

Women's empowerment in Uganda:
colonial roots and contemporary efforts, 1894-2012

Verbetering van de positie van vrouwen in Oeganda:
koloniale wortels en hedendaagse inspanningen, 1894-2012
(met een samenvatting in het Nederlands)

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Chapter 1: Introduction

1. Women's empowerment and development

The persistence of gender inequality has become one of the major concerns of our time, for Sub-Saharan Africa¹ in particular. Despite unprecedented progress toward gender equality in much of Africa, in the areas of education, life expectancy and labour force participation, large gender gaps remain (Inglehart and Norris 2003, Kevane 2004, World Bank 2011). These primarily materialize in disparities in girls' secondary schooling, unequal access to economic opportunities in markets, as well as differences in voice and agency within the household and society (World Bank 2011, Duflo 2012, World Bank 2014).

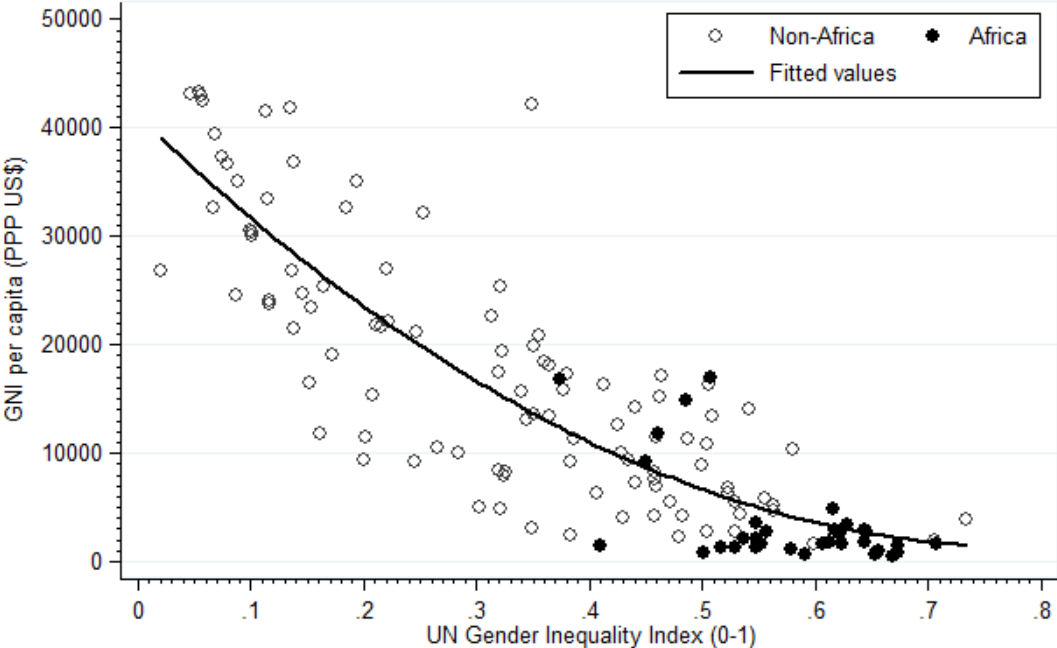
A glance at the relationship between the United Nations' Gender Inequality Index and per capita income, presented in Figure 1, tells us that Africa is not only the poorest region at present, but also has one of the highest levels of gender inequality in the world. The two phenomena are related.² Globally, countries with lower levels of per capita income on the whole tend to have higher levels of gender inequality and vice versa. This comes as no surprise, as, for a society to prosper, it is essential that citizens of both sexes share equal 'freedoms' to fulfill their potential and claim the proceeds of their efforts in life (Sen 1999). At the individual level, this requires *agency* – the power of individuals to make choices for themselves and to act upon them (Kabeer 1999, Sen 1999), frequently equated with *empowerment*.

Closing these gender gaps matters for development. Women's active participation and formal and informal contribution to economic activities is crucial to food security and the fight against poverty, as it unleashes the energy of all members of society. This then spills over to household welfare, favouring the next generation, daughters above all (Thomas 1990, 1994). Thus, gender-based discrimination and misallocation of women's talent come with substantial welfare implications (Blackden et al. 2006, Klasen and Lamanna 2009). Against this background, the centrality of gender equality has been recognized in both academia and policy circles as a human right in itself and as an integral component of sustainable growth and development (UNDP 1995, World Bank 2011, FAO 2011, Duflo 2012), rightly marking one of the seven UN Millennium Development Goals.

¹ Henceforth, the shorter term 'Africa' will be used as a substitute for 'Sub-Saharan Africa'.

² The intensity of this relationship is debated. See Carmichael et al. (2014: 217-248) for a review of the literature and global long-term correlations between GDP per capita and various measures of gender equality. For international GDP per capita figures and human development indicators, see World Bank, *World Development Report 2014* or United Nations, *Human Development Report 2014*.

Figure 1: Gender inequality and gross national per capita income, 2013



Note: Excludes countries with per capita GNI > \$50,000 and countries with a population below 1 million. (0 = gender equality). *Source:* Data derived from United Nations (2014). Human Development Report 2014.

While there is a general consensus that gender inequality is comparatively high and African girls and women face disadvantages to their socio-economic standing in the household, two important questions remain unanswered: Firstly, has Africa historically always been so unequal? And secondly, what can be done to improve women’s current situation? This thesis sets out to study those two key questions focusing on an in-depth case-study of a single African country, Uganda.

The dissertation contributes new empirical analysis in a collection of five papers, thematically organized into two parts. Part I assesses the long-run gender-specific development of human capital formation, labour market participation, social mobility, and marriage patterns in rural and urban Christian Uganda, from the beginning of colonial rule (1894-1962) to the present-day. Part II explores the role of collective action for women’s empowerment. Firstly, it studies the determinants of female smallholders’ access to cooperative membership and their level of active participation within cooperatives themselves. Secondly, it explores whether cooperative membership can remedy gender disparities on the household-level and discusses how to design more effective policies concerning gender-inclusive collective action. In order to achieve this, an in-depth case-study of a joint microfinance and cooperative in rural Uganda is employed. This introductory chapter proceeds as follows: Section 2 introduces us to the field of African economic history

and discusses the different views on the historical roots of African gender inequality. Section 3 summarizes the literature on collective action and women's empowerment. The overall conceptual model is presented in Section 4, followed by the description of the sources and methods used in Section 5. Section 6 provides a concise historiography of Uganda's economic development. Section 7 portrays the outline of the thesis, followed by a concise perspective for future research.

2. Historical roots of African gender inequality

The major debates in economic history over the last two decades have primarily focused on the causes and timing of the 'Great Divergence' between Europe and Asia (Pomeranz 2000, Findlay and O'Rourke 2007, Van Zanden 2009) or 'why Britain diverged from the rest of Europe?' (Clark 2008, Allen 2009, Mokyr 2009). In the shadow of those two big questions, Africa gradually emerged to become a new frontier in research on the historical roots of global inequality (Hopkins 2009, Schirmer et al. 2010, Austin and Broadberry 2014). This growing wave of scholarship seeks to reconstruct Africa's long-term development, attempting to explain why African economies diverged from the rest of the world.³ Over the past decade, a vast literature has emerged which explores the long-term 'legacies' of European intervention in Africa, notably the slave trades, Christian missionary expansion, and colonial rule to place us in a better position to understand African long-term economic development, and present-day relative poverty.⁴ Further, African economies have been growing for the last two decades, surpassing levels of per capita income they enjoyed at the time of independence, which has attracted new interest in understanding the long-term determinants of this remarkable economic turn-around (Radelet 2010).

The recent revitalization of interest in Africa's economic past goes hand-in-hand with vast efforts to collect and exploit new datasets from European archives, as well as from Africa itself, followed by the application of rigorous empirical techniques. However, most studies that address the impact of colonialism focus not on the colonial era itself, typically due to a lack of individual-level data, but rather on the consequences of colonial rule for the post-

³ The foundation of the *African Economic History Network* (AEHN) in 2011, the *XVI World Economic History Congress* (WEHC) taking place in Stellenbosch (South Africa), and over 40 paper-presentations witnessed at the *IX New Frontiers in Economic History Workshop 2014* (LSE, London) clearly indicate a growing research interest in the history of Africa's development. Moreover, the recent open access online textbook of the AEHN highlights the additional efforts of this new School to train a new generation of African university students, lecturers, and researchers in the historical development of their economies.

⁴ Recent seminal contributions include Acemoglu et al. (2001, 2002), Nunn (2008, 2010), Bowden et al. (2008), Moradi (2009), Acemoglu and Robinson (2010), Gallego and Woodberry (2010), Nunn and Wantchekon (2011), Frankema (2012), Frankema and Van Waijenburg (2012), Wantchekon et al. (2013), Akyeampong et al. (2014), Cogneau and Moradi (2014), Jedwab and Moradi (2015).

independence era. This approach has complicated our understanding of the precise manner in which colonial intervention shaped the lives of Africans, and in turn was shaped by local conditions and responses to metropolitan agendas. The first part of this thesis aims at contributing to the scholarship and methodology of this ‘new economic history of Africa’ through a region-specific case study of the long-term development of African gender inequality and women’s relative socio-economic position.

Pulling together scarce sources, there is ample qualitative evidence that document the varying manifestation of the sexual division of roles in pre-colonial African households, in which women’s labour largely became appropriated by (Boserup 1970, Robertson and Klein 1983, Hay and Stichter 1984, Kyomuhendo and McIntosh 2006, McIntosh 2009, Akyeampong and Fofack 2014). Often it has been held that one of the most profound cultural and socio-economic changes in historical Africa, since the end of the slave trade, occurred over the course of the colonial era (Iliffe 2007).⁵ A vast body of recent literature holds that the emergence of a cash-based economy in which African households frequently engaged with wage labour and cash crop markets (Sender and Smith 1986, Iliffe 2007: 219-229) combined with African demand for Christian mission education (Gallego and Woodberry 2010, Frankema 2012, Wantchekon et al. 2013, Nunn 2010, 2014, Okoye and Pongou 2014) provided one of the chief dynamics of colonial change. Hence, one of the tests by which missionary activities within the wider prospects of the colonial economy should be judged is their comparative long-term influence on male and female Africans. This allows us to disentangle some of the different mechanisms of missionary education, colonial intervention and African responses in shaping African gender relations, and thus the long-term development of gender inequality on the continent.

The pioneering works of Ester Boserup (1970) and Walter Rodney (1972) have famously argued that the colonial era considerably increased African gender inequalities, with men entering the colonial economy in greater numbers as cash crop farmers⁶ and wage labourers, while women’s domestic work became relatively inferior to that of men – “men’s work was ‘modern’ and women’s was ‘traditional’ and ‘backward’” (Rodney 1972: 227, Henn 1984, Robertson 1984, Lawrance et al. 2006). Consequently, “to African women under colonialism [...] social, religious, constitutional, and political privileges and rights

⁵ Clearly, the colonial impact varied from place to place. Taking for example the very different colonial experiences of Southern Rhodesia, Gold Coast, and the Belgian Congo as cases in point. The coercive recruitment of African labour in King Leopold’s Congo and the direct and indirect taxation of African households in many other colonies, as well as European expropriation of African land in African settler and plantation economies, represent some examples of the retarding effects colonialism had on African agency.

⁶ See Powesland (1954: 20-22) for Uganda and Austin (2005: 308-310) for Ghana as cases in point.

disappeared” (Rodney 1972: 227). Furthermore, it has been argued that Christian mission schools provided gender-biased education, stressing imported Victorian values of the male breadwinner/female homemaker household model that laid the intellectual foundations for women’s seclusion to home production and reproductive functions (Boserup 1970, Rodney 1972, Akyeampong and Fofack 2014). Conversely, schools prepared men for employment in the modern sector. Overall, these studies suggest that European missionaries and colonial policies reinforced the codification of patriarchy in Africa through the nature and operation of the colonial economy, which enlarged gender gaps by distancing women from expanding market opportunities.

Recently, it has been suggested that the colonial legacy alongside socio-cultural African norms continues to be relevant in understanding African women’s persisting constraints in their participation and contribution to economic development (Ayeampong and Fofack 2014, World Bank 2014). In a similar vein, Henderson and Whatley (2014) find that over the colonial era matrilineal systems in land and property inheritance, denoting elevated women’s status, were increasingly replaced by patrilineal lineage rights. Assessing gender inequality and women’s relative socio-economic position within the household and in markets from a historical perspective could provide us with a better understanding of how key historical events (or shocks) and path dependency contributed to the development of gender inequalities in the region today. However, the paucity of sex-disaggregated time series data over the course of Africa’s colonial era has impeded thus far an analysis of the historical evolution of gender inequality and women’s relative social and economic standing. This has complicated a gender-specific evaluation of key historical events, such as the advent of missionary education and the colonial impact on labour markets (Robertson 1984: 35-37). Consequently, this has left important research questions unresolved.

