015, 2016, 2017, 2018, 2019, 2023), Sierra Leone (2008, 2013, 2019), South Africa (1998, 2016), SUdan (1990), Tanzania (1999, 2010, 2015, 2022), Togo (1988, 1998, 2013), Uganda (2000, 2006, 2011, 2016), Zambia (1996, 2001, 2007, 2013, 2018), Zimbabwe (1999, 2005, 2010, 2015).

Variable definitions:

"strict" definition.– The variable "New Christian church" is an indicator variable that equals one if the respondent declares as his/her main religion one of the following: other Christian, Evangelical, Pentecostal, Apostolic, Salvation Army, Charismatic, Assembly of Gob, Armée du Salut, Église du Réveil, Seventh-day Adventist, Kimbanguist, Other

Protestant, African Initiated Church, Revival church.

"Grouped" definition.– The variable "New Christian church" is an indicator variable that equals one if the respondent declares as his/her main religion one of the following: other Christian, Evangelical, Pentecostal, Apostolic, Salvation Army, Charismatic, Assembly of Gob, Armée du Salut, Église du Réveil, Seventh-day Adventist, Kimbanguist, Other Protestant, African Initiated Church, Revival church. Moreover, in country-waves where new Christian churches are not distinguished from Protestant churches, we consider all of them as new Christian. These countries include Central African Republic, Cote d'Ivoire, Ethiopia, Kenya, Liberia, Nigeria, Togo, and Zambia.

B.1.2. PEW Research Forum

We complement the demographic surveys with individual-level information on contemporary supernatural beliefs from 25,000 respondents in 19 SSA countries. The information comes from a survey conducted between December 2008 and April 2009 by the Pew Research Center's Forum on Religion and Public Life (Pew Research Center, 2016). In addition to detailed information on religious affiliation, this database provides individual-level information on religious beliefs, practices, and knowledge for all religions including African traditional religions, and they also give information about the goods and services provided by the different churches.

Countries.– Botswana, Cameroon, Chad, Democratic Republic of the Congo, Djibouti, Ethiopia, Ghana, Guinea Bissau, Kenya, Liberia, Mali, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda, Zambia.

Variable definitions.– PEW specifically includes a question aimed to identify new Christian movements. We code the variable "new Christian church" as equal to one if the respondent is Christian *and* mentions that s/he identifies with one of the following churches: born-again Christian, evangelical Christian, Pentecostalist Christian, or charismatic Christian.

B.1.3. Afrobarometer

We also use information from Afrobarometer, which deals with more than 300,000 respondents from 40 countries . As before, this dataset contains information on both gender and (detailed) religious affiliation.

Countries and survey year.– Angola (2019, 2022), Benin (2005, 2008, 2011, 2014, 2016, 2020, 2022), Botswana (2003, 2005, 2008, 2012, 2014, 2017, 2019, 2022), Burkina Faso (2008, 2012, 2015, 2017, 2019, 2022), Burundi (2012, 2014), Cape Verde (2002, 2005, 2008, 2011 2014, 2017, 2019, 2022), Cameroon (2013, 2018, 2021, 2022), Côte d'Ivoire (2013, 2014, 2017, 2019, 2021), Eswatini (2013, 2015, 2018, 2021, 2022), Ethiopia (2020), Gabon (2015, 2017, 2020, 2021), Gambia (2018, 2021, 2022), Ghana (2002, 2005, 2008, 2012, 2014, 2017, 2019, 2022), Guinea (2013, 2015, 2017, 2019, 2022), Kenya (2003, 2005, 2008, 2011, 2014, 2016, 2019, 2021), Lesotho (2003, 2005, 2008, 2012, 2014, 2017, 2020, 2022), Liberia (2008, 2012, 2015, 2018, 2020, 2022), Madagascar (2005, 2008, 2013, 2014, 2018, 2022), Malawi (2003, 2005, 2008, 2012, 2014, 2016, 2019, 2022), Mali (2002, 2005, 2008, 2012, 2014, 2017, 2020, 2022), Mauritania (2022), Mauritius (2012, 2014, 2017, 2020, 2022), Mozambique (2002, 2005, 2008, 2012, 2015, 2021), Namibia (2003, 2006, 2008, 2012, 2014, 2017, 2019, 2021), Niger (2013, 2015, 2018, 2020, 2022), Nigeria (2003, 2005, 2008, 2012, 2014, 2017, 2022, 2022), Senegal (2002, 2005, 2008, 2013, 2014, 2017, 2020, 2022), Seychelles (2022), Sierra Leone (2012, 2015, 2018, 2020, 2022), South Africa (2002, 2006, 2008, 2011, 2015, 2018, 2021, 2022), Sudan (2013, 2015, 2018, 2021, 2022), Sao Tome and Principe (2015, 2018, 2022), Tanzania (2003, 2005, 2008, 2012, 2014, 2017, 2021, 2022), Togo (2012, 2014, 2017, 2020, 2022), Tunisia (2013, 2015, 2018, 2020, 2022, Uganda (2002, 2005, 2008, 2012, 2015, 2016, 2019, 2022), Zambia (2003, 2005, 2009, 2013, 2014, 2017, 2020, 2022), Zimbabwe (2004, 2005, 2009, 2012, 2014, 2017, 2021, 2022).

Variable definitions.– We now define "new Christian church" as an indicator variable that equals one if the respondent's religion is Other Christian, Apostolic, Church of Christ, Evangelical, African Initiated Church, Jehovah's Witness, Pentecostal, Seventh-day Adventist, Zionist Christian Church, or Christian (as a different category than Catholic or Protestant).

B.1.4. World Value Surveys

Finally, we use the World Value Surveys, which are large-scale demographic surveys supplying information on gender and religious affiliation for more than 45,000 respondents from 12 Sub-Saharan African countries.

Countries and survey year.– Ethiopia (2007, 2020), Ghana (2007, 2012), Kenya (2021), Mali (2007), Nigeria (1990, 1995, 2000, 2012, 2018), Rwanda (2007, 2012), South Africa (1982,

1990, 1996, 2001, 2006, 2013), Zimbabwe (2001, 2012, 2020), Uganda (2001), Tanzania (2001), Burkina Faso (2007), Zambia (2007).

Variable definitions.– We define "new Christian church" as an indicator variable equal to one if the respondent's main religious affiliation is Evangelical, Jehovah's Witness, Pentecostal, Charismatic, Other Christian, African Initiated Church, or Zion Christian Church.

B.2. Randomized Controlled Trial in Benin

Agricultural intervention.– The final sample of 1,009 households (877 men and 1,009 women) was randomly selected among a list of households which applied for a subsidy related to pineapple production. Two conditions were set for eligibility to the scheme: the household must have at least 0.5 hectares of land owned by a woman, and 5 percent of the amount of the subsidy should be contributed by the participant (equivalent to 52-72$).

Our intervention is twofold. First, it includes an in-kind subsidy for women intended to increase or expand a pineapple production. This subsidy covers 0.5 hectares of land and consists of: 1) implementation of the initial steps of pineapple production (land clearing, stump removal, and ploughing), with the help of experts hired by the Belgian Development Agency ; 2) the purchase and planting of pineapple shoots; and 3) the covering of the pineapple shoots, once planted, by a plastic film destined to reduce the workload at subsequent stages of the production process, and to fasten the growth cycle of the pineapple. Second, women must attend a business training program specially designed for the purpose of a proper management of the new production.

Regarding the second component of the scheme, one-third of the sample was randomly assigned to an individual training treatment, meaning that women attend the business training program alone. Another one-third of the sample was assigned to couple training, in which women are invited to the training in the company of their husband. The program was implemented in the course of seven sessions (2 to 4 hours each, with a frequency of less than 2 weeks between each session), and it included sessions on management and accounting, goal-setting capacity, discussion of gender issues aimed at a better understanding of gender-specific constraints for the production of pineapple, and one technical session devoted to the technical aspects of pineapple production. Training

took place in groups (about 8 people, on average) formed on the basis of the residence location of the participants, and the training rooms were rented by the research staff hired by the program. Participants were compensated for their transportation costs.

Summary Statistics.– Table B1 examines the balance in some baseline variables between treatment and control. It shows the means in the control and treatment groups and the control-treatment difference for variables collected during the baseline survey of 1,009 women. There are no significant differences between the treatment and control groups, neither for demographic variables nor for socioeconomic and gender-related outcomes, as we expected from computerized randomization.

Table B1: RCT Benin, baseline characteristics

	(1)		(2)		(3)		(2)-(1)		(3)-(1)	
	Control		Couple		Individual		Pairwise t-test			
Variable	N	Mean	N	Mean	N	Mean	N	Difference	N	Difference
New Christian	336	0.417	337	0.436	336	0.414	673	0.020	672	-0.003
		(0.027)		(0.027)		(0.027)				
Number children	336	4.244	337	4.151	336	4.131	673	-0.093	672	-0.113
		(0.126)		(0.122)		(0.132)				
Age women	334	37.802	335	37.531	333	36.793	669	-0.271	667	-1.010
		(0.568)		(0.553)		(0.526)				
Father alive	336	0.360	337	0.436	335	0.334	673	0.076**	671	-0.026
		(0.026)		(0.027)		(0.026)				
Phone	336	0.667	337	0.691	336	0.664	673	0.025	672	-0.003
		(0.026)		(0.025)		(0.026)				
Bank account	336	0.167	337	0.125	336	0.140	673	-0.042	672	-0.027
		(0.020)		(0.018)		(0.019)				
Has mobile money	273	0.538	269	0.554	266	0.466	542	0.015	539	-0.072*
		(0.030)		(0.030)		(0.031)				
Attended school	336	0.399	337	0.421	336	0.393	673	0.023	672	-0.006
		(0.027)		(0.027)		(0.027)				
Owns TV	336	0.375	337	0.362	336	0.333	673	-0.013	672	-0.042
		(0.026)		(0.026)		(0.026)				
Extension area	336	0.500	337	0.472	336	0.473	673	-0.028	672	-0.027
		(0.027)		(0.027)		(0.027)				
Isolated	336	0.027	337	0.039	336	0.054	673	0.012	672	0.027*
		(0.009)		(0.011)		(0.012)				
Polygamous	336	0.125	337	0.125	336	0.146	673	-0.000	672	0.021
		(0.018)		(0.018)		(0.019)				
Father produced pineapple	334	0.171	333	0.150	332	0.169	667	-0.021	666	-0.002
		(0.021)		(0.020)		(0.021)				
Pineapple women	336	0.402	337	0.383	336	0.414	673	-0.019	672	0.012
		(0.027)		(0.027)		(0.027)				
Pineapple men	294	0.741	296	0.733	287	0.725	590	-0.008	581	-0.017
		(0.026)		(0.026)		(0.026)				
IGA women	228	1.123	237	1.169	240	1.113	465	0.046	468	-0.010
		(0.029)		(0.028)		(0.027)				
Woman applied individually	336	0.021	337	0.015	336	0.009	673	-0.006	672	-0.012
		(0.008)		(0.007)		(0.005)				
Norms: Pineapple=male activity	336	0.170	337	0.205	336	0.179	673	0.035	672	0.009
		(0.021)		(0.022)		(0.021)				
Empowerment: free to visit family	336	0.646	337	0.620	336	0.673	673	-0.026	672	0.027
		(0.026)		(0.026)		(0.026)				
Empowerment: free to buy land	336	0.804	337	0.798	336	0.753	673	-0.005	672	-0.051
		(0.022)		(0.022)		(0.024)				

NOTE. Sample: 1,009 female respondents from baseline survey. The value displayed for t-tests are the differences in the means across the groups. "Extension area" equals one if the respondent lives in a region where pineapple production is uncommon (as compared to regions where pineapple production has been traditionally widespread). "IGA woman" indicates whether the woman has any income-generating activity. "Norms: Pineapple=male activity" equals one if the respondent says that producing pineapple is a male activity, unfit for women. "Empowerment: family" equals one if the respondent says that she can go and visit her family if she wants. "Empowerment: Buy land" equals one if the respondent says that she can buy land with her own money if she wants. ***, **, and * indicate significance at the 1, 5, and 10 percent critical levels.