The main research question to be explored is: how did the colonial era, by transforming political, economic and social relations in Africa, affect the evolution of gender inequality and ultimately African women’s relative socio-economic position? Within the colonial context I formulate four more specific sub-questions: 1) Did the advent of mission education and parallel emergence of the colonial wage labour market affect the long-term development of African gender inequality on the household-level, 2) Did the transition from agriculture to services in cities open up occupational opportunities for women, 3) what was the particular role of the mission church in this process, and 4) did men’s and women’s family background affect their occupational mobility?

This dissertation sets out to empirically investigate this matter through an in-depth case study of Uganda's colonial and post-colonial period, compiling and using some of the earliest micro-level data available on Ugandan men and women to quantify and reconstruct socio-economic trends and occupational mobility of men and women in both urban and rural areas. Uganda presents an interesting case study to investigate the links between colonial rule, missionary activities and gender because of its comparatively unparalleled scale and character of Christian mass conversion and demand for mission education. This makes it an excellent historical laboratory to study the mechanisms of missionary activities and individual-level development outcomes in the long-run. Moreover, the evolution of gender (in)equality over the long 20th century in Uganda is particularly interesting as Uganda lacked a pre-colonial tradition of female market traders (contrary to West Africa), nor was heavily influenced by coastal trade. Furthermore, over the first half of the 20th century Uganda did not experience a remarkable influx of European settlers who dispossessed Africans of their land. Meanwhile, pre-colonial institutions largely remained intact under British *indirect rule*, which exploited and reinforced rather than destroyed Buganda's pre-colonial traditional power structures (Low and Pratt 1960, Twaddle 1969, Mamdani 1996). This spared Uganda from some of the effects African settler and plantation economies encountered. To measure and compare women's and men's performance, a variety of indicators are employed in this thesis, including literacy, numeracy, working skills, "white collar" and "blue collar", wage labour, social class, and marriage age.

3. Collective action and women's empowerment

The second part of the thesis addresses the question which consequently arises from the phenomenon of today's comparatively high levels of women's discrimination and persisting gender inequality in most African countries: what can be done to change and challenge gender inequalities and empower women in the market and within the household?

To start with, African women's greater representation amongst the poor reflects the fact that women face persistent barriers that constrain their active participation in commodity and capital markets (Meinzen-Dick et al. 2011, World Bank 2011, Demirguc-Kunt and Klapper 2012, Hallward-Driemeier 2013). Thus, women face greater risks and restrictions from any form of investment in income-generating activities and security arrangements for themselves and their offspring. Women's limited access to capital not only reflects unequal gender practices on the supply side of financial institutions, but also tends to materialize in unbalanced gender relations on the household level. Women's lack of voice and agency on the household-level

may impede them from accessing financial services. As a result, gender inequities on the capital market tend to spill over to commodity and labour markets, limiting women's ability to achieve reasonable prices in agricultural markets and exploit entrepreneurial opportunities (Quisumbing et al. 2011, Hallward-Driemeier 2013).

Beyond women's individual capacity, collective action has been recently upheld as one potential catalyst of change in this respect (Birchall 2003, Pandolfelli et al. 2008, World Bank 2011, 2014). This recognition is based on the view that, individually, women have a limited capacity to change and challenge the way markets and social institutions function. It is held that collective action can expand women's set of opportunities and enhance their voice and agency within the household and community and, thus, reduce gender disparities. The literature on collective action, going back to the seminal contribution of Elinor Ostrom (1990), has emphasized the vital role of institutions for collective action to overcome certain common problems in society. Further, over the past decade, the Nobel Committee has repeatedly awarded those who have contributed to energetically build institutions for collective action (i.e. Wangari Maathai 2004, Muhammad Yunus 2006, Elinor Ostrom 2009). Only recently the focus has shifted to the links between gender and collective action as a way of creating new spaces for women to express their agency and to fully engage in the process of development (Pandolfelli et al. 2008).

Group-based microfinance programs are fundamentally premised on collective action. From the start Nobel prize-winning "banker to the poor" Muhammed Yunus realised the importance of women when confronting poverty. Since then, the provision of microfinance services to enterprising poor women became one of the world's most energetically funded development interventions, heralded to improve women's financial and social position in the household, a claim that has been a source of much recent debate.⁷ In fact, over the last decade, enthusiasm for microfinance's economic and social empowerment potential has turned into scepticism, as it has been realized that improvements in women's relative socio-economic position needed more than simply access to capital (Kabeer 2005, Banerjee et al. 2014). Nevertheless, it has been argued that collective action institutions can still provide a good entry point for complementary strategies for economic and social empowerment of women (Mayoux 1999).

This recognition coincides with recent attention from policy circles that emphasize cooperative's potential to pursue socio-economic transformation (ILO 2008, World Bank 2014) and, in particular, resolving vulnerabilities and poverty in rural Africa (Develtere *et al.*

⁷ For a concise review of the empirical literature one may consult Armendáriz and Morduch (2010: 211-238), Banerjee and Duflo (2011: 133-234), or Kabeer (2005).

2009, Wanyama *et al.* 2009).⁸ In cooperatives, individuals join their efforts, and marshal their individual capabilities and market their produce collectively to achieve greater bargaining power in input and output markets. Collective marketing realizes economies of scale and enhances female smallholder farmers' power to negotiate better prices and tap into high-value markets (Markelova *et al.* 2009, Meinzen-Dick *et al.* 2011, Datta and Gailey 2012). This is often complemented by the provision of microcredit, which presents a comparatively cheaper way to access capital than borrowing from money lenders. Further, cooperatives ensure that loans are recycled into productive economic activities in order to help their members to generate future household revenues and maintain loan repayment. In addition, many cooperatives provide training, and cheaper agricultural inputs and services (e.g. fertilizer, seedlings) to their members that enhance their skills and productivity. In this sense, cooperatives can play an important role for women to overcome market restrictions to accessing productive resources and marketing their produce (at reasonable prices), which helps both to increase yields and farm incomes (Birchall 2003, Word Bank 2011). Finally, organizing into collective enterprises unites women in solidarity groups which forms a network of mutual trust and peer support between female members which can improve women's relative social standing within their household (Jones *et al.* 2012).

While gender is a key determinant of individuals' abilities to participate in collective action, so far we lack a thorough understanding of the links between female smallholders' participation in cooperatives and their agency (i.e. bargaining power) within the household. In particular it remains open to question what determines women's ability and willingness to join cooperatives. Also, if women are supposed to make the most out of their membership, one needs to understand what determines women's intensity of participation within the cooperative, and whether cooperative participation generates the desired impacts.

4. Conceptual framework

The conceptual framework is presented in Figure 2. It illustrates the main connections to be explored in the different articles of this thesis. An applied version of this model is presented in Figure 6 (Section 1.6), which illustrates both historical and contemporary aspects of women's empowerment in a more disentangled and less abstract format which summarizes the main findings of the analysis. Because of the diversity of the five papers included, the conceptual framework cannot account for all specific relationships, although each individual paper might

⁸ The UN International Year of Cooperatives (IYC) in 2012 is a case in point, as well as the International Labour Organization (2008) report: "Cooperating out of Poverty".

deal with them in more detail. For this reason, the model does not speak to Chapter 4 which is devoted to men's intergenerational social mobility in the *longue durée*.

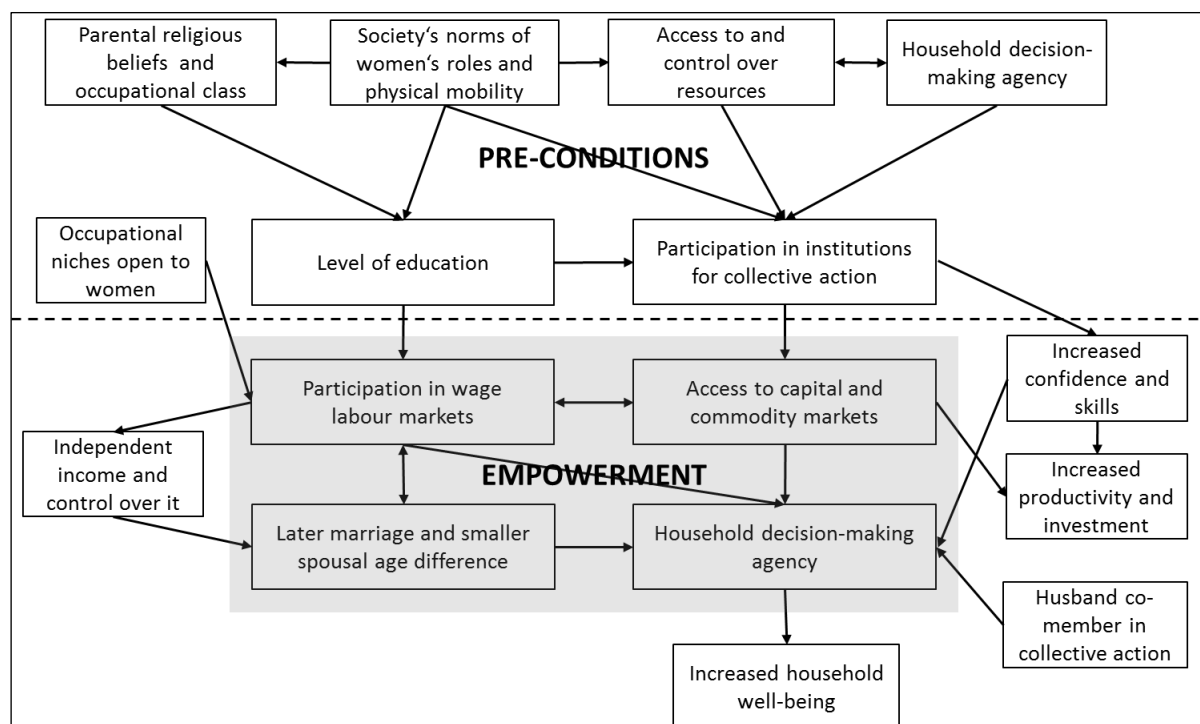
In the conceptual framework women's empowerment is measured along a selection of four dimensions (see grey shaded-box) closely associated with women's ability to make effective choices at different stages along the life-cycle. Those comprise women's age at first marriage and spousal age difference, labour market participation, access to capital and commodity markets, and women's household decision-making power. These 'empowerment' outcomes are related and often compound each other. While most of them measure 'empowerment' as outcome variables at a woman's later stage in life, arguably the 'pre-conditions' of women's future social and economic achievements are laid earlier in life.

Two events are held as particularly important junctures for women's empowerment later in life. First, the parents' decision whether to enroll their daughter to school. Education, in particular the acquisition of literacy skills, marks a pre-condition for women's future labour market participation and determines a variety of future (non-manual) occupations available to them. Secondly, parents play a crucial role in either arranging a marriage partner for their daughter (at a young age) or allowing their daughter to freely choose when and whom to marry (at a later age). Typically, girls who marry as early as in their teens have less say in the terms of the union and are more likely to drop out of school and start having children at an earlier stage in life which ultimately has repercussions on women's employment chances. Also, the age difference between spouses is held to reflect upon the bargaining position between sexes (Carmichael 2011, Carmichael et al. 2014), in which a smaller spousal age gap reflects a more equal and companionate partnership. Clearly, economic circumstances (e.g. poverty) and existing social norms, religious beliefs and ideological definitions of women's roles shape parents' decisions in many respects.

A strong indicator of female empowerment is labour market participation as it reflects women's ability to exploit economic opportunities and earn their own incomes, which may increase women's bargaining power within the household (De Moor and Van Zanden 2010, World Bank 2011) and gives them additional freedom to choose their marriage partner or leave marriage. Women's opportunities to pursue a formal career and engage in income-generating activities largely depend on niches open to women in the labour market which, in turn, depend on society's norms of women's work and physical mobility. Female labour force participation also facilitates access to capital markets which raises women's investment and productivity levels. Women who work outside formal employment, in small-scale agriculture, often face large barriers to accessing commodity markets to sell their produce (at reasonable

prices) and access to capital to raise their productivity and incomes (Jiggins 1989, World Bank and FAO 2009: 173-228, Peterman et al. 2014). Against this background, it is held that institutions for collective action (e.g. cooperatives) provide an alternative to overcome market imperfections and increase productivity and income.

Figure 2: Factor analysis of women’s empowerment



Source: Author’s own elaboration.

Especially, within patriarchal societies, in which prevailing social norms tend to subordinate women, group-based collective action, involving peer-monitoring by other members, has been held to improve women’s relative position vis-à-vis husbands by making their lives more public and by building social networks between other female members (Armendáriz and Morduch 2010). Raising women’s social and economic status within families may change the nature of decision-making too, which may lead to carry additional household well-being effects (Thomas 1994). However, women’s ability and willingness to participate in collective action institutions in the first place is probably strongly influenced by their freedom of movement and their relative ability to control collateral, since men typically own or otherwise control a larger share of household resources and assets (e.g. land) than women. These factors then lead to disparities at the household level. In other words, women who have a larger degree of agency are hypothesized to be more likely to engage in collective action. In this sense, female engagement in collective action already reflects their ability to have some voice in the household.