Attrition.– An important issue that may potentially undermine the validity of our experiment is attrition. To address it, we first test for the comparability of our treatment arms. In Table B2, we first show that the respondents' characteristics remain balanced at baseline after attritors have been removed.

Table B2: RCT Benin, baseline characteristics in the final sample

	(1)		(2)		(3)		(2)-(1)		(3)-(1)	
	Control		Couple		Individual		Pairwise t-test			
Variable	N	Mean	N	Mean	N	Mean	N	Difference	N	Difference
New Christian	307	0.414	315	0.448	321	0.417	622	0.034	628	0.004
		(0.028)		(0.028)		(0.028)				
Number children	307	4.329	315	4.238	321	4.112	622	-0.091	628	-0.217
		(0.131)		(0.127)		(0.135)				
Age woman	305	37.682	313	37.486	318	36.723	618	-0.196	623	-0.959
		(0.600)		(0.564)		(0.536)				
Father alive	307	0.355	315	0.429	320	0.334	622	0.074*	627	-0.021
		(0.027)		(0.028)		(0.026)				
Phone	307	0.664	315	0.692	321	0.667	622	0.028	628	0.002
		(0.027)		(0.026)		(0.026)				
Bank account	307	0.147	315	0.121	321	0.143	622	-0.026	628	-0.003
		(0.020)		(0.018)		(0.020)				
Has mobile money	250	0.516	254	0.539	255	0.455	504	0.023	505	-0.061
		(0.032)		(0.031)		(0.031)				
Attended school	307	0.381	315	0.410	321	0.396	622	0.028	628	0.015
		(0.028)		(0.028)		(0.027)				
Owns TV	307	0.358	315	0.349	321	0.333	622	-0.009	628	-0.025
		(0.027)		(0.027)		(0.026)				
Extension area	307	0.489	315	0.448	321	0.467	622	-0.041	628	-0.021
		(0.029)		(0.028)		(0.028)				
Isolated	307	0.026	315	0.038	321	0.056	622	0.012	628	0.030*
		(0.009)		(0.011)		(0.013)				
Polygamous	307	0.121	315	0.130	321	0.146	622	0.010	628	0.026
		(0.019)		(0.019)		(0.020)				
Father produced pineapple	305	0.174	311	0.158	318	0.173	616	-0.016	623	-0.001
		(0.022)		(0.021)		(0.021)				
Pineapple woman	307	0.404	315	0.400	321	0.424	622	-0.004	628	0.020
		(0.028)		(0.028)		(0.028)				
Pineapple men	270	0.748	275	0.745	274	0.723	545	-0.003	544	-0.026
		(0.026)		(0.026)		(0.027)				
IGA woman	209	1.129	224	1.165	230	1.104	433	0.036	439	-0.025
		(0.031)		(0.029)		(0.027)				
Woman applied individually	307	0.020	315	0.016	321	0.009	622	-0.004	628	-0.010
		(0.008)		(0.007)		(0.005)				
Norms: Pineapple=male activity	307	0.166	315	0.216	321	0.178	622	0.050	628	0.011
		(0.021)		(0.023)		(0.021)				
Empowerment: free to visit family	307	0.638	315	0.616	321	0.676	622	-0.023	628	0.038
		(0.027)		(0.027)		(0.026)				
Empowerment: free to buy land	307	0.798	315	0.797	321	0.751	622	-0.001	628	-0.047
		(0.023)		(0.023)		(0.024)				

NOTE. Sample: 943 female respondents from endline survey. The value displayed for t-tests are the differences in the means across the groups. "Extension area" equals one if the respondent lives in a region where pineapple production is uncommon (as compared to regions where pineapple production has been traditionally widespread). "IGA woman" indicates whether the woman has any income-generating activity. "Norms: Pineapple=male activity" equals one if the respondent says that producing pineapple is a male activity, unfit for women. "Empowerment: family" equals one if the respondent says that she can go and visit her family if she wants. "Empowerment: Buy land" equals one if the respondent says that she can buy land with her own money if she wants. ***, **, and * indicate significance at the 1, 5, and 10 percent critical levels.

Next, we compare attrition by treatment arm and examine whether the characteristics of attritors differ by treatment category. Toward that purpose, we estimate the following

equation:

$$A_i = \beta_0 + \beta_1 T_i + X_i' + X_i' \Phi + X_i' T_i \theta + \epsilon_i \tag{2}$$

where A_i is an indicator denoting whether respondent i has participated in the endline survey, T_i is an indicator equal to one for respondents assigned to the treatment group (and to zero for those assigned to the control group), and X_i' is a vector of individual-level characteristics.

Table B3 shows the results. Although attrition is overall quite low (6.5%), we find that it is slightly lower (3 percentage points) in the treatment group (column 1). Moreover, this effect seems to be driven by the individual (training) treatment (column 2). Importantly, the characteristics of respondents are not correlated with attrition rates, suggesting that attritors are not systematically different than non-attritors (column 3). These results, together with the balanced baseline characteristics after removing attritors, suggest that attrition does not seem to be a serious problem in our context. Hence, we may assume that missing answers are randomly distributed throughout the paper.

Table B3: Differential attrition across treatment arms

	(1) P(Attrition)	(2) P(Attrition)	(3) P(Attrition)
Treatment	-0.0313*		0.0113
	(0.0177)		(0.0915)
Couple treatment		-0.0210	
		(0.0204)	
Individual treatment		-0.0417**	
		(0.0190)	
New Christian x T			-0.0319
			(0.0368)
Nr of children x Treat.			0.00554
			(0.00792)
Age x Treat.			0.000197
			(0.00206)
Father Alive x Treat.			0.00408
			(0.0389)
Bank account x Treat.			-0.102
			(0.0652)
Mobile Phone x Treat.			0.0420
			(0.0394)
Mobile money x Treat.			-0.0164
			(0.0415)
Attended School x Treat.			-0.0260
			(0.0358)
TV x Treat.			-0.0220
			(0.0406)
Extension area x Treat.			0.00238
			(0.0362)
Father grows pineapple x Treat.			-0.0337
			(0.0440)
Polygamous x Treat.			-0.0365
			(0.0622)
Pineapple women x Treat.			-0.0344
			(0.0405)
IGA x Treat.			-0.00865
			(0.0387)
Pinneaple=male activity x Treat.			-0.0531
			(0.0501)
Freedom to visit relativesx Treat.			-0.0210
			(0.0379)
Freedom to buy land x Treat.			-0.00944
			(0.0426)
Mean Y control	0.0863		
R-squared	0.00357	0.00473	0.0527
N	1009	1009	991

NOTE. Sample: 1,009 female respondents from baseline survey. Robust standard errors are in parenthesis. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

C. Additional Figures and Tables

C.1. Gender gaps in religious affiliation

Table C1: Average religious affiliation by gender, raw data

	Share of New Christians			Share of Catholics		
Country	Men	Women	Female - male	Men	Women	Female - male
Zimbabwe	48.2	64.4	16.2	9.6	8.4	-1.2
Gambia	25.0	39.9	14.9	37.6	35.8	-1.8
Eswatini	19.2	29.0	9.7	5.1	4.7	-0.5
Lesotho	42.5	50.5	7.9	40.7	39.0	-1.8
Kenya	63.4	69.8	6.4	21.9	18.6	-3.3
Congo	31.7	37.2	5.5	33.4	31.4	-2.0
Angola	7.2	12.7	5.5	36.2	37.6	1.4
Ghana	43.2	48.1	4.9	12.1	11.8	-0.3
D.R. Congo	36.3	41.1	4.8	28.3	26.5	-1.7
Mozambique	15.6	20.3	4.7	30.4	29.5	-0.8
Cote d'Ivoire	19.3	23.9	4.6	16.8	19.4	2.6
Benin	17.6	21.5	3.9	29.8	29.6	-0.3
Togo	19.1	22.6	3.5	29.9	27.8	-2.1
Malawi	42.5	45.5	3.1	21.4	20.7	-0.7
Uganda	6.5	9.4	2.9	42.5	41.0	-1.6
Madagascar	7.1	8.5	1.4	32.0	32.5	0.4

Source: Author's calculations based on data from the Demographic and Health Surveys (DHS). All countries with presence and clear definition of new Christian churches are included.

Table C2: Religious affiliation and gender, restricted definition

	New Christian		Traditional		Catholic		Protestant		Islam	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Panel A: Countries with positive share of well identified New Christians										
Female	5.749***	5.524***	-1.163***	-1.195***	-0.702***	0.0260	1.053***	1.588***	-1.047***	-1.604***
	(0.133)	(0.132)	(0.0671)	(0.0631)	(0.118)	(0.116)	(0.103)	(0.105)	(0.101)	(0.0829)
Mean Y	0.285	0.284	0.0444	0.0440	0.250	0.248	0.156	0.157	0.145	0.146
R-squared	0.153	0.338	0.107	0.394	0.0486	0.269	0.106	0.277	0.162	0.583
N	780659	759283	780659	759283	780659	759283	780659	759283	780659	759283
Panel B: Full sample										
Female	2.219***	2.564***	-0.681***	-0.692***	-0.677***	-0.163***	1.111***	1.553***	-0.355***	-1.485***
	(0.0635)	(0.0592)	(0.0317)	(0.0307)	(0.0620)	(0.0613)	(0.0526)	(0.0535)	(0.0631)	(0.0449)
Country-round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
DHS cluster FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Mean Y	0.177	0.177	0.0260	0.0259	0.189	0.189	0.152	0.153	0.330	0.328
R-squared	0.267	0.512	0.104	0.391	0.150	0.365	0.305	0.458	0.503	0.799
N	2214449	2094501	2214449	2094501	2214449	2094501	2214449	2094501	2214449	2094501

Note. Data: Demographic and Health Surveys. The table reports OLS estimates. The coefficients should be divided by 100. Panel A restricts the sample to country-waves where new Christians can be properly identified and with positive share of new Christian churches. Panel B includes the full DHS sample. The outcome variable is an indicator that equals one if the respondent's religion is New Christian columns 1 and 2, Traditional (columns 3 and 4), Catholic (columns 5 and 6), Protestant (columns 7 and 8), Islam (columns 9 and 10). Individual controls include age, age squared, education, marital statis, labor market participation and urban/rural place of residence. Country and year fixed effects always included. Robust standard errors clustered at the DHS cluster level in parenthesis.

Table C3: Religious affiliation and gender, different datasets

	DHS		Afrobarometer		PEW		WVS		South Benin		North Benin	
	Trad.	new Christian	Trad.	new Christian	Trad.	new Christian	Trad.	new Christian	Trad.	new Christian	Trad.	Christian
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female	-0.681***	2.711***	-0.623***	2.898***	-0.893***	5.450***	0.00660	2.339***	-6.507***	7.189***	-19.96***	20.16***
	(0.0317)	(0.0673)	(0.0437)	(0.151)	(0.161)	(0.562)	(0.0637)	(0.270)	(1.482)	(2.367)	(4.829)	(4.667)
Country and round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Mean Y men	0.0260	0.252	0.0187	0.306	0.0216	0.458	0.00413	0.106	0.141	0.478	0.610	0.291
R-squared	0.104	0.314	0.0459	0.194	0.0477	0.219	0.0436	0.287	0.0110	0.00516	0.0383	0.0403
N	2214449	2214449	307149	307149	25091	24943	40726	40726	1783	1783	430	430

Note. Data: DHS, Afrobarometer, PEW, WVS, first-hand data from southern and northern Benin. The outcome variable is an indicator that equals one if the respondent's religion is Traditional (columns 1,3,5,7,9,11), or "New" Christian (columns 2,4,6,8,10,12). In column 12, we do not have information on the type of Christian religion. Robust standard errors are in parenthesis (clustered at the DHS cluster level in the DHS data).

C.2. RCT Benin

Table C4: Treatment effects: religious conversion, opposition and witchcraft

	Endline 1					Endline 2
	Women's conversion			Opposition by:		Witchcraft
	Ever	To new Xty	To old Xty	Husband	Other family	Used by husband
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A: Aggregated treatment						
Treatment	0.0644**	0.0425*	-0.00314	0.0754**	0.0457	0.0409*
	(0.0322)	(0.0254)	(0.0217)	(0.0336)	(0.0327)	(0.0215)
R-squared	0.0792	0.252	0.0489	0.0625	0.0649	0.00939
Panel B: By treatment arm						
Partial husband involvement	0.0805**	0.0567*	-0.0148	0.0548	0.0411	0.0101
	(0.0374)	(0.0295)	(0.0245)	(0.0384)	(0.0377)	(0.0236)
Full husband involvement	0.0481	0.0280	0.00874	0.0959**	0.0502	0.0712***
	(0.0372)	(0.0289)	(0.0254)	(0.0390)	(0.0379)	(0.0269)
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y control	0.342	0.202	0.117	0.366	0.343	0.0784
R-squared	0.0800	0.252	0.0498	0.0636	0.0650	0.0161
N	943	943	943	931	931	842

Note. Data: First-hand data collected in southern Benin. The table reports OLS estimates. The sample in column 6 is restricted to married women. The outcome variables are indicators with unitary value if: the respondent has ever converted to any new religion (column 1), to a new Christian religion (column 2), or to an "old" Christian church (column 3). In columns 4 and 5 the outcome variables are indicators equal to one if the husband (column 4) or another family member (column 5) has opposed woman's conversion to a New Christian church. The outcome variable in column 6 is an indicator that equals one if the respondent reports that her husband (in the last 5 years) went to see a witch-doctor to slow down his wife's activities or reduce her resources. Panel A shows treatment effects of the aggregated treatment. In Panel B, "Partial husband involvement" is an indicator equal to one if the woman (or the wife of the man when the sample is restricted to men) has been assigned to the treatment group where business training was reserved for women. "Full husband involvement" is an indicator equal to one if she has been assigned to the treatment group where women attended the business training together with their husband. In columns 1-3, being New Christian at baseline is included as a control. Department fixed effects included. Robust standard errors are in parenthesis.

Table C5: Treatment on the Treated: religious conversion, opposition and witchcraft

	Endline 1					Endline 2
	Women's conversion			Opposition by:		Witchcraft
	Ever	To new Xty	To old Xty	Husband	Other family	Used by husband
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A: Aggregated treatment						
Treatment	0.0825**	0.0605*	-0.00643	0.101**	0.0625	0.0475*
	(0.0415)	(0.0325)	(0.0278)	(0.0416)	(0.0409)	(0.0281)
R-squared	0.0655	0.241	0.0555	0.110	0.0929	0.0181
Panel B: By treatment arm						
Partial husband involvement	0.0980**	0.0795**	-0.0257	0.0708	0.0582	0.0117
	(0.0488)	(0.0384)	(0.0317)	(0.0475)	(0.0472)	(0.0306)
Full husband involvement	0.0673	0.0419	0.0124	0.131***	0.0728	0.0900***
	(0.0472)	(0.0367)	(0.0321)	(0.0473)	(0.0464)	(0.0342)
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y control	0.341	0.203	0.115	0.365	0.342	0.0789
N	936	936	936	924	924	835

Note. Data: First-hand data collected in southern Benin. The table reports Treatment on the Treated (ToT) estimates using 2SLS, where actual treatment receipt is instrumented by random assignment. The sample in column 6 is restricted to married women. The outcome variables are indicators with unitary value if: the respondent has ever converted to any new religion (column 1), to a new Christian religion (column 2), or to an "old" Christian church (column 3). In columns 4 and 5 the outcome variables are indicators equal to one if the husband (column 4) or another family member (column 5) has opposed woman's conversion to a New Christian church. The outcome variable in column 6 is a indicator that equals one if the respondent reports that her husband (in the last 5 years) went to see a witch-doctor to slow down his wife's activities or reduce her resources. Panel A shows ToT effects of the aggregated treatment. In Panel B, "Partial husband involvement" is the ToT effect for women assigned to receive business training alone. "Full husband involvement" is the ToT effect for women assigned to attend business training together with their husband. Controls include age, education and marital status at baseline, whether the respondent was a new Christian at baseline, and department fixed effects. Robust standard errors are in parenthesis.

Table C6: Treatment on the Treated: religious conversion, opposition and witchcraft. No controls

	Endline 1					Endline 2
	Women's conversion			Opposition by:		Witchcraft
	Ever	To new Xty	To old Xty	Husband	Other family	Used by husband
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A: Aggregated treatment						
Treatment	0.0825**	0.0544*	-0.00402	0.0961**	0.0548	0.0467*
	(0.0413)	(0.0324)	(0.0278)	(0.0435)	(0.0424)	(0.0276)
R-squared	0.0596	0.236	0.0472	-0.00134	-0.00233	0.00204
Panel B: By treatment arm						
Partial husband involvement	0.104**	0.0732*	-0.0190	0.0710	0.0531	0.0127
	(0.0484)	(0.0381)	(0.0316)	(0.0497)	(0.0488)	(0.0301)
Full husband involvement	0.0611	0.0356	0.0110	0.122**	0.0640	0.0893***
	(0.0470)	(0.0366)	(0.0321)	(0.0498)	(0.0484)	(0.0338)
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y control	0.342	0.202	0.117	0.366	0.343	0.0784
N	943	943	943	931	931	842

Note. Data: First-hand data collected in southern Benin. The table reports Treatment on the Treated (ToT) estimates using 2SLS, where actual treatment receipt is instrumented by random assignment. The sample in column 6 is restricted to married women. The outcome variables are indicators with unitary value if: the respondent has ever converted to any new religion (column 1), to a new Christian religion (column 2), or to an "old" Christian church (column 3). In columns 4 and 5 the outcome variables are indicators equal to one if the husband (column 4) or another family member (column 5) has opposed woman's conversion to a New Christian church. The outcome variable in column 6 is a indicator that equals one if the respondent reports that her husband (in the last 5 years) went to see a witch-doctor to slow down his wife's activities or reduce her resources. Panel A shows ToT effects of the aggregated treatment. In Panel B, "Partial husband involvement" is the ToT effect for women assigned to receive business training alone. "Full husband involvement" is the ToT effect for women assigned to attend business training together with their husband. Only outcome at baseline included as a control. Department fixed effects included. Robust standard errors are in parenthesis.

Table C7: Economic opportunities, witchcraft threats and religious conversion

	Feels threatened by witchcraft		Witchcraft more likely with money at stake	
	(1)	(2)	(3)	(4)
Treatment	-0.0405		-0.0391	
	(0.0374)		(0.0352)	
Treat x Conv to new Christian	0.187**		0.185**	
	(0.0788)		(0.0801)	
Individual treatment		-0.0240		-0.0284
		(0.0434)		(0.0410)
Couple treatment		-0.0565		-0.0496
		(0.0430)		(0.0411)
Individual x To new Christian		0.169*		0.191**
		(0.0872)		(0.0881)
Couple x To new Christian		0.206**		0.179*
		(0.0922)		(0.0932)
Mean control	0.441	0.441	0.628	0.628
R-squared	0.155	0.155	0.162	0.162
Controls	905	905	905	905

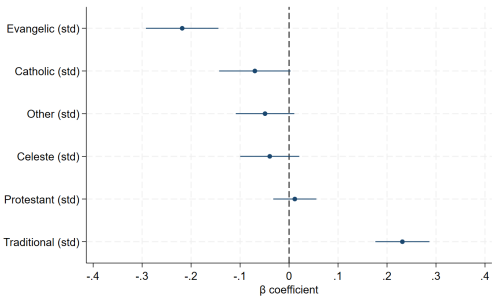
NOTE. Data: First-hand survey data from southern Benin. The sample is restricted to women. The outcome variable in columns 1 and 2 is a dummy variable equal to one if the respondent says that she feels threatened by spiritual attacks (witchcraft). In columns 3 and 4, the dependent variable is a dummy variable that equals one if the woman thinks that witchcraft attacks are more likely when money is at stake. Converted to new Xty is a dummy variable that equals one if the woman has ever converted to a new Christian church. Controls include age, education at baseline, whether the respondent was new Christian at baseline, and marital status. Department fixed effects are included. Robust standard errors are in parenthesis.