5. Data sources and methods

This thesis makes use of both archival and questionnaire-based field research in Uganda from which two large primary datasets were created. First, to measure the historical evolution of human capital, labour market participation, marriage patterns and social mobility of Ugandan men and women, marriage registers from Anglican Church parishes in Uganda were used. Second, to study the impact and determinants of women's participation in cooperatives, female members of a microfinance and coffee cooperative and other non-members were selected and surveyed using a questionnaire. The two approaches are subsequently described.

Historical Anglican marriage registers

“...sources for the social history even of the poor are richer in Africa than is often realised, but the subject can be studied seriously only where written sources survive.”
(Iliffe 1987: 2)

Marriage registers of the Anglican Church – also known as the Church of Uganda – from six Anglican parishes from central and western Uganda form the primary source of the gender-specific historical analysis of socio-economic development. The parishes include Kampala, Mityana, and Kasenyi from the Buganda kingdom and Fort Portal, Butiti, and Bundibugyo from the Toro kingdom. Marriage registration was established by the Church Mission Society (CMS) in 1891 and the data continues to the present for most parishes. The largest parish, with about 16,800 observed marriages, is St. Paul's Cathedral of Namirembe Diocese in Kampala, the earliest mission station and main place of worship for Protestants in Uganda. After receiving the bishops' permission from each parish, the registers were photographed by the author, and data-entered by research assistants from Mountains of the Moon University in Uganda.⁹ The dataset contains 20,900 marriages with 41,800 individuals (grooms and brides) over the period 1894-2012. Because the registers contain sensitive information that could violate the privacy of living parishioners and their relatives, names were treated as anonymous. For the benefit of the church and future researchers, a digital archive of the photos was deposited at each parish studied in this thesis.

The sampled Anglican marriage registers contain information on the date and place of marriage, names of spouses and fathers, grooms' and brides' age at marriage, literacy (from signatures), and occupations, as well as the occupations of their fathers. The occupational data

⁹ I would like to thank Benard Asimwe, Christopher Byomukama, Charity Masika, and Ismail Muhemba for their excellent work during the data-entry process.

allow for classification according to individuals' working skill, manual/non-manual production, and occupational class based on the *Historical International Standard Classification of Occupations* (HISCO) for the first time in the African context (Van Leeuwen et al. 2002, Van Leeuwen and Maas 2011). Its suitability is discussed in Chapter 4. Next to the data collected from Ugandan parishes, occupations in local Luganda were translated into English with the help of a dictionary and local translators. Complementary data was added to contextualize the findings which comprise a range of primary sources (e.g. colonial blue books, censuses, CMS publications) gathered at The National Archives in London, the CMS archive at Birmingham University Cadbury Special Collections, and the Library of the London School of Economics, in addition to secondary literature.

Church book registry is not a new source of historical vital information as it was used to reconstruct much of the demographic history of Europe, the Church typically being the earliest institution conducting civil registration, and thus documenting family life (Fleury and Henry 1965, Wrigley et al. 1997, Weisdorf 2014). Historical Africa is no different in that respect. On the eve of the *Berlin Conference* (1884/1885) and the subsequent partitioning of Africa, Christian missionaries, initially confined to the coastal areas, had already spread inland since the mid-19th century onwards.¹⁰ The evangelizing movement was motivated by the prospect of African mass-conversion, 'civilizing' claims, combatting the slave traffic, competition among the two major religions, and the medical innovation of quinine, a prophylactic against malaria dissolved from the bark of cinchona tree. Mission stations were established which generated and compiled parish registers, accounts, correspondences, diaries, photographs and annual reports. Initially church books were brought in from Europe but with the subsequent arrival of printing presses, lithography was gradually organized locally. Many of these written records can be found in the archives of European missionary organisations today. However, because the registration of vital events was crucial for the continued functioning of local parishes, parish registry remained exclusively on African soil (Siiskonen et al. 2005). Thus, the methodological contribution of this thesis to the field of African economic history is to explore whether and how such data could be used to reconstruct some part of Uganda's economic and social history on the individual level.

The pre-printed layout of the marriage registers of the Ugandan Church Mission Society (CMS) avoids, to a large extent, the willful and subjective entry of information on Africans and follows systematic and consistent principles of documentation across time. The CMS

¹⁰ This is not to deny that Portuguese missionaries already established a permanent base of Christianity on the Gold Coast (i.e. Elmina Castle) in 1482 and arrived at the Kingdom of Kongo as early as 1491. However, African mass-conversion and expansion inland only followed from the mid-19th century onwards.

registrations are unique in that they represent the earliest written source to describe the life of Ugandan Protestants on the individual level.¹¹ Fortunately, despite political conflict (i.e. Idi Amin era), the threat of burglary and fire, as well as the difficulties of record preservation in a tropical climate did not destroy the fragile books.

So far the main obstacle for a quantitative approach to the study of gender inequality in colonial Africa has been the lack of historical data and relevant sources on African women. Indeed, the focus of notable recent studies employing African urban male real wages (Bowden et al 2008, De Zwart 2011, Frankema and Van Waijenburg 2012, De Haas 2014a) and anthropometry of male soldiers (Moradi 2008, 2009, Austin et al. 2012, Moradi et al. 2013) over the colonial era further reflects the general lack of quantitative longitudinal evidence on African women. Furthermore, it has been argued by Robertson (1984: 35-40) that statistics from colonial demographic surveys and censuses contained methodological shortcomings, often took a particular view on African economic development, and tended to be biased toward (male) wage-earning workers, thus excluding the majority of the population which was self-employed. This under-registration of working women makes the census a more difficult source, than for example, marriage registers, consisting of self-declared occupations. Hence, one advantage of information available from parish registers, particularly important for this thesis, is that it presents rich detail on female Africans. Moreover, the use of longitudinal micro-data mitigates the problem of ‘compression of history’ – the neglect of the attempt to understand particular historical contexts and particular routes to development outcomes (Austin 2008, Hopkins 2009). However, despite the prevalence of parish registers across Africa, thus far there has been no ‘rush’ to collect and extract data from African Christian churches. Yet, notable earlier works include demographic case-studies on specific regions of Namibia (Notkola et al. 2000, Notkola and Siiskonen 2000, Shemeikka et al. 2005), Tanzania (Walters 2008), D.R. Congo (Thornton 1977), South Africa (Katzenellenbogen et al. 1993, Fourie et al. 2014), Burundi (Feltz 1990), and Western Uganda (Doyle 2013). However, the hitherto absence of the use of Anglican parish registers from Africa reflects that the existence and richness of this historical source has not been fully exploited until now. This thesis aims to investigate the potential of this type of source as an empirical foundation for a long-term welfare analysis of Christianized Africans, and thus to also make a methodological contribution to the study of the history of Africa.

¹¹ This is not to deny that reading and writing was prevalent in Africa before the mass-arrival of missionaries in the 19th century. Yet, this was mainly locally focused in West African libraries of Timbuktu and the Berber kingdoms and the kingdom of Aksum, as well as the Cape Colony among others.

Overall, the availability and detail of marriage records in Uganda give the impression that African parish registers promise to make substantial progress in our quantitative and comparative understanding of Africa's pre-colonial and colonial history disaggregated by sex. This may allow us to better specify and measure causal channels through which historical shocks, such as the advent of literacy (mission schools), Christianity, and the emergence of wage labour markets, affected social mobility, demography, and gender-specific as well as ethnic socio-economic developments on the micro-level. Far more could be achieved in the future than presented in the three studies included. Names could be used more effectively to explore occupational trends across ethnic origin. Labelling the spatial information, perhaps coded in a GIS framework, could provide additional value in understanding migratory flows.¹² Baptism and death registers could fuel the debate on pre-1950 African population estimates; and mission hospital archives could potentially sit on historical in-patient registers that may inform us about the local disease environment and the interaction between medical care and African health. All of this raises exciting opportunities both for further research around missionary records and building them into a systematic African database.

Marriage registers do not however come without limitations. One major bias of the individual data from parish registers is that during the first decades Christians represented only a fraction of African populations (Siiskonen et al. 2005). Often Christianity started out as an elite movement which in the course of time grew into a mass-movement. Also, marriage registers do not contain information on the entire Christian population in a given area but only capture those who celebrated Christian marriage. Therefore, the individual-level data from registers need to be carefully interpreted within the local African context in which they are embedded, making use of qualitative literature and colonial statistics. Also, the absence of a clear counterfactual (i.e. how Africa would have fared without colonial interference) further complicates the measurement of so-called 'legacies' of colonialism on present-day African development (Heldring and Robinson 2013). Chapter 2 explores the representativeness of the Kampala parish records with both present-day socio-economic outcomes and colonial occupational structures. Further, a more thorough source critique is provided in Chapter 3 which discusses the main opportunities and challenges of using Anglican parish registry in the Ugandan context. The parishes' socio-economic micro and macro-histories are described in each of the chapters of Part I and Figure 3 in Chapter 4 maps their geographic location.

¹² GEONet Names Server (National Geospatial-Intelligence Agency 2007) appears to be helpful in matching Ugandan place names.

Contemporary field survey data

“Analyzing the in-depth case studies can deepen one’s appreciation of human artisanship in shaping and reshaping the very situations within which individuals must make decisions and bear the consequences of actions taken on a day-to-day basis.” Elinor Ostrom (1990: 185)

A field survey was conducted on female non-members and members from *Bukonzo Joint Co-operative Microfinance Society* located in Kyarumba town along the northern slopes of the Rwenzori Mountains in western Uganda, next to the border with the D.R. Congo, and south of Kilembe which is depicted in Figure 3. Figure A1 in Chapter 5 shows the exact location. Bukonzo Joint is a joint coffee marketing and microfinance cooperative with over 2,200 male and female members distributed over 74 producer groups scattered across an approximate 15 km radius. The cooperative was chosen as a suitable case-study because of its majority female membership and an interest in the effect of women’s participation in microfinance and agricultural marketing on their relative financial and social position within the household. Moreover, the cooperative’s 13 years of operation allowed ample variation to assess the effect of membership duration.

After constructing a sample of 26 groups among the cooperative’s 74 producer groups, individuals were randomly selected for a face-to-face interview. Randomization was done at the individual level, stratified by household composition (i.e. married women). Based on this eligibility criterion, 421 women of the total of 2,200 cooperative members were selected. Producer groups were widely spread across the remote and mountainous landscape in an approximate radius of 15 km from the cooperative headquarters and could only be reached by hiking. To assess the impact and determinants of participation, female non-members were randomly sampled from the same treatment region, comprising 210 individuals. Interviews were conducted in private (without any other family members present) using a carefully designed closed questionnaire.¹³ After testing the questionnaire interviews took place in July/August 2012.

The individual interviews were commissioned to eight independent enumerators from Mountains of the Moon University (Fort Portal) who spoke the local language of Lukonzo. Prior to the survey interviews the students received a training of enumerating by the author who also supervised the entire field research.¹⁴ The survey collected information on respondents’ individual and household demographic characteristics, sources of income,

¹³ The field questionnaire used can be obtained by request from the author.

¹⁴ I am very grateful to the team of enumerators of Mountains of the Moon University (Fort Portal, Uganda) comprising Benard Asiiimwe, Joshua Baluku, Christopher Byomukama, Evalyne Karusiime, Moureen Kanweri, Angel Muhindo, Scovia Mwerya, and Johnson Rukara for excellent research assistance during field research.

health, asset ownership, household decision-making agency and group characteristics. Chapter 5 and 6 explain the applied sampling and randomization techniques in detail and provide a thorough source critique. Moreover, the survey data were supplemented by interviews with the leadership and field officers of the cooperative. The study gained approval from the Uganda National Council for Science and Technology (UNCST) and Office of the President in June 2012.