Table C8: New Christianity and protection by husbands

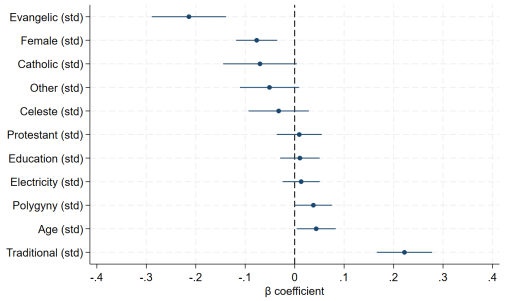
	Husband offers protection		
	(1)	(2)	(3)
Catholic	0.0274		-0.0369
	(0.0355)		(0.0389)
New Christian		-0.158***	-0.137***
		(0.0335)	(0.0371)
Mean Y	0.570	0.570	0.570
Controls	No	No	Yes
R-squared	0.000636	0.0238	0.174
Controls	931	931	924
New Christian=Catholic			0.00922

NOTE. Data: First-hand survey data from southern Benin. The outcome variable is a dummy variable equal to one if the female respondent said that her husband protects her against witchcraft attacks. Age, education, marital status, whether the respondent grows pineapple, and department fixed effects are included as controls. Robust standard errors are in parenthesis.

Figure C1: Correlation between belief in ancestral spirits and religion



(a) Religion fixed effects (FE)



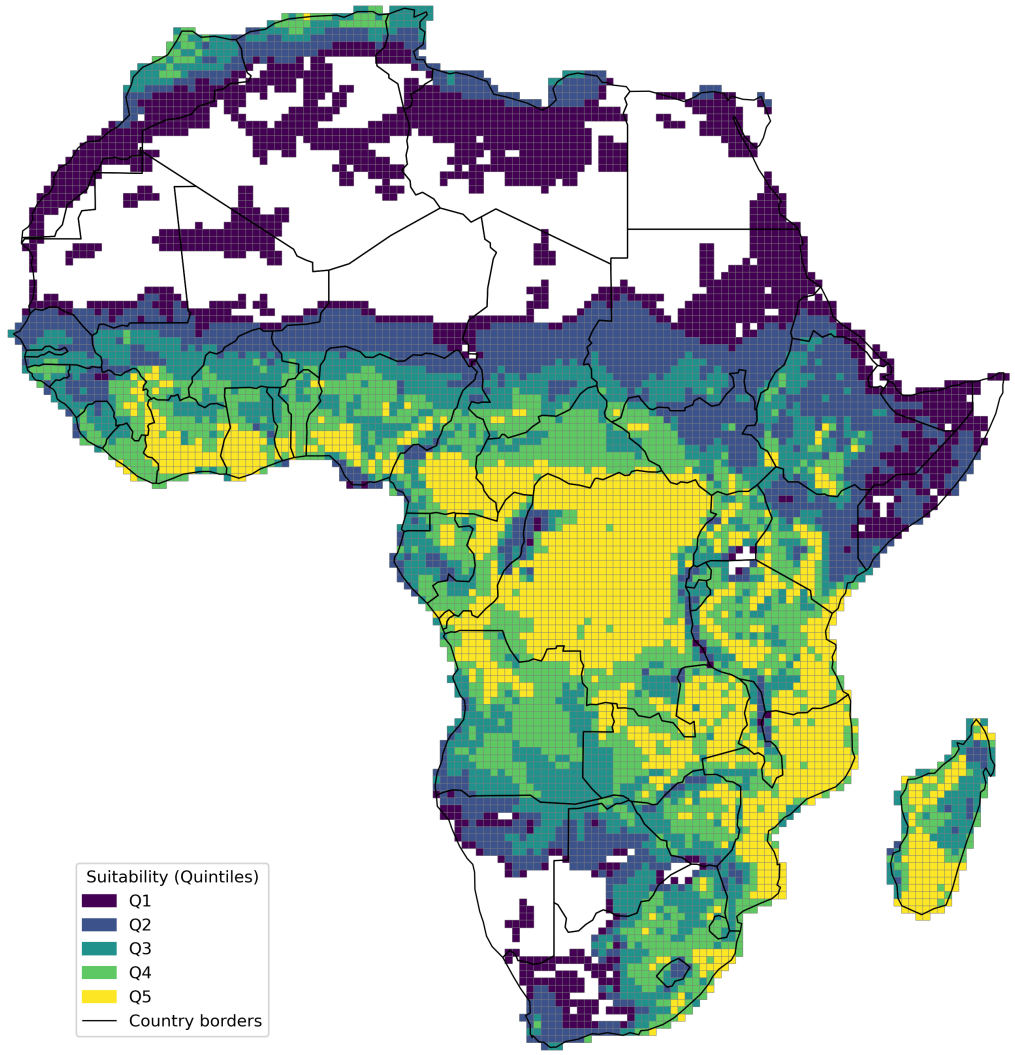
(b) Religion FE and controls

Notes: The figure shows the plotted coefficients of regressing an indicator variable that equals one if the respondent believes that the spirits of her ancestors have an influence on her life on religion fixed effects (Panel a) or on religion fixed effects and a set of control variables (panel b).

C.3. Economic opportunity I: Shocks to crop prices and women's involvement in cash cropping

C.3.1. Crop suitability

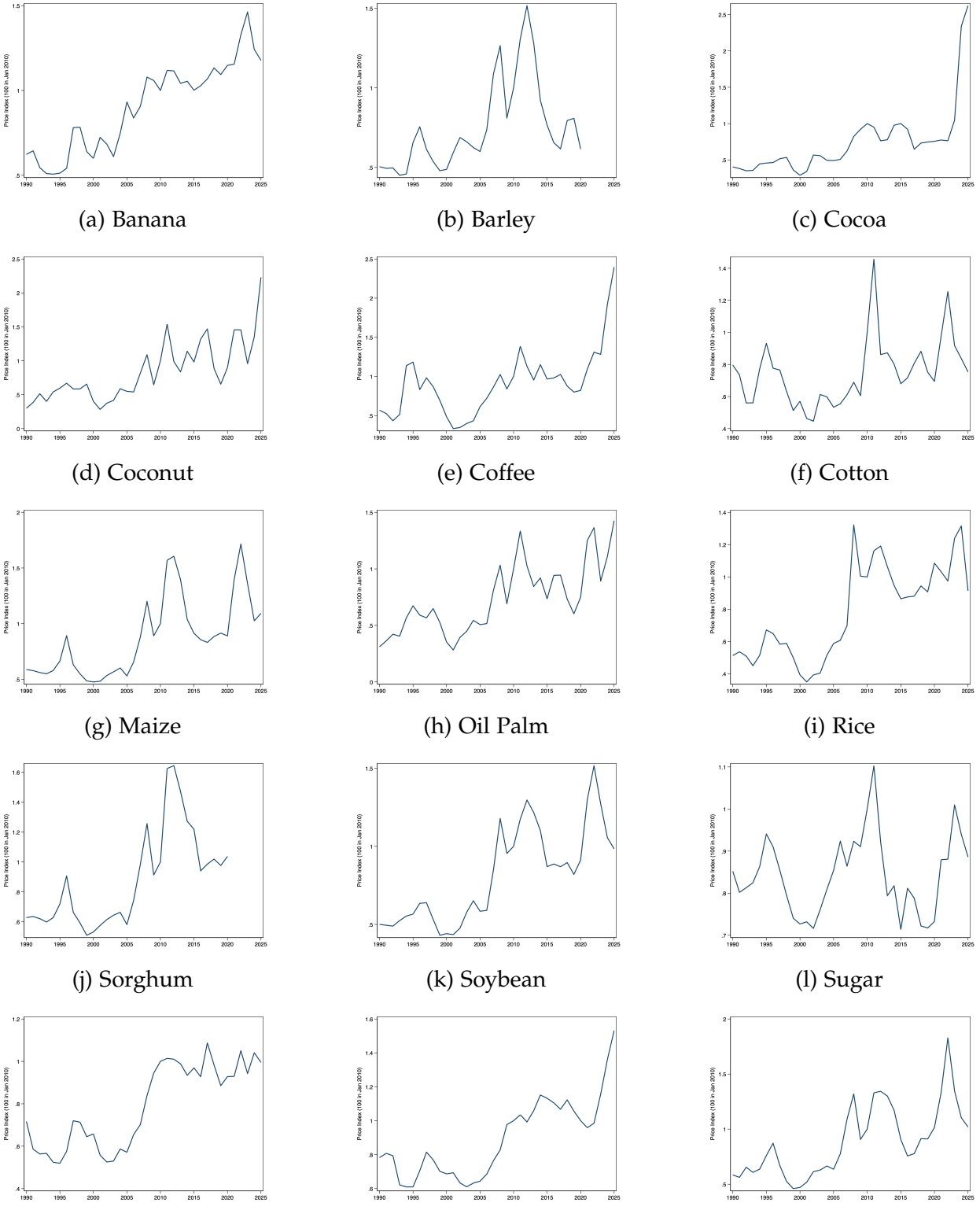
Figure C2: Cash crop suitability across Africa



Source: Data come from GAEZ (FAO). The figure shows the spatial distribution of cash crop suitability. The unit of observation is a $0.5° \times 0.5°$ grid-cell. Suitability is measured as the sum of the suitability score across the fifteen crops used in the analysis: banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, and wheat.