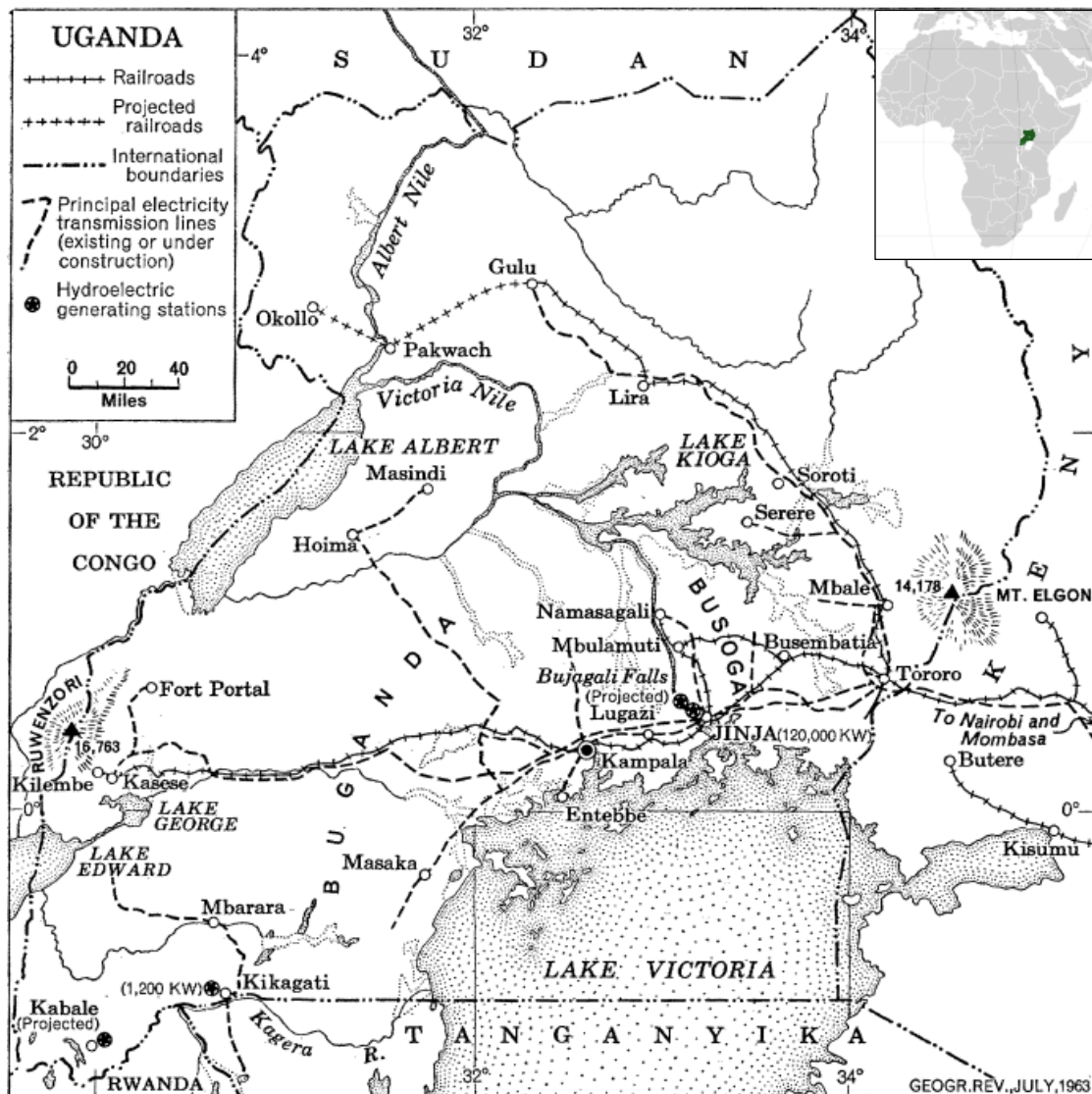
Despite the common application of randomized control trials (RCTs) in recent impact evaluations, reviewed in Banerjee and Duflo (2011) and Karlan and Appel (2011), it is demonstrated in Chapter 5 and 6 that cross-section analysis can nevertheless provide valuable insights and, thus, randomization is only one of the tools in assessing effects.

6. A concise economic history of Uganda

Geography

Uganda, a country the size of the United Kingdom, is a landlocked nation in East Africa, at present day bordered by South Sudan in the north, Kenya to the east, Tanzania and Rwanda to the south, and the DRC to the west (Figure 3). Lake Victoria, which comprises the headwaters of the White Nile prior to its journey northward to Egypt, constitutes much of Uganda's southern boundary while the Rwenzori Mountains (5,109 m) and volcanic Mount Elgon (4,321 m) mark the western and eastern boundary respectively. A large part of Uganda lies 1,200 m above sea-level and is endowed with fertile and rain-fed volcanic soils, covered with vast lakes and belts of swamps, tropical forests, and grassland, which inspired Winston Churchill to christen Uganda the "Pearl of Africa" in 1907.

Figure 3: Map of Uganda, 1962



Source: Hoyle (1963).

Pre-colonial Uganda

Bantu-speaking farmers became well established in the Great Lakes region of central Africa from approximately 2,500 years ago (Reader 1998: 184). The basis of nutrition in most of Uganda was formed by yams and, in particular, perennial plantains, cultivated in permanent groves which served calories all-year-round with comparatively little labour input (Ehret 1998: 278-279, Reader 1998: 291-303). These fertile and food secure conditions gave rise to comparatively productive and densely populated central states. However, the presence of the TseTse fly in Uganda's tropical forests and savannahs made large swathes of cultivable land unsuitable to the development of agro-pastoral farming systems which in turn hampered the intensification and commercialisation of agriculture (Goody 1971: 26, Alsan 2015). The TseTse fly was the vector for *Trypanosomiasis* (known as sleeping sickness) which, apart

from being harmful to human lives, was also lethal to domesticated livestock (e.g. cattle and horses). Thus, their presence and frequent outbreaks of the disease in many areas of tropical rainforests impeded the development of long-distance trade and the use of animal-powered technologies, such as the wheel or the plough (Wrigley 1957).¹⁵ Hence, pastoralism only thrived in a few grassland pockets, in particular in Ankole, Teso and Karamoja (Wrigley 1996), despite regular rinderpest epidemics. Thus, the majority of short-distance trade was confined to high value goods which were headloaded or slaves who could walk for longer distances. At this time few mineral resources were exploited, with the exception of regionally traded salt and iron in Bunyoro. Indeed, Bunyoro's highly specialized iron, copper and brass working industry was reknown in the region (Doyle 2006: 138). The presence of extensive agriculture, a largely open land frontier and comparatively scarce labour are held to have contributed to the development of polygamy as an institution of marriage (Goody 1976, Fenske 2012), which helped to expand food and livestock production. Bridewealth compensated wives' families for the loss of future reproductive and productive potential.

There was a long history of central state formations in the region of today's Uganda. When, as the first European, the British explorer John Hanning Speke arrived at the northern shore of Lake Victoria in 1862 he was impressed by the unusual size and sophistication of the central state of the Buganda kingdom and its royal capital and well-maintained roads (Jeal 2011). By the mid-19th century Buganda had emerged as the most dominant of several competing interlacustrine central states in the region, comprising the monarchies of Ankole, Bunyoro, Busoga, and Toro (Low 2009).¹⁶ The Buganda kingdom was a feudal economy which was ruled by a *kabaka* (king) and appointed chiefs who commanded and taxed the local *bakopi* (peasants) on behalf of the state (Reid 2002). Among the Baganda, new territorial chieftainship was not awarded on a hereditary basis but depended on one's competence and personal loyalty to the king, thus creating achievement-oriented social hierarchies in which men competed for advancement at the royal court (Wrigley 1957, Fallers 1959, Twaddle 1974, Berman 1974).

On Lake Victoria the Baganda operated a sophisticated canoe fleet to extend their military power and to control regional trade routes and commerce with the East African coast (Reid 1998). Also, Buganda had thriving barkcloth, leather, pottery and iron-working industries (Roscoe 1911: 365, 425, Reid 2002: 97) largely operated by men. In addition, men cleared the land before planting, raised cattle in pastoral economies, hunted and fished.

¹⁵ Cattle were used in particular in Ankole and Teso as a way of storing (movable) wealth, raising land productivity, and providing a crucial source of protein.

¹⁶ Chapter 3 and 4 contain maps indicating the location of the different kingdoms in post-1893 Uganda.

Women were involved in domestic basket- and mat-weaving (Reid 2002: 97) and responsible for the cultivation and processing of staple crops, beer brewing, provision of water and firewood, and the rearing of children (Hattersley 1908: 108, Roscoe 1911: 82-97). Thus, gender inequality in economic activities was already entrenched in all modes of production prior to the colonial period. In the mid-19th century Buganda intensified its trade with the coast exchanging high-value goods with Swahili and Arab merchants from Zanzibar and Khartoum (Reid 2002) such as ivory and slaves for cloth, beads, firearms and gunpowder (Twaddle 1988). Arab influence did not stop at trade; Islam already exerted a profound cultural influence on Buganda and provided its first encounter with literacy (Wrigley 1959, Hastings 1994: 375).

Colonial change

Despite Uganda's comparatively healthy settlement climate to Western missionaries, Christianity came comparatively late. The first missionaries that arrived at Buganda's court of Mutesa I in 1877 were from the Anglican *Church Mission Society*, followed by the contending Roman Catholic *White Fathers* two years later. The foreign religious dominations were enthusiastically welcomed, and quickly Muslim as well as Protestant and Catholic converts made up a considerable body of adherents at the Buganda royal court (Oliver 1952: 77, Wrigley 1959, Stanley 1990: 127-132). Thus, the Ganda were confronted with the claims of three mutually hostile foreign religious systems (Isichei 1995: 146). When Mwanga II in 1884 succeeded his father, the young *kabaka* feared that the sizeable Christian faction would threaten his political power, and therefore ordered the killings of missionaries and indigenous Christians in 1885. This precipitated his disposal and triggered a religious civil war among Ganda Protestants, Catholics and Muslims (Wrigley 1959). In 1893, the 'flag followed the cross' in the form of the *Imperial British East Africa Company* which, led by Captain Frederick Lugard, intervened and restored order to protect British missionary and anti-slavery interests (Pakenham 1991: 413-433).

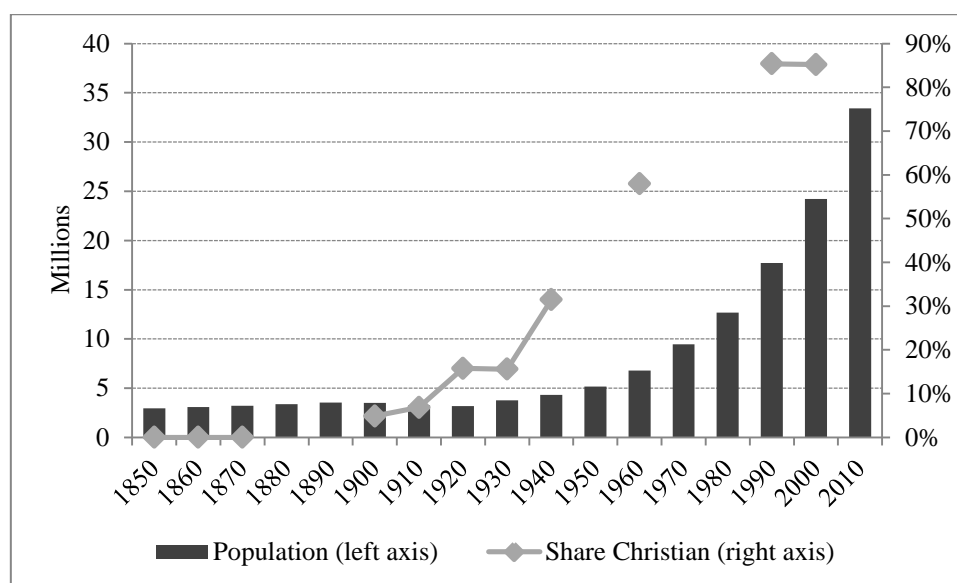
After imperial pacification, in 1894, Uganda was proclaimed a British Protectorate. From this point onwards the British colonial administration and the missionaries from all denominations accommodated each other within the British system of *indirect rule*. This left indigenous institutions in place, with mission schools and hospitals providing the bulk of education (Frankema 2012) and medical care (Etherington 2005). In 1900, the *Uganda Agreement* between Buganda and the British allotted half of Buganda's land into freehold estates held by the royal family and about one thousand chiefs as freehold tenure (Fallers

1959, Hansen 1986). This increased the power of chiefs over peasant farmers who became tenants on their land (Low and Pratt 1960). Thus, land remained overwhelmingly in African possession which avoided some of the effects Africans in British settler economies, such as Kenya and Southern Rhodesia, encountered. Hence, Buganda was the first kingdom that ‘cooperated’ with the British and from where the surrounding kingdoms and territories were gradually integrated. Kampala was the hub of economic activity in the Protectorate and the principal ‘node’ of the British administration, encompassing the terminus of the Mombasa-Uganda railway (since 1931), Port Bell at Lake Vicotria, the missionaries’ headquarters and the *lukiiko*, i.e. the parliament of the Buganda kingdom.

The hierachical organisation and the spirit of achievement of pre-colonial Ganda society presented a most favourable climate for Christian mass-conversion (Fallers 1964, Kiwanuka 1971, Twaddle 1974, Low 2009). The provision of education was crucial to missionary conversion efforts and therefore exclusively provided by mission schools over the course of the colonial era, resulting in the remarkable geographical spread from the late 1870s onwards (Oliver 1952, Wrigley 1959). In fact, Christianity and mission school enrollment were nowhere else in Africa as thriving (Hastings 1994, Frankema 2012), once it became clear that European rule would define long-term socio-economic relations. In 1911, 9% of Ugandans already followed the gospel. By 1959, 58% of Uganda’s total population (see Figure 4), while a stunning 74% in Buganda had converted.