C.3.2. International crop prices

Figure C3: Price indices for agricultural commodities (Base year: 2010)



(a) Banana (b) Barley (c) Cocoa

(d) Coconut (e) Coffee (f) Cotton

(g) Maize (h) Oil Palm (i) Rice

(j) Sorghum (k) Soybean (l) Sugar

(m) Tea (n) Tobacco (o) Wheat

C.3.3. Robustness: strict definition of new Christian

Table C9: Shocks to cash crops and conversion to New Christian churches, restricted definition

	Respondent is New Christian					
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Crop Price Index	0.0889***	0.0892***	0.0934***	0.0768***	0.0943***	0.0816***
	(0.0137)	(0.0138)	(0.0138)	(0.0138)	(0.0146)	(0.0148)
Female		0.0249***	0.0293***	0.00562	0.0297***	0.0120***
		(0.00117)	(0.00125)	(0.00391)	(0.00132)	(0.00401)
Cash Crop Price Index x Female				0.0247***		0.0179***
				(0.00414)		(0.00413)
Cash-crop PI x witchcraft (cell)					0.0312***	0.00322
					(0.00469)	(0.00527)
Cash-crop PI x Female x witch.						0.0405***
						(0.00500)
Mean Y	0.198	0.198	0.196	0.196	0.204	0.204
R-squared	0.408	0.409	0.405	0.405	0.406	0.407
Basic controls	No	Yes	Yes	Yes	Yes	Yes
Full controls	No	No	Yes	Yes	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1961792	1958050	1857296	1857296	1709570	1709570

Note. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is the sum across fifteen crops (banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, wheat) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability. "Witchcraft (cell)" is the standardized mean prevalence of witchcraft in a given grid cell. The outcome variable is an indicator that equals one if the respondent is from a new Christian church. Basic controls include age, age squared and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the cell-year level appear in parenthesis.

C.3.4. Robustness: $0.25° \times 0.25°$ *cells, 9 main export crops (Roessler et al., 2022)*

Table C10: Shocks to cash crops and conversion to New Christian churches, $25° \times 25°$ cells (Roessler et al., 2022)

	Respondent is New Christian					
				Women	Men	
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Crop Price Index	0.0660***	0.0651***	0.0636***	0.0673***	0.0547***	0.0585***
	(0.00489)	(0.00490)	(0.00494)	(0.00519)	(0.00581)	(0.00552)
Female		0.0250***	0.0297***			0.0296***
		(0.00104)	(0.00110)			(0.00113)
Cash-crop PI x witchcraft (cell)						0.00407*
						(0.00229)
Mean Y	0.237	0.238	0.237	0.235	0.242	0.243
R-squared	0.459	0.460	0.456	0.466	0.454	0.458
Basic controls	No	Yes	Yes	Yes	Yes	Yes
Full controls	No	No	Yes	Yes	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1822215	1818726	1737891	1202408	535458	1627689

Note. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is measured as in Roessler et al. (2022). It is the standardized sum across nine cash crops (coffee, cocoa, cotton, groundnuts, oil palm, sugarcane, tea, tobacco, and banana) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability. "Witchcraft (cell)" is the standardized mean prevalence of witchcraft in a given grid cell. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). Basic controls include age, age squared and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the cell-year level appear in parenthesis.

C.3.5. *Effect of cash-crop price index on different religions*

Table C11: Shocks to crops and conversion to/from different religions

	Respondent is:			
	New Christian	Catholic	Protestant	Traditional
	(1)	(2)	(3)	(4)
Cash Crop Price Index	0.0746***	-0.0411***	-0.0761***	-0.00234
	(0.0133)	(0.00911)	(0.0145)	(0.00516)
Mean Y	0.231	0.186	0.117	0.0211
R-squared	0.429	0.243	0.274	0.203
Controls	Yes	Yes	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	1857296	1857296	1857296	1857296

NOTE. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is the sum across fifteen crops (banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, wheat) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together) in column 1, Catholic in column 2, from a Protestant denomination in column 3, or from a Traditional religion in column 4. Controls include age, age squared, gender, education, labor market participation, marital status and urban/rural residence. Standard errors clustered at the cell-year level are in parenthesis.

Table C12: Shocks to crops and conversion to/from different religions, $25° \times 25°$ cells (Roessler et al., 2022)

	Respondent is:			
	New Christian	Catholic	Protestant	Traditional
	(1)	(2)	(3)	(4)
Cash Crop Price Index	0.0636***	-0.0324***	-0.0238***	-0.000300
	(0.00952)	(0.00480)	(0.00766)	(0.00432)
Mean Y	0.237	0.178	0.103	0.0215
R-squared	0.456	0.276	0.286	0.254
Basic controls	Yes	Yes	Yes	Yes
Full controls	Yes	Yes	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	1737891	1737891	1737891	1737891

NOTE. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is the standardized sum across nine cash crops (coffee, cocoa, cotton, groundnuts, oil palm, sugarcane, tea, tobacco, and banana) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability (ranging from 0 to 1). The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together) in column 1, Catholic in column 2, from a missionary Protestant denomination in column 3, or from a Traditional religion in column 4. Basic controls include age, age squared and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the country-year level appear in parenthesis.

C.3.6. *First-stage results: effects on wealth and luminosity*

Table C13: Effect on wealth and nightlights

	DHS data (cell level)		Cell-level data	
	Wealth quintiles	Wealth quintiles (sd)	Nightlights (mean)	Nightlights (sd)
	(1)	(2)	(3)	(4)
Cash-crop Price Index	0.168**	0.0849*	0.224***	0.258***
	(0.0855)	(0.0475)	(0.0498)	(0.0524)
Mean Y	2.580	0.925	0.346	0.932
Cell and year fixed effects	Yes	Yes	Yes	Yes
R-squared	0.774	0.622	0.936	0.946
N	9158	9158	149984	149984

Note. Data: Demographic and Health Surveys, Food and Agriculture Organization (FAO), and Chiovelli et al. (2026). "Cash Crop Price Index" is the sum across fifteen crops (banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, wheat) of their price in t-1 (indexed to 1 in year 2010 for each crop) weighted by their suitability. The outcome variable in column one is the average wealth quintile of the cell, averaged across all DHS clusters within that cell. In column 2, the dependent variable is the standard deviation of the wealth quintile variable computed among all individuals within a given cell. In column 3, the dependent variable is the average nightlights in the cell. In column 4, the dependent variable is the standard deviation of nightlights in the cell. Robust standard errors clustered at the cell level appear in parenthesis.

C.3.7. *Women's participation in cash-crops and new Christianity*

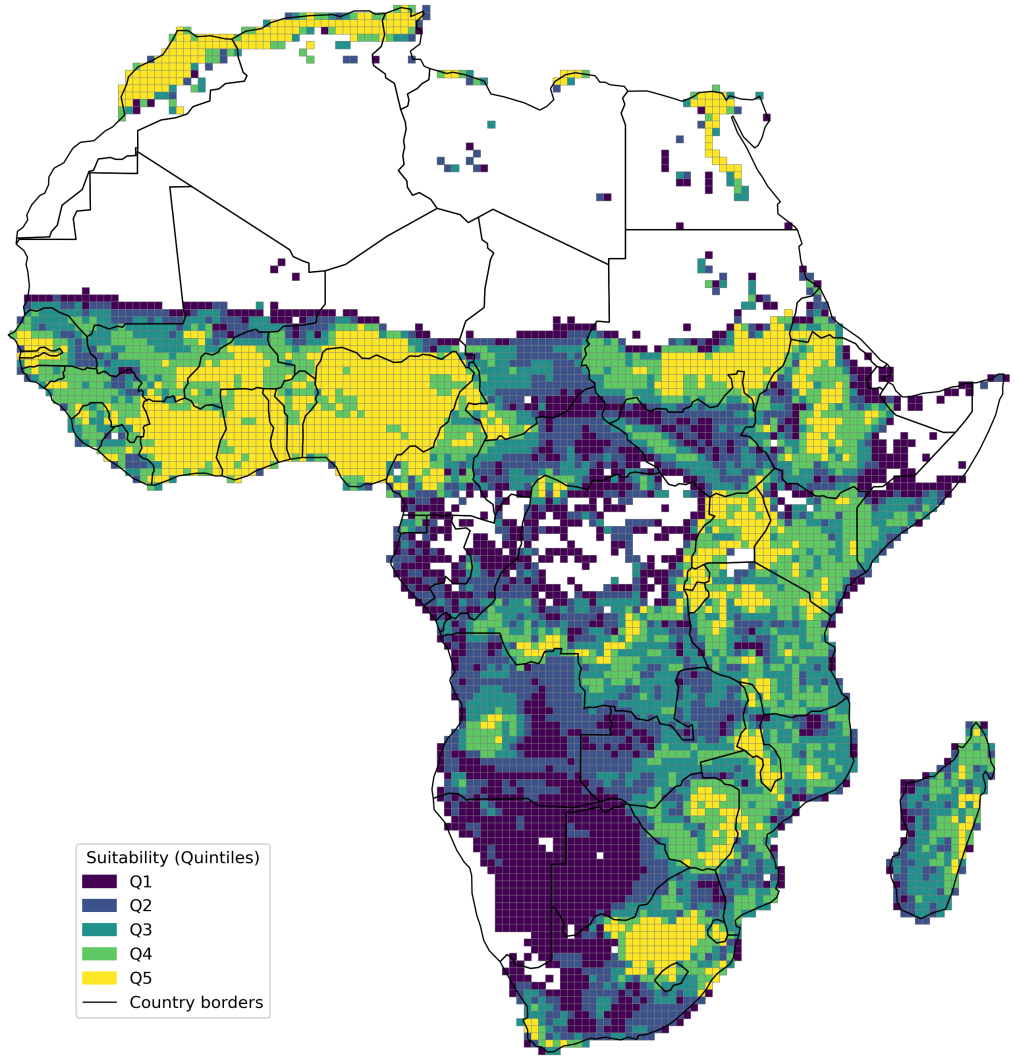
Table C14: Shocks to cash crops, women participation in cash crop cultivation and conversion

	Respondent is New Christian							
	Women sample				Men sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash-crop price index	0.0871***	0.0873***	0.0948***	0.0958***	0.0528***	0.0539***	0.0545***	0.0525***
	(0.0178)	(0.0180)	(0.0184)	(0.0186)	(0.0195)	(0.0196)	(0.0197)	(0.0201)
CC PI x women in CC	0.0214***	0.0214***	0.0210***	0.0196***	0.00563	0.00564	0.00657	0.00771
	(0.00694)	(0.00694)	(0.00698)	(0.00688)	(0.00708)	(0.00710)	(0.00715)	(0.00739)
CC PI x witchcraft (cell)				0.0252***				0.0147**
				(0.00486)				(0.00582)
CC PI x women in CC x witch.				-0.00917				-0.00922
				(0.00607)				(0.00652)
Mean Y	0.236	0.237	0.232	0.236	0.237	0.237	0.238	0.243
R-squared	0.434	0.434	0.433	0.436	0.416	0.416	0.417	0.418
Basic controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Full controls	No	No	Yes	Yes	No	No	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1274966	1273497	1193245	1150175	539400	537621	524805	506668

Note. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is the sum across fifteen crops (banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, wheat) of their price in t-1 (indexed to 1 in year 2010 for each crop) and their suitability. "Women in cash-crops" is measured at the grid-cell level and it is calculated as the standardized share of women who earn cash in their work and their main occupation is agriculture. "Witchcraft (cell)" is the standardized mean prevalence of witchcraft among individuals with information on witchcraft in a given grid cell, assigned to everyone in the grid-cell. The sample is restricted to grid-cells for which "Women in cash-crops" has been computed using at least 50 observations. In columns 4-7, the sample is restricted to grid-cells for which "Women in cash-crops" or "Witchcraft (cell)" have been computed using at least 50 observations. The outcome variable is a dummy that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). Basic controls include age, age2 and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the cell level in parenthesis.

C.3.8. Robustness: additional measures of economic opportunities

Figure C4: Crop suitability, M3 database



Source: The figure shows the spatial distribution of cash crop suitability using the information from the M3 crop database (Monfreda et al., 2008). The unit of observation is a $0.5^\circ \times 0.5^\circ$ grid-cell. Suitability is measured as the sum of the estimated harvested area in hectares across the fifteen crops used in the analysis: banana, barley, cocoa, coconut, coffee, cotton, maize, palm oil, rice, sorghum, soybean, sugar, tea, tobacco, and wheat.

Table C15: Shocks to cash crops and conversion to New Christian churches, M3 crop database

	Respondent is New Christian					
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Crop Price Index	0.0646***	0.0517***	0.0695***	0.0709***	0.0710***	0.0566***
	(0.00832)	(0.00813)	(0.00795)	(0.00803)	(0.00778)	(0.00761)
Cash-crop PI x witchcraft (cell)	0.0163***	0.00965**				
	(0.00354)	(0.00417)				
Female	0.0300***	0.0114***		0.0249***	0.0296***	0.00820**
	(0.00133)	(0.00371)		(0.00118)	(0.00126)	(0.00341)
Cash Crop Price Index x Female		0.0181***				0.0208***
		(0.00375)				(0.00339)
Cash-crop PI x Female x witch.		0.00948**				
		(0.00382)				
Mean Y	0.239	0.239	0.233	0.233	0.231	0.231
R-squared	0.431	0.431	0.431	0.432	0.431	0.431
Basic controls	Yes	Yes	No	Yes	Yes	Yes
Full controls	Yes	Yes	No	No	Yes	Yes
Grid-cell FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1702846	1702846	1946828	1943178	1843949	1843949

Note. Data: Demographic and Health Surveys and Food and Agriculture Organization (FAO). "Cash Crop Price Index" is computed using M3-crop instead of GAEZ data. "Witchcraft (cell)" is the standardized mean prevalence of witchcraft in a given grid cell. The sample is restricted to grid-cells for which "Witchcraft (cell)" has been computed using at least 50 observations. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). Basic controls include age, age squared and gender. Full controls further include education, labor market participation, marital status and urban/rural residence. Robust standard errors clustered at the cell-year level appear in parenthesis.

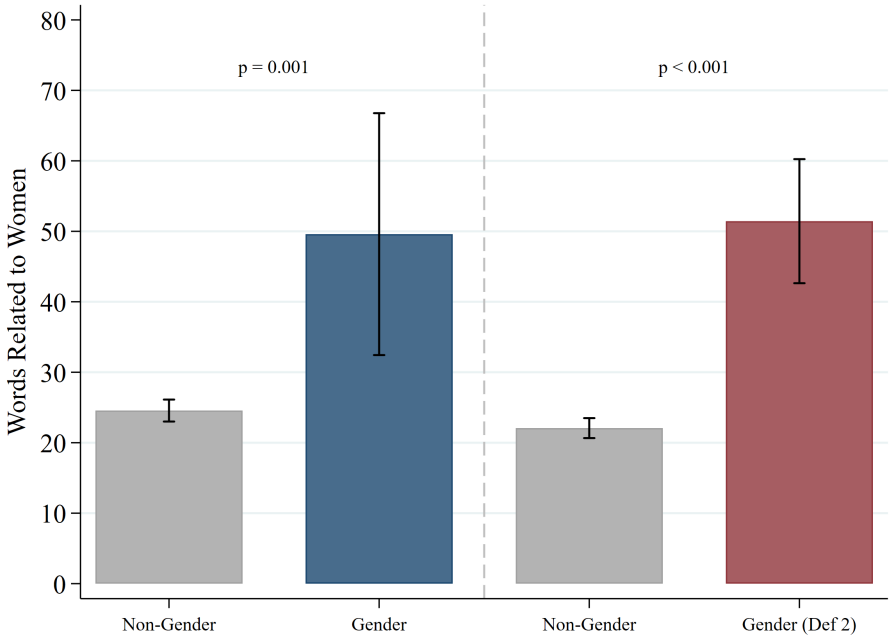
C.4. Economic opportunity II: Development aid projects

C.4.1. Alternative measure of gender-related project: description and validation

This measure considers projects which include income-earning opportunities for women even though their main theme is not "gender". We inspected projects' documents made available by the World Bank. More specifically we checked all projects whose main theme fall in the following categories: "Social protection and risk management", "Social dev/gender/inclusion", "Rural development", "Other human development", "Micro, Small and Medium Enterprise support", "Other financial and private sector development", "Land administration and management" and "Other environment and natural

resources management". Within these broad categories, we excluded projects explicitly mentioning the following words: electrification, HIV, roads/transport, river basin, research and training, petroleum, emergency reconstruction, trade reform, street children, energy, sanitation, infrastructure renewal, infrastructure rehabilitation, water sector, infrastructure project, infrastructure rehabilitation, communications infrastructure, national health, family planning, education, water development, hydropower, transmission hub, agricultural research, governance, budget support, financial sector, rural infrastructure, institutional reform, city management, biodiversity, cultural heritage, mining sector capacity building, nutrition enhancement, municipal development, coastal environment management, mineral resource | distance learning, school access, water sector, local government, avian influenza control, hydroelectric, structural adjustment credit.

Figure C5: Women-related words by type of project, different definitions



Notes: The figure illustrates the difference in the average number of words associated with women in the descriptions of 368 gender-related and non-gender-related World Bank projects. A gender-related project is defined in two ways: 1) a project whose main theme is gender, and 2) a project whose main theme is gender or that focuses on providing income-generating activities for women. Bars represent standard errors, and p-values from t-tests are reported above each figure.

Table C16: Women-related words and World Bank projects

	(Log) Number of women-related worlds			
	(1)	(2)	(3)	(4)
Gender Project	0.580**		0.758***	
	(0.233)		(0.238)	
Gender Project (Def 2)		0.790***		1.107***
		(0.196)		(0.155)
Country FE	No	No	Yes	Yes
Controls	No	No	Yes	Yes
R-squared	0.008	0.047	0.439	0.499
N	4401	4401	4400	4400

NOTE. Unit of observation: project-location site. "Gender Project" is defined as a project whose main theme is gender. "Gender Project (Def 2") also includes projects focusing on providing income-generating activities for women. Fixed effects include country and start year of the project. Controls include the (log) cost of the project and project status (active or closed). Standard errors clustered at project level appear in parentheses.

C.4.2. Additional results WB projects

Table C17: New Christians and World Bank gender-related projects, restricted definition

	New Christian (restricted)			
	(1)	(2)	(3)	(4)
Female	0.0243***	0.0262***	0.0261***	0.0286***
	(0.000891)	(0.000808)	(0.000820)	(0.000874)
Female x Witchcraft (cell)			0.00708***	0.00726***
			(0.000957)	(0.000949)
WB gender project	-0.00213	0.0115	-0.000551	-0.000872
	(0.0104)	(0.00928)	(0.00735)	(0.00745)
WB gender project x Female	0.0178***	0.0152**	0.00407	0.00351
	(0.00628)	(0.00603)	(0.00383)	(0.00382)
WB gndr project x Witch. (cell)			0.0255***	0.0265***
			(0.00962)	(0.00968)
WB gndr x Female x Witch. (cell)			0.0219***	0.0221***
			(0.00439)	(0.00436)
Total number of WB projects	0.00784***	0.00194*	0.00141	0.00159
	(0.000908)	(0.00117)	(0.00124)	(0.00126)
Mean Y	0.207	0.207	0.212	0.209
R-squared	0.258	0.441	0.444	0.439
Country and year FE	Yes	Yes	Yes	Yes
Grid-cell FE	No	Yes	Yes	Yes
Individual	No	No	No	Yes
N	1781810	1781809	1672681	1602447

Note. Data: Demographic and Health Surveys and AidData research lab (2020). "WB gender project" is an indicator that equals one if there is a WB gender-related project before the month of the interview in the grid-cell where the individual lives. "Witchcraft (cell)" is the (standardized) mean prevalence of witchcraft in a given grid cell. The outcome variable is an indicator that equals one if the respondent is from a new Christian church. The total number of World Bank projects before the month of the interview in a given cell always included as a control. Individual controls include age, age squared, gender, education, labor market participation, marital status and urban/rural residence. Country and year fixed effects are always included. Robust standard errors clustered at the cell-month level appear in parenthesis.

Table C18: New Christians and World Bank gender-related projects, alternative WB gender project measure

	New Christian (broad def.)			
	(1)	(2)	(3)	(4)
Female	0.0258***	0.0281***	0.0281***	0.0303***
	(0.000929)	(0.000840)	(0.000854)	(0.000908)
Female x Witchcraft (cell)			0.00692***	0.00720***
			(0.000980)	(0.000971)
WB gender project	-0.0120*	-0.00779	-0.00641	-0.00572
	(0.00634)	(0.00605)	(0.00548)	(0.00553)
WB gender project x Female	0.00848**	0.00163	0.00153	0.00108
	(0.00377)	(0.00343)	(0.00281)	(0.00285)
WB gndr project x Witch. (cell)			0.0246***	0.0254***
			(0.00647)	(0.00648)
WB gndr x Female x Witch. (cell)			0.0161***	0.0160***
			(0.00337)	(0.00338)
Total number of WB projects	0.00804***	-0.000159	-0.000905	-0.000792
	(0.000964)	(0.00118)	(0.00125)	(0.00127)
Mean Y	0.268	0.268	0.277	0.275
R-squared	0.302	0.467	0.468	0.465
Country and year FE	Yes	Yes	Yes	Yes
Grid-cell FE	No	Yes	Yes	Yes
Individual	No	No	No	Yes
N	1781810	1781809	1672681	1602447

Note. Data: Demographic and Health Surveys and AidData research lab (2020). "WB gender project" is an indicator that equals one if there is a WB gender-related project before the month of the interview in the grid-cell where the individual lives. "Witchcraft (cell)" is the (standardized) mean prevalence of witchcraft in a given grid cell. The outcome variable is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). The total number of World Bank projects before the month of the interview in a given cell always included as a control. Individual controls include age, age squared, gender, education, labor market participation, marital status and urban/rural residence. Country and year fixed effects are always included. Robust standard errors clustered at the cell-month level appear in parenthesis.