In 1901 the arrival of the *Uganda Railway* to Lake Victoria, connecting the interior of East Africa with the Indian Ocean, dramatically decreased transport costs (Jedwab et al. 2014). This made the growing and exporting of cash crops, for which most areas of Uganda had ideal soil and climatic conditions, a viable undertaking, resulting into a radical transformation of subsistence agriculture. Pre-colonial currencies, such as cowry shells and ivory discs, were gradually replaced by the colonial government through the circulation of a single currency. Initially, the Indian rupee was introduced, only to be replaced by the East African shilling in 1921. While colonial monetization lowered transaction costs and helped to facilitate rapid commercialization, above all it enabled the colonial state to collect taxes from the local population.

Figure 4: Population of Uganda (in millions) and percentage of Christians, 1850-2010



Source: Ecclesiastical statistics from various Blue Books (1901-1945), Uganda Protectorate census 1959 and UBOS (1991, 2002). Population estimates for 1850-1960 from Frankema and Jerven (2014) and 1960-2010 figures from United Nations Population Database.

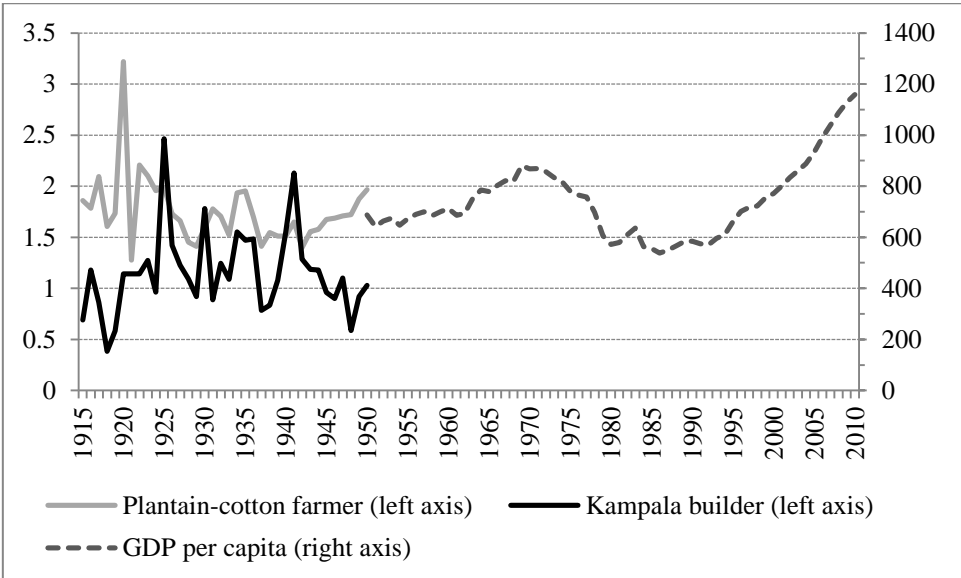
Indeed, cash crops were an easy way to make the Protectorate financially self-sufficient, as it allowed the colonial state to capture rents from trade taxes. As a response, the British administration, with the help of a network of chiefs and missionaries, introduced the growing of cotton from 1903 onwards. Indigenous farmers' response to the growing of cash-crops, based on economic rational, alongside colonial tax-pressure and the initial existence of a sort of coercive labour tribute for men (*kasanvu*) until 1922, led to a rapid adoption of the growing of cotton (Twaddle 1974, Youé 1978, Nayenga 1981). By 1920, cotton represented 90% of the country's export earnings (Youé 1978) and Uganda had become the largest exporter of cotton in the whole of sub-Saharan Africa. The hiring of migrant farm labour from comparatively densely populated Ruanda-Urundi became a clear feature of the commercialization of cash crop agriculture among Buganda's farmers (Richards 1954, De Haas 2014b). From the 1930s onwards, African cultivation of robusta coffee rapidly expanded (especially in Buganda) and soon became Uganda's main export crop, followed by cotton, tea, and tobacco. Substantial copper and cobalt extraction in the west of the country (Kilembe Mines) eventually emerged in the 1950s (Ofcansky 1996).

Another important aspect of Uganda's cash economy was the growing Asian migrant community who came to dominate the modern sector of the Protectorate's economy, together with European companies. Most crop-processing (i.e. cotton ginneries), as well as wholesale and retail businesses were in Asian hands, culminating in a de facto ethnically divided labour market in which Africans contributed manual labour and non-Africans their capital and

entrepreneurship (Ehrlich 1963, Jamal 1976). High income inequalities between Africans and non-Africans were the consequence.

Evidence from male unskilled real wages from Kampala, presented in Figure 5, shows that urban welfare ratios remained close to subsistence, indicating an urban construction worker’s purchasing power of just over one family-subsistence basket per day. In addition, colonial tax pressure (i.e. hut and poll tax) was, compared to other British colonies in Africa, relatively high in Uganda, equaling around 35 working days for an unskilled worker from Kampala in 1911 and 1937 (Frankema and Van Waijenburg 2012). However, for rural cash-crop smallholders there is good reason to believe that welfare ratios were slightly higher (see Figure 5), in particular for cotton and coffee cultivators (De Haas 2014a). Yet, when Uganda gained independence in 1962 its economy remained overwhelmingly rural and specialized in the export of primary commodities, with 3% of its population living in urban areas and 93% working in agriculture (Van Zwanenberg and King 1975).

Figure 5: Welfare ratio (left axis) and GDP per capita (international 1990 GK\$), 1915-2010



Source: Welfare ratios based on De Haas (2014a); GDP per capita derived from Bolt and Van Zanden (2013). Note: Colonial welfare ratios are based on a composite basket of a mix of root crops (cassava, sweet potato), plantain and grains (millet, sorghum, maize) to account for a fair representation of workers’ consumption patterns. Welfare ratios of unskilled urban (Kampala) and rural workers in Uganda (1 = subsistence level) and GDP per capita (international 1990 GK\$) of Uganda, 1915-2010. Coffee-plantain farmers (not pictured here) were able to purchase an additional third of a subsistence basekts compared cotton-plantains farmers between 1915-1950.

Although colonialism seems not to have stimulated significant increases in material standards of living for average Ugandan households (Figure 5), the era appeared to have brought improvements in safety, transport infrastructure, and education. In fact, Uganda had

the highest primary school enrollment in the whole of British Africa before World War II (Frankema 2012). Also, major gains in medical provision (i.e. access to medicines, mass-vaccination, and maternity facilities) and the diffusion of knowledge of personal hygiene led to a sharp reduction in mortality (Doyle 2013, Prados de la Escosura 2013). As a result, Uganda's population, made up of 56 different indigenous ethnic groups, almost doubled from 3.5 million in 1900 to 6.8 million in 1960 (Figure 4).

The post-colonial era

The subsequent post-colonial decades were deeply troubled years for Uganda. The presidencies of Idi Amin and Milton Obote between 1971 and 1986 saw political and military violence, which had a devastating effect on the Ugandan economy.¹⁷ The reign of terror, warfare and expulsion of the entrepreneurial Asian minority by Amin led to a complete collapse of the country's economy. Figure 3 illustrates that by 1986, when Yoweri Museveni became president, GDP per capita had withered by almost 40% of its 1970 value (Figure 3). The Museveni era led to an economic recovery and restored the relationship with international aid agencies, introduced structural adjustment programs, increased public spending, and made women more equal participants in education and politics (Tamale 1999, Kyomuhendo and McIntosh 2006). Yet, today, with a GDP per capita of \$1,365, Uganda ranks among the poorest third of African countries (World Bank 2014). Also, present-day Uganda has one of the highest fertility rates in the world with approximately six children per woman. Average life expectancy significantly increased since the mid-1990s to 58 years in 2012 (World Bank 2014). As a result, Uganda's population sharply increased to reach 33.4 million in 2010¹⁸ (Figure 2) of which 85% make a living in the rural economy, while two-thirds continue to directly depend on primary production and export crops, and 7.2% of adults (between 15 and 49 years old) live with HIV/AIDS (World Bank 2014).

7. Outline of thesis

The thesis consists of two parts. Part I (chapters 2-4) offers a new empirical perspective on the long-term development and historical causes of gender (in)equality in Uganda, tracing its developments over the long 20th century. Part II (chapter 5 and 6) highlights the challenges smallholder women face in present-day Uganda and investigates the potential of collective

¹⁷ See Meredith (2011: 231-238) and Ofcansky (1996: 42-48) for a summary of the main developments.

¹⁸ Uganda's population is projected to reach 94 million in 2050 (United Nations 2012).

action institutions to improve women's relative socio-economic position in the future. Figure 6 portrays the applied conceptual framework.

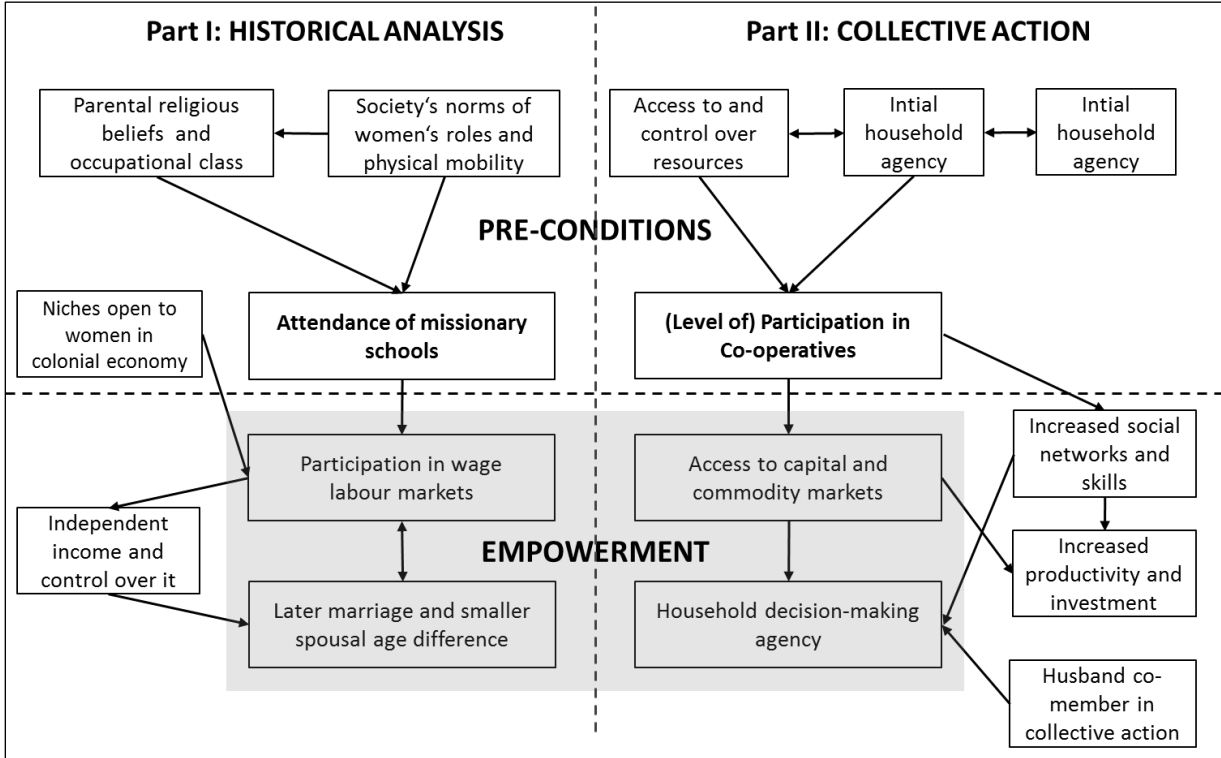
Chapter 2 presents an empirical investigation of the long-term trends of gender inequality in Uganda's capital city Kampala (co-authored with Jacob Weisdorf). The Boserupian hypothesis is examined that present-day African gender inequality and marginalization of women is rooted in colonial times. We present long-term trends of various measures of human capital and labour market participation for both African women and men in Christian Kampala. The arrival of Christian missionaries and the parallel development of the formal colonial economy in Uganda ignited a century-long transformation of Kampala involving a *gender Kuznets curve*. Although, large inequalities between the sexes already existed in pre-colonial history, the indigenous response to Christian mission education and the opening of new windows of opportunity in labour markets, primarily for African men, clearly augmented the gender imbalances concerning educational attainment and occupational mobility. However, marital gender inequality gradually declined during the latter half of the colonial era, and after Uganda's independence its level was not significantly different from that of pre-colonial times, contesting the view that gender inequality remains a legacy of colonial rule. Nevertheless, large gender gaps in formal labour market participation continue to persist today.

Chapter 3 delves deeper into women's social and economic standing during colonial times. It shows that while women were primarily marginalised over the course of the colonial era, the Church Mission Society played a key role in women's initial self-emancipation. Mission schools opened new windows of opportunity for African women by furthering their formal education and building their occupational skills through the creation of employment niches as mission school teachers and hospital nurses/midwives. While literacy alone did not affect marriage patterns, women who worked for the missionaries married significantly later and married men closer to their own age. This indicates an important shift in the power balance between parents and daughters and between husband and wife, marking a clear break from women's role in pre-colonial Uganda. Daughters from traditional backgrounds were less likely to attend school, less frequently followed a career outside the home than daughters of from families that were deeply entrenched in the mission movement or employed in the colonial economy.

Next, chapter 4 examines the trends and determinants of intergenerational occupational mobility of Protestant male Ugandans over the long 20th century (co-authored with Marco H.D. van Leeuwen and Jacob Weisdorf). It is shown that following a relatively socially static

pre-colonial society, the colonial era opened new windows of opportunity for upward social mobility which enabled men to take leaps between ones social origin and destination. Achievement gradually challenged ascription in which the *Africanization* of the mission offered significant opportunities of occupational mobility to Christian Africans. To this end, literacy became a clear pre-condition for status attainment and sons benefitted from their fathers’ occupational ties to the mission and the colonial state. It is also demonstrated that colonial influences in Uganda, besides facilitating the emergence of a new educated elite, gave rise to a more equal society in terms of social mobility which withered pre-colonial power structures rather than preserving them. Rural-to-urban labour migration became a common strategy to ascend the social ladder, although migrants faced lower chances of high-status attainment than initial residents of Kampala.

Figure 6: Applied conceptual framework



Source: Author’s own elaboration.

Part II explores the role of collective action for women’s empowerment today, using an in-depth case study of a coffee and microfinance cooperative from rural Uganda. Chapter 5 highlights that women’s access to and control over land is key for women’s membership in the cooperative in the first place. Women’s lack of freedom in the choice of a marriage partner seems not to affect women’s ability to join the cooperative in the medium-term.

However, membership alone does not explain how intensively female farmers participate and commit themselves to their organisation. Female members' intensity of participation is modelled through women's level of participation in collective coffee marketing and their share of capital contributions to the organisation. I find that length of cooperative membership, women's control over coffee production, and their ability to make autonomous decisions within the household positively influence women's ability to commit themselves to collective action. This implies that cooperatives which fail to address gender, or that target women without a clear understanding of gender relations, risk not setting the right conditions for active female participation.

Finally, chapter 6 evaluates the effect of women's participation in collective action (co-authored with Erik Stam). In terms of the cooperative's 'empowerment' potential, it is shown that female smallholders' participation in the coffee and microfinance cooperative is a conditional blessing: even though it does deliver higher household incomes from coffee with length of membership, participation per se does not increase women's household decision-making agency. When the husband is a member of the same self-help group of the cooperative the wife's household decision-making power is significantly diminished. This holds regardless of the order of husbands' and wives' individual entry into the cooperative, which highlights the causal mechanism. This offers new insights for development policy and scholars to design cooperatives in such a way that enable women to improve both their financial performance and socio-economic status and position within the household.

8. Future perspectives

Rudimentary storage conditions threaten the 'life-expectancy' of African parish registers (see Chapter 2: Figure A6). Therefore, it would be important to organize multiple projects around identifying African parish registers from early mission stations and digitising their parish registers, which in some instances are on the brink of becoming unviewable, both for safeguarding African heritage for future generations and research purposes. This should be important to both African churches and researchers. In the future, the set-up of a database containing Africa-wide data from both parish and mission hospital registers should be the goal which would make ecclesiastical archives more secure and accessible to a wider public. This would allow research into the comparative (Christian) African demographic and socio-economic development by gender and over the *longue durée*, from the pre-colonial era to the present day. To achieve this it would be desirable to also engage African universities, churches, researchers, and students in the process of local data-collection, entry, and analysis

in order to build capacities among a new generation of African historians and development practitioners.

At the same time further research using different research designs is needed to further explore whether cooperatives dealing with different types of cash and food crops (e.g. cocoa, groundnuts, palm oil, passion fruit, shea butter) and crafts (e.g. basket-weaving) live up to their empowerment potential. Also, in-depth studies of the process of interrelationship between (types of) gender empowerment trainings, microfinance, and cash crop cooperative sales would move debates on gender and microfinance further.

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Part I

Chapter 2: A colonial legacy of African gender inequality? Evidence from Christian Kampala, 1895-2011

with Jacob L. Weisdorf (University of Southern Denmark and CEPR)

Abstract: We use hitherto unexplored Anglican marriage registers from historical Kampala to investigate the hypothesis that African gender inequality and female disempowerment are rooted in colonial times. We find that the arrival of Europeans in Uganda ignited a century-long transformation of Christian Kampala involving a *gender Kuznets curve*. Men rapidly acquired literacy and quickly found their way into white-collar (high-status) employment in the colonial economy. Women took somewhat longer to obtain literacy and considerably longer to enter into white-collar and wage labour. This led to increased gender inequality during the first half of the colonial period. However, gender inequality gradually declined during the latter half of the colonial era, and after Uganda's independence in 1962 its level was not significantly different from that of pre-colonial times. We then focus on the understanding of the channels through which parental occupational background affected intra-marriage gender inequality: daughters who had a father working in the traditional or informal economy were less well educated, less frequently employed in formal work, and more often subjected to marital gender inequality than daughters of men employed in the modernized, formal economy which emerged over the colonial era.

Keywords: Colonial rule, education, gender inequality, Kampala, labour market, mission, marriage registers, Christianity, Uganda

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1. Introduction

Recent scholarship has pointed to women's lack of access to education and formal employment as a barrier to African economic growth and development (World Bank 2011, Duflo 2012, World Bank 2014). Earlier scholarship suggests that the current marginalization of women in many African economies is a legacy of the colonial past (Boserup 1970, Rodney 1972, Akyeampong and Fofack 2014). The conventional view of this literature is that the emergence of cash crop and wage labour markets in the colonial era, parallel to the expansion of Christian missionary education (Gallego and Woodberry 2010, Frankema 2012, Nunn 2010, 2014), served as an impetus to profound cultural transformation and socio-economic change in many parts of Africa (Sender and Smith 1986: 1, Iliffe 2007: 219-250, Henderson and Whatley 2014). The scholarly consensus holds that these new educational and socio-economic opportunities were not equally shared between African men and women (Boserup 1970, Rodney 1972: 247, Little 1973: 32, Hay and Stichter 1984: 10-16, Evans 2015). As a result, "women's work became greatly inferior to that of men within the new value system of colonialism: men's work was 'modern' and women's was 'traditional' and 'backward'." (Rodney 1972: 227).

Ester Boserup (1970) conjectured that a key reason why women were marginalized in formal employment was due to pre-colonial gendered power relations and, thus when new windows of opportunities opened in the colonial era, men were able to "reserve for themselves the much-desired jobs in the modern sector" (Boserup 1970: 178). Recently, Akyeampong and Fofack (2013, 2014) advanced Boserup's and Rodney's hypotheses, reasoning that since post-colonial, male-dominated politics did little to correct these gender imbalances, today's persistent gender inequalities in African economies are a legacy of colonial times. However, the absence of long-term African gender-specific occupational information has prevented empirical investigation of the historical origins, dynamics and persistence of gender (in)equality in African labour markets and households.

The purpose of this paper is to shed new light on these long-debated questions. In order to achieve this, we propose both a new methodological approach and a novel empirical basis for testing the hypothesis that gender inequality and female disempowerment is a legacy of colonial times. We use newly collected church books of one of the earliest and largest Protestant parishes in Sub-Saharan Africa, St. Paul's Cathedral in Kampala, containing more than 16,000 historical marriages. The recorded statistics provide uncharted access to the educational and occupational performances of Christianized African men and women dating back to pre-colonial times. Our sampled birth cohorts spread across four distinct eras of

Ugandan history: the pre-missionary period (pre-1877), the (intermediate) pre-colonial period (1877-1894), the colonial period (1894-1962), and the post-colonial period (post-1962). The data facilitates an investigation of individual performances and gender inequalities within five distinct areas of accomplishment: (i) numeracy skills, (ii) literacy skills, (iii) working skills, (iv) white-collar employment (i.e. high-status), and (v) formal-sector employment (i.e. waged). The statistics also provide insights into female labour force participation rates across the four eras of Ugandan history mentioned above. The use of African longitudinal individual-level data mitigates the issue of “compression of history” that Gareth Austin (2008) cautioned against.

Our results reveal that the arrival of missionaries and colonial agents dramatically changed the educational and occupational structures among the sampled African Protestant population, initiating a century-long transformation of Kampala from an entirely rural economy to one of urban modernity. We find that this transformation significantly raised gender inequality during colonial times within those capacities that we are able to measure, both between cohorts of birth and within marriage. Our sampled Protestant men and women both underwent a ‘literacy revolution’ following the arrival of the missionaries, with literacy rates rising from 0% to nearly 100% within three generations. But the literacy revolution among women was delayed by approximately three decades, causing the gender gap in literacy to grow substantially. We observed similar patterns with regard to female labour market opportunities: women took on average considerably longer than men to acquire working skills and to enter into wage and white-collar (high-status) work.

We attribute these gendered effects partly to pre-colonial gender roles and partly to the colonial tax system from which women were exempted, explaining why wage labour initially became a male preserve. But towards the end of the colonial era, notably after 1950, women started to catch up with men within most areas, a change partially ascribable to the efforts by colonial administrations to ‘Africanize’ civil service positions and to the employment opportunities for women in mission schools and hospitals. Today, gender gaps within the capacities that we are able to observe are minor compared to colonial times. This conclusion remains valid also after we account for the compositional effects arising from the possible scenario that the process of conversion to Christianity began as an elite movement before gradually turning into a mass-movement (Ofcansky 1996, Low 2009).

We also find that social background, captured by the occupational status of the fathers of our sampled men and women, played a key role in relation to both the educational and occupational performances of their offspring and gender inequality *within* marriage. Our data

shows that daughters of fathers engaged in the traditional, informal economy were less well educated, less frequently employed in formal work, and more often subjected to marital gender inequality compared to daughters of fathers employed in the colonial wage economy. These findings lend support to the Boserupian notion that female labour market segregation was linked to (pre-colonial) gender norms in Buganda society. Our data rejects the hypothesis, however, that colonial gender inequality in educational and occupational opportunities continued into the post-colonial era: marital gender inequality among the sampled population was not significantly different from its pre-colonial level at any point in time following Uganda's independence in 1962. Even Idi Amin's political regime of the 1970s, renowned for its campaign against women working outside the household, had no significant impact on gender inequality among our sampled couples.

The paper proceeds as follows in order to demonstrate these findings in detail. After providing a brief historical background (Section 2), we describe the data (Section 3) and illustrate them (Section 4). Then, we present the results of our regression and sensitivity analyses (Section 5) and conclude (Section 6).

2. Historical background

Before Uganda became a British Protectorate in 1894, the Kingdom of Buganda, situated along the northern shore of Lake Victoria, was a centralized state with a *kabaka* (king), territorial chiefs appointed by the king, and a peasant class. The greater area of Kibuga, with its fertile soils, in which today's Kampala is situated, was the most densely settled region in Buganda, home to about 70,000 *bakopi* (peasants) (Reid 2002).¹ The capital was the centre of Buganda's political and administrative activities where the king's palace was located. By the mid-19th century the Kingdom had emerged as the dominant force over several competing central states (e.g. Bunyoro-Kitara and Ankole) in the Great Lakes region, controlling large tracts of Lake Victoria with a large canoe fleet and engaging intensively, since the 1850s, in the trade of ivory and slaves for cotton cloth, beads, firearms, and gunpowder with Swahili and Arab merchants (Reid 2002). The first missionaries of the Church Mission Society (CMS) and the Roman Catholic White Fathers arrived in Buganda in the late 1870s.

After British intervention and restoration of order after long civil conflict between Ugandan Christian factions and Muslim followers (Hastings 1994: 371-384), in 1890 Mengo was selected by the *British East Africa Company*, under the command of Frederick Lugard, as

¹ Note that estimates of the Kibuga area vary between 10,000 and 77,000 for the late pre-colonial era (Van Zwabenberg and King 1975: 259).

the headquarters where a fort was built. This made Kampala the principal 'node' of the British Protectorate in 1894, and thus became the location from where both missionaries and British *indirect rule* spread.

Unlike neighbouring British Kenya, Uganda lacked a significant settler community, thus land was not alienated but remained largely in African possession. Instead, the British colonial authority introduced a cash crop economy (mainly cotton and coffee) based on indigenous responses to commercial opportunities. Nevertheless, recent evidence from real wages of unskilled male labourers in colonial Kampala shows that urban living standards remained close to subsistence (De Haas 2014) and that Ugandans had to pay comparatively high taxes (i.e. hut tax) to the British (Frankema and Van Waijenburg 2012). Another important aspect of urban life was the rapidly growing Asian community concentrated around Kampala that dominated the higher segments of the urban economy, providing skilled labour, capital, and entrepreneurship, in particular in wholesale and crop processing (Jamal 1976).