Table C19: New Christians and World Bank gender-related projects, 55x55km cells

	Respondent is New Christian							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	0.0290***	0.0310***	0.0308***	0.0356***	0.0282***	0.0312***	0.0310***	0.0357***
	(0.00103)	(0.000930)	(0.000940)	(0.00101)	(0.00109)	(0.000978)	(0.000992)	(0.00106)
Female x Witchcraft (cell)			0.00492***	0.00526***			0.00377***	0.00410***
			(0.00111)	(0.00109)			(0.00119)	(0.00117)
WB gender project	-0.0142	0.0280***	0.00331	0.00465				
	(0.00913)	(0.00793)	(0.00661)	(0.00669)				
WB gender project x Female	0.00707*	0.00279	0.000669	-0.00000266				
	(0.00383)	(0.00358)	(0.00278)	(0.00274)				
WB gndr project x Witch. (cell)			0.0408***	0.0388***				
			(0.00612)	(0.00610)				
WB gndr x Female x Witch. (cell)			0.0169***	0.0187***				
			(0.00295)	(0.00283)				
WB gender project (Def 2)					-0.0265***	0.00377	-0.00128	-0.000631
					(0.00629)	(0.00544)	(0.00495)	(0.00497)
WB g. proj (Def 2) x Female					0.00847***	0.000102	0.00131	0.000695
					(0.00284)	(0.00255)	(0.00224)	(0.00222)
WB g. proj (Def 2) x Witch. (cell)							0.0229***	0.0223***
							(0.00486)	(0.00483)
WB gndr (Def 2) x F x Witch. (cell)							0.0166***	0.0179***
							(0.00242)	(0.00236)
Total number of WB projects	0.00853***	0.0000859	-0.000425	-0.0000951	0.00883***	0.000150	-0.000281	0.0000123
	(0.000699)	(0.000846)	(0.000856)	(0.000823)	(0.000725)	(0.000874)	(0.000874)	(0.000839)
Mean Y	0.268	0.268	0.275	0.273	0.268	0.268	0.275	0.273
R-squared	0.304	0.446	0.447	0.444	0.304	0.446	0.447	0.444
Country and year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Grid-cell FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Individual	No	No	No	Yes	No	No	No	Yes
N	1779796	1779796	1709081	1636934	1779796	1779796	1709081	1636934

Note.Data: Demographic and Health Surveys and AidData research lab (2020). "WB gender project" is an indicator that equals one if there is a WB gender-related project whose main topic is gender before the month of the interview in the grid-cell where the individual lives. "WB gender project (Def)" is an indicator that equals one if there is a WB gender-related project whose main topic is gender or which focuses on providing income generating opportunities to women before the month of the interview in the grid-cell where the individual lives. "Witchcraft (cell)" is the (standardized) mean prevalence of witchcraft in a given grid cell. The outcome variable in columns 1-4 is an indicator that equals one if the respondent is from a new Christian church (or Protestant in surveys where new Christians and Protestants are grouped together). The outcome variable in columns 5-8 is an indicator that equals one if the respondent is from a new Christian church. The total number of World Bank projects before the month of the interview in a given cell always included as a control. Individual controls include age, age squared, gender, education, labor market participation, marital status and urban/rural residence. Country and year fixed effects are always included. Robust standard errors clustered at the cell-month level appear in parenthesis.

C.5. New Christian churches and decision-making

Table C20: New Christian churches, labor and reproductive outcomes, and decision-making, restricted definition

	Labor market	Reproductive			Decision-making		
					At home	In the church	
	Working status	Contraceptives	Ideal nr of children	Children ever born	Decision-making Index	Respect for women	Female leadership
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: New Christians compared to all other denominations							
New Christian	0.0574***	0.0515***	-0.632***	-0.443***	0.0727***	0.0968***	0.185***
	(0.00215)	(0.00142)	(0.0128)	(0.0152)	(0.00189)	(0.00570)	(0.00686)
R-squared	0.0927	0.112	0.244	0.155	0.271	0.0859	0.197
Panel B: New Christians (and non-Christians) compared to missionary churches							
New Christian	0.0164***	0.0129***	-0.129***	-0.107***	0.0235***	0.0234***	0.0571***
	(0.00213)	(0.00139)	(0.0104)	(0.0147)	(0.00177)	(0.00795)	(0.00975)
Non Christian	-0.0960***	-0.0927***	1.243***	0.782***	-0.110***	-0.113***	-0.197***
	(0.00233)	(0.00132)	(0.0133)	(0.0152)	(0.00192)	(0.00917)	(0.0107)
Country-round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean Y	0.766	0.217	5.154	5.568	0.578	0.791	0.460
R-squared	0.0985	0.117	0.269	0.164	0.280	0.0921	0.210
N	624192	1549400	1387105	441793	961925	24605	23839

Note. Data: All available DHS in columns 1-5, and PEW for columns 6 and 7. The sample is restricted to women. In column 1, the sample is restricted to women over 30 years old and in column 4 to women over 35 years old to approximate completed fertility. The table reports OLS estimates. "New Christian" is an indicator that equals one if the respondent reports one of the new Christian religions as their main religion in the raw DHS data. Outcome variables are: probability to work (column 1), use of contraceptives at the time of the survey (column 2), ideal number of children (column 3), total number of children ever born (column 4), decision-making index (column 5). This index is calculated as the average of all non-missing responses to four yes/no questions (indicators) that equal one if the respondent has some say – either the woman decides together with her partner/husband or she decides alone – in the following matters: (1) how a woman's earning are used, (2) healthcare, (3) large household purchases, and (4) visiting relatives. In column 6, the outcome variable is an indicator that equals one if the respondent associates attitudes of respect for women with Christianity. In column 7, the outcome variable is an indicator equal to one if the respondent thinks that women should be allowed to serve in religious leadership roles, such as pastor, priest or imam. Country-wave fixed effects always included. Controls include age, age squared, and rural/urban residence. Robust standard errors clustered at the DHS cluster level are in parentheses in the DHS data.

Table C21: New Christian churches and women's participation in decision-making, different components

	Woman makes decisions about:				
	Healthcare	Large purchases	Visits to relatives	Use of earnings	Index
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Panel A: New Christians compared to everyone else					
New Christian	0.0840***	0.0847***	0.0736***	-0.00247	0.0694***
	(0.00227)	(0.00225)	(0.00222)	(0.00173)	(0.00181)
R-squared	0.211	0.203	0.168	0.0640	0.271
Panel B: New Christians (and non-Christians) as compared to missionary churches					
New Christian	0.0275***	0.0253***	0.0219***	-0.00260	0.0219***
	(0.00212)	(0.00212)	(0.00208)	(0.00184)	(0.00169)
Non Christian	-0.130***	-0.137***	-0.119***	-0.000299	-0.110***
	(0.00241)	(0.00240)	(0.00249)	(0.00184)	(0.00192)
Country-round FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Mean Y	0.504	0.479	0.584	0.886	0.578
R-squared	0.218	0.211	0.175	0.0640	0.280
N	898618	899630	900424	477694	961925

Note. Data: DHS. The sample is restricted to women. "New Christian" is an indicator that equals one if the respondent reports one of the new Christian religions as her main religion. Outcome variables are indicators equal to one if the respondent has some say in decisions (either the woman decides together with her partner/husband or she decides alone) regarding (1) healthcare, (2) large household purchases, (3) family visits, (4) use of a woman's earnings. The index is the average of all non-missing responses. Country-round FE are always included. Individual controls include: age, age squared and rural/urban place of residence. Standard errors are clustered at the DHS cluster level.

Table C22: New Christian churches and women's participation in decision-making, 1-3 outcome

	The woman makes decisions about:				
	Use of earnings	Healthcare	Large purchases	Family visits	Index
	(1)	(2)	(3)	(4)	(5)
New Christian	-0.0270***	0.0386***	0.0312***	0.0331***	0.0257***
	(0.00387)	(0.00315)	(0.00290)	(0.00308)	(0.00244)
Non Christian	0.0842***	-0.167***	-0.162***	-0.142***	-0.132***
	(0.00427)	(0.00343)	(0.00323)	(0.00364)	(0.00278)
Country-round FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Mean Y	2.498	1.691	1.609	1.771	1.823
R-squared	0.135	0.186	0.169	0.123	0.263
N	477694	898618	899630	900424	961925

Note. Data: DHS. The sample is restricted to women. "New Christian" is a dummy equal to one if the respondent reports one of the new Christian religions as her main religion. Outcome variables: women were asked who usually decides on (1) how a woman's earnings are used, (2) healthcare, (3) large household purchases, and (4) family visits. The response options have been rescaled so as to obtain a 1 to 3 categorical variable defined as follows: the partner or another person makes the decision (value 1), the respondent and the partner jointly decide (value 2), and the respondent makes the decision alone (value 3). The index presented in column 5 is calculated as the average of all non-missing responses. Country-round FE always are included. Individual controls include: age, age squared and rural/urban place of residence. Standard errors are clustered at the DHS cluster level.

Table C23: New Christianity and decisions about the use of women's earnings

	The woman makes decisions regarding earnings:			
	Categorical [1-3]	Alone or w/ husband	Alone	With husband
	(1)	(2)	(3)	(4)
New Christian	-0.0270***	-0.00260	-0.0244***	0.0218***
	(0.00387)	(0.00184)	(0.00270)	(0.00252)
Non Christian	0.0842***	-0.000299	0.0845***	-0.0848***
	(0.00427)	(0.00184)	(0.00303)	(0.00265)
Country-round FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Mean Y	2.498	0.886	0.613	0.273
R-squared	0.135	0.0640	0.174	0.157
N	477694	477694	477694	477694

Note. Data: DHS. The sample is restricted to women. "New Christian" is a indicator equal to one if the respondent reports one of the new Christian religions as her main religion. The outcome variable in column 1 is a categorical variable with values from 1 to 3: 1 if the partner or another person decides, 2 if the respondent and her partner decide jointly, and 3 if the respondent decides alone. In column 2, the outcome variable is a indicator equal to one if the woman decides alone or together with her husband. In column 3, the indicator is equal to one if the woman decides alone. In column 4, it is equal to one if both spouses decide together. Country-round FE are always included. Individual controls include: age, age squared and rural/urban place of residence. Standard errors are clustered at the DHS cluster level.