The first urban planning of Kampala (and its then close to 3,000 citizens) came in 1912. In 1931 the *Uganda Railway* was extended westward to Kampala, linking central Uganda directly with the coast which lowered transport costs significantly (Jedwab et al. 2014), boosted cash crop trade (Van Zwanenberg and King 1975: 194, Hoyle 1963), and subsequently strengthened Kampala as the economic centre of Uganda. Nevertheless, by 1948 greater Kampala remained a moderate-sized town with around 24,000 residents (Uganda Protectorate 1948), growing to reach some 77,000 residents by 1959 (Uganda Protectorate 1959) with a 2:1 ratio of male to female residents (Little 1973: 10) reflected greater male rural-to-urban labour migration compared to women. Among Africans, the Ganda were the dominant tribe and migrants were often transitory, short-term, unskilled, and unmarried (Parkin 1966). Europeans and Asians represented close to half of Kampala's residents in the mid- and late-colonial era (Uganda 1948, 1959), as high rents and the enforcement of building standards impeded the ability of most Africans to reside within the city. This provided a positive inducement to gravitating towards the peri-urban slums, close enough to the sources of wage employment (Van Zwanenberg and King 1975). Education was comparatively well established in Kampala. Estimates from the late 1960s show that, while in the whole of Uganda 35% of the 7-13 African age-groups were at primary school, in Kampala 62% attended classes; and Kampala hosted 27% of total hospital beds in the country (Jamal 1976). After independence, metropolitan Kampala grew considerably due to migratory influx from rural areas but also from Ruanda-Urundi (Uganda Protectorate 1938), first to 352,000 residents in 1969, then to 774,241 in 1991 (Omolo-Okalebo et al. 2010). Today, Kampala has

swelled to a projected population of around 1.7 million, making up a third of Uganda's urban population (World Bank 2014).²

Today, Christianity is by far the most popular religion in Kampala, with nine out of ten adults declaring themselves as Christians in 2002 (UBOS 2006). Adrian Hastings (1994: 464) described a Buganda society in which 'there was both large-scale conversion to Christianity in the pre-colonial era and a mass-conversion movement within the early colonial age.' Indeed, the growth of the Church in Uganda was unique by any comparative standards in Africa (Oliver 1952, Sundkler and Steed 2000) and its spread within Buganda was faster than in any other region of the Protectorate (Taylor 1958, Ward 1999). Ecclesiastical statistics from colonial Blue Books of the Protectorate of Uganda confirm this. The share of Christian affiliates among the population of Buganda grew from 23% in 1910 to 74% in 1959 (Meier zu Selhausen 2014), and Uganda had the highest total number of pupils enrolled in mission schools in the whole of British Africa in 1938 (Frankema 2012).

3. Source and data

Anglican marriage registers

Our data come from the earliest and largest Protestant missionary station in Uganda: the Anglican Church *Diocese of Namirembe*, originally established in 1884 by the Church Missionary Society (CMS) and situated on the hill-top of Namirembe (today's Kampala), where it represented – and still represents – the main centre of the Anglican Church in Uganda. The Diocese's original barn church, housing 3,000 people (see Figure A2), was destroyed during a thunderstorm in 1894 (Moon 1994). The church's fast-growing popularity inspired the construction of a new church in 1895 with a seating capacity of approximately 4,000 (see Figure A3 for a visual impression). This event marks the starting point of our marriage register series, which ends in 2011. The series is complete apart from the books covering the years 1899-1907 which were lost to reasons unknown to the Church, but likely related to the fact that lightning set fire to the church's thatched roof in 1910. Following the fire, the current St. Paul's Cathedral (Figure A4) was constructed between 1915 and 1919 which could accommodate a congregation of 3,000 (Sundkler and Steed 2000: 849). This was one of the largest houses of God in sub-Saharan Africa at the time, where thousands of Christian affiliates gathered every Sunday (Hattersley 1908: 201, Taylor 1958, Hastings 1994).

² See Figure A1 for long-term population estimates from Kampala.

Anglican marriage registers contain some key vital statistics regarding our sampled population at the time of their marriage. These include the names of each of the spouses, their age at marriage, their civil status, their occupational title, the occupational title of their fathers, and their place of residence. Information about literacy was inferred from spouses' signatures on the marriage certificate: if a spouse was unable to write down his or her name, the vicar would do so, and the illiterate spouse would then make a mark to verify his or her consent. While signature literacy is, of course, an imperfect measure of someone's actual literacy achievement, previous work has shown that signature literacy is a reasonably good proxy for someone's general ability to read and write (Schofield 1973, Clark 2007), usually falling below reading ability and above writing skills, but roughly running parallel to the two (Rachal 1987). Figures A5 and A6 offers an example of an early marriage register page.

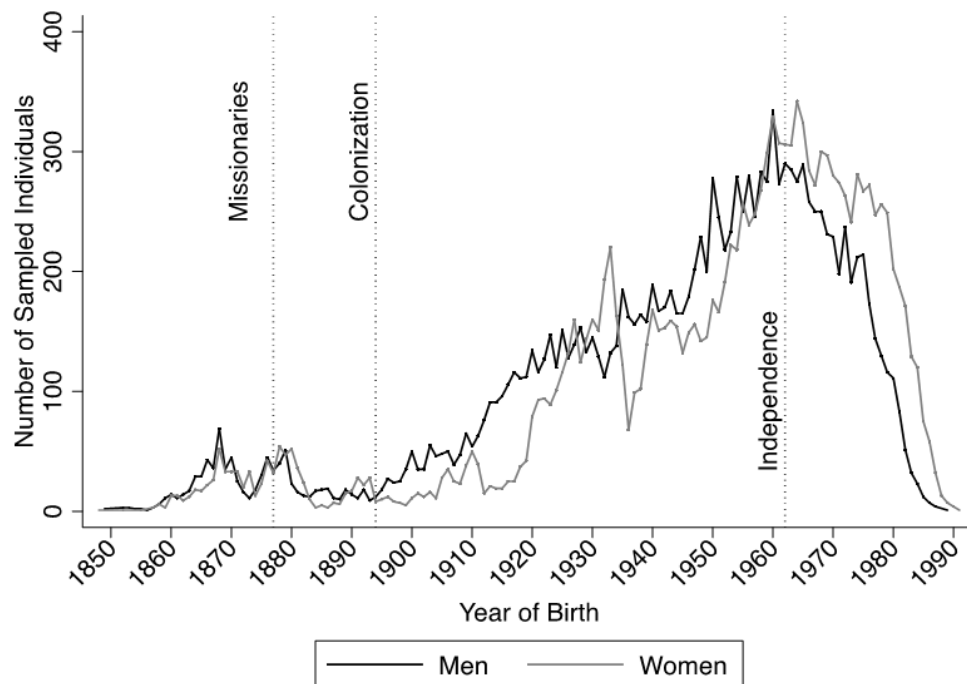
The detailed and systematic record-keeping of the Anglican missionaries, as well as their Ugandan successors who were significant in the spread of gospel (Frankema 2012), not only make our data a novel empirical basis in the context of African economic history. It also constitutes an excellent source of information for studying the impact of missionary and colonial influences on the educational and occupational opportunities of indigenous Africans.³ One of its key advantages is that Anglican missionaries followed the same procedure as their British-based colleagues: even our earliest registers, from the 1890s, are written in English on standardised forms, pre-printed in London, and are completely identical to those used by parish ministers in Britain.

Anglican missionaries were not the only Christian missionaries in Uganda. Other missionary societies, such as the White Fathers, the Mill Hill Missionaries, and the Verona Fathers, operated in the region as well. Statistics from the Colonial Blue Books of the Protectorate of Uganda report that roughly two thirds of all Christian marriages in early twentieth-century Uganda were Catholic marriages (Meier zu Selhausen 2014). Catholic missionaries did not, however, follow the tradition of their Anglican counterparts in recording the occupational titles of the spouses. This makes a comparison of the occupational performances between Catholics and Protestants impossible.

³ Thornton (1977) has used vital information from Catholic parish registers to estimate the population of 17th-century Congo by combining the statistics of African baptisms from missionary stations with a reconstruction of the nation's age structure. Similarly, Katzenellenbogen et al. (1993) have assessed the changes in mortality at the Western Cape of South Africa based on records of the Moravian Church for cohorts between 1837 and 1909. Notkola and Siiskonen (2000), Notkola et al. (2004) have studied fertility, mortality, and migration in northern Namibia using parish registers of the Evangelic-Lutheran Church between 1925 and 1990. More recently, Walters (2008) has used Catholic parish registers for the Mwanza region in northern Tanzania to reconstruct historical families since 1890. Fourie et al. 2014 explore literacy and numeracy from 1849 mission census in the Cape Colony. None of these works, however, have sought to use educational or occupational information from Anglican parish registers for the purpose of studying the economic history of Africa.

Our dataset includes 16,783 marriages which took place between 1895 and 2011.⁴ Figure 1 shows the distribution of the sampled men and women by year of birth.⁵ The success of missionary efforts to solemnize African marriage can be read from the rising trend. Some of the marriage records were incomplete and hence excluded from the sample. Records missing the spousal signature information (0.1%) and records where neither of the spouses had an occupation recorded (2%) were removed from the sample. We kept those marriages, however, where only the groom was recorded to have held an occupation (12%) on the assumption that the bride was a housewife. The implication of this is discussed below. Finally, in some of the recorded marriages, mainly during the 1930s, the spousal ages were replaced by the terms ‘Minor’ or ‘Full’ (14%). This signified whether or not a spouse had reached the age of 21. These records are included only when we study the sampled population’s occupational structure, but for obvious reasons the records are excluded when we study cohorts of birth.

Figure 1: Frequency distribution of sampled individuals by sex and year of birth



One more data limitation is necessitated by the prevalence of polygamy in Uganda (Fenske 2012). Polygamy, i.e. men’s marriage to multiple brides, may create a bias in our

⁴ We observe that no marriages took place during the annual period of Lent.

⁵ Figure A1 displays the number of observations by marriage year in relation to the estimated population developments of Kampala.

sample. For example, if workers with high-status jobs take more wives than workers with low-status jobs, high-status workers will be over-represented in the sample. Worse still, the propensity towards polygamy may change over time, thus changing the bias of the sample across the period of observation. Interestingly, besides those listed as widow(er)s, which we remove to avoid individual over-representation (0.4%), there are no records of individuals re-marrying in our data, all remaining spouses were recorded as either ‘bachelor’ or ‘spinster’. This is consistent with the proscription of the Anglican Church against polygamy and supports the Church’s emphasis on the building of nuclear families (Hastings 1973). It does not imply, of course, that polygamy did not take place at all among our sampled individuals. Many Ugandan couples celebrated a customary wedding prior to marrying in the Christian faith (Hansen 1984). The flipside of this is that the Christian Church could not prevent their affiliates from engaging in several customary marriages following the Christian marriage, a practice frequently observed among local chiefs (Taylor 1958, Hastings 1973). Since such behaviour does not appear to bias our sample, however, polygamy of this sort will not have any bearing on our results.

Table 1: Summary statistics

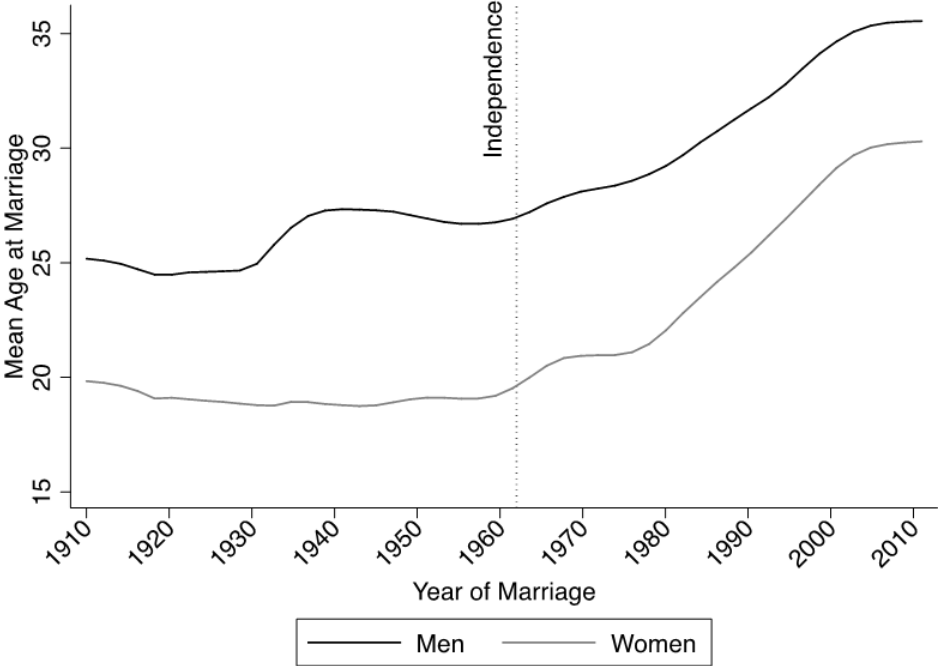
Variable	Obs.	Men		Women	
		Mean	St.dev.	Mean	St.dev.
Year of marriage	12,939	1970	30	1970	30
Age at marriage	12,939	30.3	7.0	23.8	6.4
Year of birth	12,939	1945	25	1952	25
Numeracy skills	12,939	0.75	0.43	0.84	0.37
Literacy skills	12,939	0.97	0.18	0.92	0.27
Working skills	12,939	0.66	0.47	0.50	0.50
White-collar work	12,939	0.70	0.46	0.56	0.50
Waged work	12,939	0.87	0.33	0.55	0.50
Agricultural work	12,939	0.08	0.28	0.03	0.16
Housewife	12,939	-	-	0.06	0.24
Imputed housewife	12,939	-	-	0.12	0.33

Note: Numeracy skills measure the tendency *not* to age heap, i.e. not ending one’s age with a 0 or 5. Literacy skills are inferred from a signature (or lack hereof) on the marriage certificate. Working skills mean holding a medium-skilled or highly-skilled profession according to the HISCLASS scheme (Van Leeuwen and Maas 2011). The shares of women in skilled/white-collar/waged/agricultural work do not include housewives or imputed housewives. For more details, see the text.