C.6. Prohibitions in new Christian churches: alcohol and polygyny

Table C24: New Christian churches and alcohol consumption

	DHS data		First-hand data Benin
	Partner/husband drinks alcohol	Man drinks alcohol	Respondent drinks trad. beverage
	(1)	(2)	(3)
New Christian	-0.0671***	-0.147***	-0.0330*
	(0.00392)	(0.0323)	(0.0201)
Non Christian	-0.290***	0.0629***	0.0781***
	(0.00405)	(0.0201)	(0.0288)
Mean Y	0.353	0.428	0.156
R-squared	0.186	0.128	0.0370
Controls	Yes	Yes	Yes
Country-Wave FE	Yes	Yes	No
N	255115	12049	1480

Note. Data: DHS and first-hand data from Benin. The sample is restricted to women in column 1, to men in column 2, and to both men and women in column 3. The outcome variable in column 1 is a indicator that equals one if the woman reports that her husband or partner drinks alcohol. The outcome variable in column 2 is a indicator that equals one if the man reports drinking alcohol. The outcome variable in column 3 is a indicator that equals one if the respondent drinks sodabi (traditional alcoholic drink in Benin). "New Christian" is a indicator that equals one if the respondent's main religion is a new Christian church. Controls include age, age squared, education, occupation, marital status and rural/urban place of residence in the DHS data; and age, education, marital status, and electricity at home in the first-hand data. Standard errors are clustered at the DHS-cluster level when using DHS data.

Table C25: New Christian churches and polygny

	In polygamous union			
	Unconditional		Married at the time of the survey	
	(1)	(2)	(3)	(4)
New Christian	-0.00483**	-0.00464**	-0.00399**	-0.00407**
	(0.00192)	(0.00193)	(0.00182)	(0.00183)
Non Christian	0.156***	0.158***	0.156***	0.158***
	(0.00207)	(0.00206)	(0.00207)	(0.00207)
Mean Y	0.335	0.339	0.335	0.339
R-squared	0.203	0.204	0.203	0.204
Controls	Yes	Yes	Yes	Yes
Country and year FE	Yes	Yes	Yes	Yes
N	1238252	1011337	1238252	1011337

Note. Data: Demographic and Health Surveys. "New Christian" is an indicator equal to one if the respondent reports one of the new Christian religions as her main religion. The outcome variable is an indicator equal to one if the respondent is engaged in a polygamous union. In columns 2 and 4, attention is restricted to women who have ever been married. In columns 1 and 2, "New Christian" is a indicator that equals one if the respondent reports one of the new Christian religions as their main religion. In columns 3 and 4, "New Christian" is a indicator that equals one if the respondent reports being New Christian or Protestant in surveys where New Christians and Protestants are together. Country and year FE and individual controls include: age, age squared, gender and urban/rural place of residence. Standard errors clustered at the DHS cluster level are in parenthesis.

C.7. New Christian churches vis-à-vis traditional beliefs and practices

Table C26: Traditional beliefs and gender in SSA

	Rituals	Sacrifices	Initiation	Trad. healer
	(1)	(2)	(3)	(4)
Female	-1.273**	-2.564***	-3.204***	-1.222*
	(0.549)	(0.577)	(0.554)	(0.628)
Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Mean Y	0.262	0.329	0.267	0.423
R-squared	0.109	0.165	0.104	0.103
N	23537	22816	23474	22964

Note. Data: PEW Research Center. The table reports OLS estimates. The outcome variable is a dummy equal to one if the respondent has ever participated in an African traditional ceremony or performed rituals to honor ancestors (column 1), if s/he believes that sacrifices to ancestors prevents unfortunate events from happening (column 2), if s/he has ever participated in an initiation ritual (column 3), and if s/he has ever consulted with a traditional religious healer (column 4). Individual controls include age, urban/rural place of residence, marital status, education, and whether the respondent has recently lacked money. Robust standard errors are reported in parenthesis.

Table C27: Traditional beliefs or practices and gender in South Benin

	Traditional beliefs and practices			
	Vodoun religion	power of ancestors	power of wizards	power of magic potion
	(1)	(2)	(3)	(4)
Female/100	-7.295***	-14.69***	-5.392**	-9.690***
	(1.798)	(2.735)	(2.339)	(2.271)
Controls	Yes	Yes	Yes	Yes
Mean Y	0.103	0.367	0.156	0.146
R-squared	0.0194	0.0305	0.0322	0.0273
N	1703	1705	1480	1383

Note. Data: First-hand data collected in southern Benin. The table reports OLS estimates. The outcome variable is a dummy equal to one if the respondent's religion is Vodoun (column 1), if s/he believes that the spirits of her/his ancestors influence her/his life (column 2), if s/he has consulted with a wizard (the bokono, in local parlance) or used a fetish to protect against coronavirus (column 3), and if s/he has drunk the traditional alcoholic beverage (sodabi) to protect against coronavirus (column 4). Individual controls include age, marital status, whether the respondent attended school, cultivated pineapple in 2020, and had electricity at home in 2020. Robust standard errors are in parenthesis.

Table C28: New Christians and attitudes toward tradition and supernatural power, by gender

	Traditional beliefs and practices				Beliefs in supernatural power		
	Rituals	Sacrifices	Initiation	Trad. healing	Miracles	Exorcism	God-ordained prosperity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: New Christians compared to all other denominations							
New Christian	-0.0564***	-0.0821***	-0.0615***	-0.0710***	0.193***	0.167***	0.0580***
	(0.00787)	(0.00830)	(0.00802)	(0.00898)	(0.00905)	(0.00901)	(0.00916)
Female	-0.0123	-0.00562	-0.0321***	0.00353	0.0135	0.0244***	0.0176*
	(0.00795)	(0.00838)	(0.00805)	(0.00873)	(0.00879)	(0.00866)	(0.00905)
New Christian x Female	0.0157	-0.0113	0.0175	-0.00834	0.0252**	0.0119	-0.00682
	(0.0107)	(0.0113)	(0.0109)	(0.0123)	(0.0124)	(0.0125)	(0.0125)
R-squared	0.108	0.164	0.101	0.104	0.0749	0.0687	0.0718
Panel B: New Christians (and non-Christians) as compared to missionary churches							
New Christian	-0.0508***	-0.0647***	-0.0388***	-0.0359***	0.141***	0.101***	0.0557***
	(0.0102)	(0.0109)	(0.0104)	(0.0114)	(0.0116)	(0.0117)	(0.0118)
Female	-0.0121	-0.00510	-0.0314***	0.00461	0.0121	0.0225***	0.0175*
	(0.00795)	(0.00838)	(0.00805)	(0.00873)	(0.00876)	(0.00862)	(0.00906)
New Christian x Female	0.0155	-0.0121	0.0165	-0.00991	0.0274**	0.0147	-0.00673
	(0.0107)	(0.0113)	(0.0109)	(0.0123)	(0.0124)	(0.0125)	(0.0125)
Non Christian	0.00846	0.0260**	0.0339***	0.0525***	-0.0784***	-0.0996***	-0.00339
	(0.00979)	(0.0104)	(0.00997)	(0.0108)	(0.0109)	(0.0109)	(0.0113)
Mean Y	0.263	0.329	0.267	0.424	0.477	0.420	0.571
R-squared	0.108	0.165	0.102	0.105	0.0768	0.0719	0.0718
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	24204	23458	24132	23587	24369	23694	23562

Note. Data: PEW Research Center. The table reports OLS estimates. "New Christian" is an indicator equal to one if the respondent reports one of the new Christian religions as their main religion. The outcome variable, also an indicator, is equal to one if the respondent has ever participated in an African traditional ceremony or performed rituals to honor ancestors (column 1), if s/he believes that sacrifices to ancestors can prevent disturbances from happening (column 2), if s/he has ever participated in an initiation ritual (column 3), if s/he has ever visited a traditional healer (column 4). In column 5, the binary variable is equal to one if the respondent answered "yes" to the question "have you ever experienced or witnessed a divine healing of an illness or injury?". In column 6, value one is obtained equal if s/he answered "yes" to the question "have you ever experienced or witnessed a situation where the devil or evil spirits were driven out of a person?". In column 7, the outcome indicator equals one if the respondent thinks that "God will grant wealth and good health to all believers who have enough faith in Him" rather than "God doesn't always give wealth and good health even to believers who have deep faith in Him". Individual controls include age, urban/rural place of residence, marital status, education, and whether the respondent has recently experienced a money shortage. Robust standard errors are reported in parentheses.

Table C29: New Christianity and trust in traditional leaders and the family

	Trad. leaders	Family	Trad. leaders	Family
	(1)	**(2)**	**(3)**	**(4)**
Panel A: New Christians as compared to all other denominations				
New Christian	-0.0932***	-0.0693***	-0.0755***	-0.0612***
	(0.00554)	(0.00566)	(0.00751)	(0.00759)
Female	0.000422	-0.0132***	0.0120**	-0.00812
	(0.00462)	(0.00452)	(0.00558)	(0.00523)
New Christian x Female			-0.0350***	-0.0159
			(0.00989)	(0.0101)
R-squared	0.128	0.122	0.128	0.122
Panel B: New Christians (and non-Christians) as compared to missionary churches				
New Christian	-0.0345***	-0.0335***	-0.0130	-0.0233***
	(0.00616)	(0.00619)	(0.00802)	(0.00802)
Female	0.00518	-0.0101**	0.0190***	-0.00381
	(0.00462)	(0.00452)	(0.00557)	(0.00523)
Non Christian	0.154***	0.0984***	0.155***	0.0988***
	(0.00707)	(0.00678)	(0.00707)	(0.00678)
New Christian x Female			-0.0416***	-0.0198**
			(0.00989)	(0.0101)
Mean Y	1.838	2.361	1.838	2.361
R-squared	0.130	0.123	0.130	0.123
Controls	Yes	Yes	Yes	Yes
Country-Wave FE	Yes	Yes	Yes	Yes
N	197268	141462	197268	141462

NOTE. Data: Afrobarometer Surveys 3,4,5 and 9. The outcome variables in columns 1 and 3 and columns 2 and 4 show the degree of trust in traditional leaders or in the family, respectively. They take value 0 (not at all), 1 (a little), 2 (a lot) and 3 (very much). The explanatory variable is an indicator that equals one if the respondent's religion is New Christian. Controls include age, age squared, and whether the respondent lives in a rural place. Country and Afrobarometer round FE always included. Robust standard errors are reported in parentheses.