By limiting the sample to bachelors and spinsters, who had signed the register and had their age recorded, and to couples where at least the groom held an occupation, we end up with a baseline sample of 12,939 men born between 1849 and 1989 and an identical number of women born between 1848 and 1990. Table 1 provides the summary statistics and Figure 2 the average age at marriage. Interestingly, the marriage pattern in the colonial era looks very

similar to that of historical Eastern Europe (Hajnal 1965) with women marrying relatively young, and the spouse age gap being comparatively large. In the post-colonial era, the pattern looks more like historical Western Europe, with late marriages and converging spousal age gaps.

Figure 2: Mean age at first marriage by sex



Note: The graph shows the average age at marriage apart from those individuals whose age at marriage was replaced by the terms ‘Minor’ or ‘Full’ (see text).

Exploring sample bias

To what extent does our sampled population represent the actual population of Kampala? While we cannot answer this for the colonial period, a population census conducted in 2002 by the Ugandan Statistical Office (UBOS 2006) enables us to compare the population living in Kampala today with those from our sampled population. To this end, we restrict both datasets to include cohorts of births aged 20 to 60 in 2002 and, for the census data, to those whose civil status was ‘married’ or ‘widow’/’widower’.

Table 2 reports the literacy rates for the sampled men and women. Among our marriage register population, the literacy rates are 100% for men and 99% for women. Among Anglican Protestants living in Kampala they are 96% for men and 92% for women. The discrepancy could be due to the fact that signature literacy is an imperfect measure of actual literacy. The literature rates among all Ugandans – 77% for men and 53% for women –

demonstrate that individuals living in Kampala are far more literate than the average Ugandan. Notably, this is not a matter of religion: Anglican Protestants in Uganda as a whole include 79% literate men and 56% literate women.

Table 2: Shares of literate and skilled workers by sex

Sample	Literate		Skilled	
	Males	Females	Males	Females
Uganda, all	77%	53%	43%	24%
Uganda, Anglicans	79%	56%	45%	26%
Kampala, all	96%	91%	86%	76%
Kampala, Anglicans	96%	92%	83%	72%
Marriage sample	100%	99%	80%	61%

Note: Skilled individuals in the census data are individuals with more than six years of schooling. Skilled individuals in the marriage sample are workers holding occupations that are coded medium- or higher-skilled in the HISCLASS scheme (Van Leeuwen and Maas 2011). *Source:* 2002 Census Data for Kampala and Uganda (UBOS 2006). Marriage sample: see text.

The census data reports years of schooling, information that the marriage registers do not include. Conversely, our marriage registers report occupational titles, which are not available in the census data. It is possible, under sensible assumptions, to transform the two different variables into an analogous measure. To this end, we use the so-called HISCLASS scheme to code our occupational titles into ‘skilled’ and ‘unskilled’ workers (see Van Leeuwen and Maas 2011). ‘Skilled’ workers include highly- or medium-skilled professions in HISCLASS, while ‘unskilled’ workers include lower- or unskilled professions. To give two examples from the data, a teacher is classified as a skilled worker, and a matmaker is classified as an unskilled worker. Next, we coded those individuals in the census population that had completed their primary education, i.e. had more than six years of schooling, as ‘skilled’ workers, and those individuals with less than six years of schooling as ‘unskilled’ workers. Table 2 shows the results. In the marriage register, 80% of males and 61% of females are classified as skilled workers. Among Kampala Anglicans, 83% of males and 72% of females are classified as skilled. The numbers for the entire Kampala population (i.e. regardless of religious affiliation) are 86% skilled males and 76% skilled females. Among average Ugandans, 45% of males and 25% of females are skilled.

We think the performance of our sampled population is slightly worse than that of their Kampala counterparts for two reasons, other than measurement error. The first is that not all of our individuals live in Kampala. Our regression analysis below shows that grooms residing outside a radius of 10 km from the centre of Kampala (roughly 40% of all males) underperform in terms of educational and occupational achievements compared with Kampala dwellers. Another factor that would downward-bias the skill performance of our individuals is

that we capture them, on average, earlier in life (i.e. at the time of their marriage) compared to those of the census registers (captured when the census was conducted, which could be early or late in life). Nonetheless, the modest discrepancies in the skill performances between the census population and the population of our marriage registers do not deny the fact that our sample seems to fairly represent Kampala individuals today in those indicators (regardless of religious affiliation).

Our comparison with the census results of 2002 takes us back to cohorts born as early as the 1940s. However, did the sampled Protestants also represent the general population of Kampala as we move further back in time? The *Enumeration of African Employees* from 1952 opens the opportunity to compare our Anglican male sample with that of the general composition of male occupations in Kampala for the colonial era. A complicating factor is that the enumeration data does not reveal any individual occupational titles and only includes companies with more than five employees. Instead, the enumerated employees were subdivided (by the British statisticians) into 45 occupational groups. In order to make these comparable to the occupations found in the marriage registers, we have collapsed those 45 occupational groups into seven major occupational groups found in the HISCO scheme (Van Leeuwen and Maas 2002).⁶ We also categorized the occupations contained in our marriage data in this fashion. Moreover, to match the enumeration sample, our sub-sample individuals of the marriage register consists only of males (of working age) born between 1892 and 1932 and whose occupational titles indicated they were wage labourers (see the list in Appendix).⁷ This sub-sample comes to 2,468 observations.

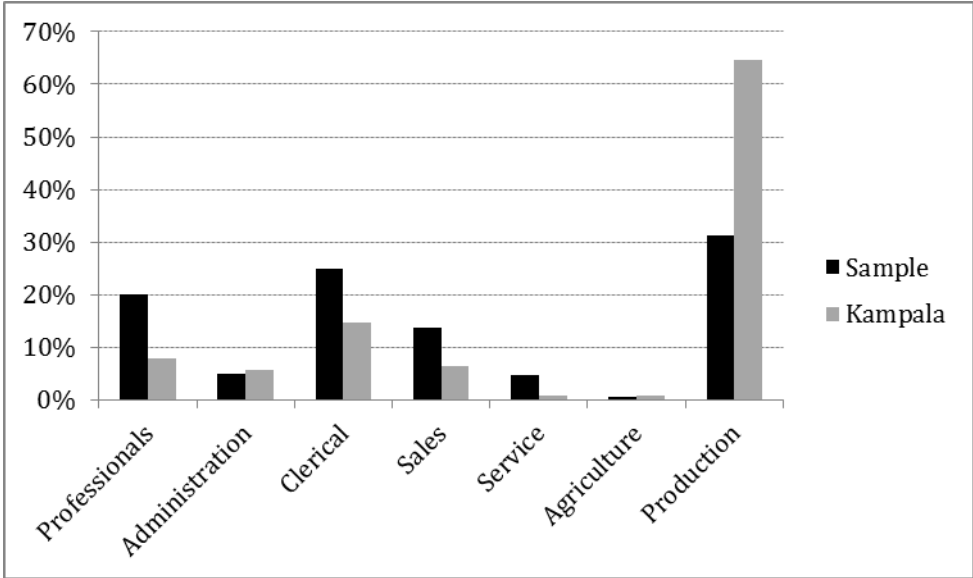
The enumeration covers employees from the whole of Uganda, but the companies (both private and government) are listed by their municipality of registration. The Municipality of Kampala lists 678 companies which employed a total of 29,381 African male workers in 1952. We cannot be certain, that all the employees of Kampala companies were also working and living in Kampala. In fact, it is very likely that a large fraction of enumerated Kampala construction workers (about a third of total employees in the enumeration) were hired temporarily by the *East African Railways and Harbours Corporation*, and thus worked and resided along the railroads (Grillo 1974), and not in Kampala. Yet, at the same time Kampala gradually increased in size during the 1950s (see Section 2), reflecting an increasing demand

⁶ The seven occupational classes (Van Leeuwen et al. 2002) are: Groups 1: Professional, technical and related workers; Group 2 Administrative and managerial workers; Group 3: Clerical and related workers; Group 4: Sales workers; Group 5: Service workers; Group 6: Agricultural, animal husbandry and forestry workers, fishermen and hunters; Group 7: Production and related workers, transport equipment operators and labourers.

⁷ We do not include females in this comparison because of their insignificant participation in wage labour in Kampala. The 1952 *Enumeration* reports 29,381 adult male and 523 adult women employed in Kampala.

for building and construction labour (Elkan 1956a). Our marriage register also tend to capture grooms relatively early in life (i.e. at the time of their marriage) which further complicates the comparison with the enumeration sub-sample.

Figure 3: Occupational structure of the 1952 Enumeration of Kampala and Protestant sample



Source: Enumeration data (Uganda 1953). Sample data: see text.

Note: The categorization of occupations follows the HISCO scheme (Van Leeuwen et al. 2002).

Keeping all the limitations of this comparison in mind, Figure 3 shows that our Protestant sub-sample from the Namirembe marriage registers was, on average, more often employed in white-collar work (i.e. professionals, managerial, clerical work, sales, and service) compared to the 1952 enumerated population of Kampala. This coincides with the observations that our male sample is filled with a large number of clerks and teachers already in the early colonial era (see Table A1) and that almost all men had attained the ability to sign their marriage register by 1915. Also, our sub-sample appears underrepresented in the production sector but equally represented in administrative and agricultural labour. Of course, the degree to which our sample more frequently occurs in white-collar (high-status) work is sensitive to our assumption about how many enumerated construction workers in fact resided in Kampala. Overall, this tentatively suggests that the sampled Protestant grooms had a better chance to enter higher status professions, based on their early educational advantages. Our spot-check approximation from the 2002 census suggests that our sample may come close to Kampala’s urban dwellers today, at least in terms of literacy and skill attainment which is plausible, given that already over the course of the colonial era education and Christian conversion both grew into mass-movements.

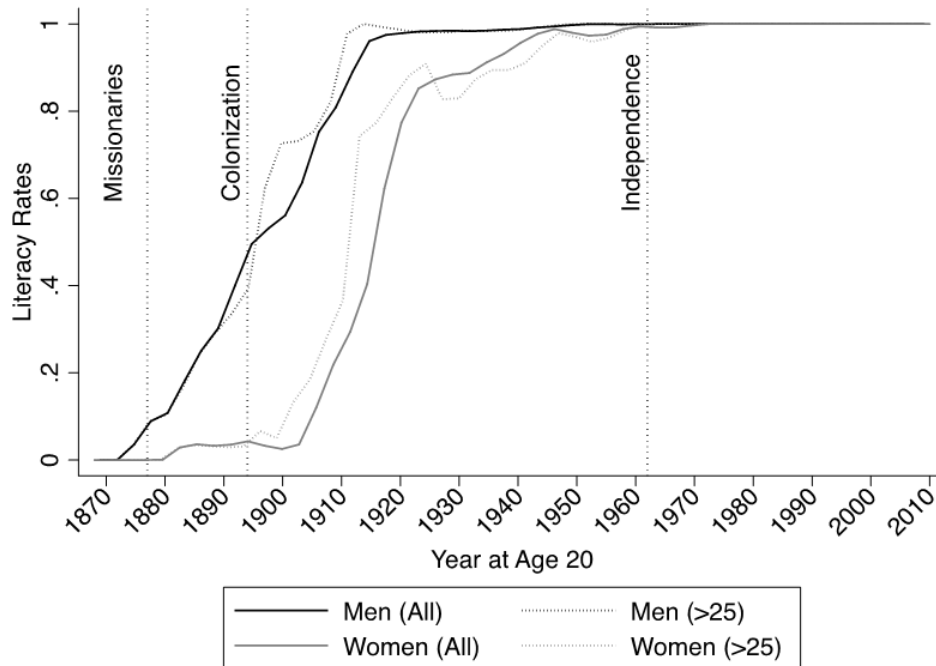
4. Graphical analysis

This section outlines the evolution, from the pre-colonial times until today, in the educational and occupational performances of our sampled men and women, as well as the gender inequality between them. We are able to measure individual performances (and gender inequalities) within five distinct dimensions of achievement: literacy, numeracy, working skill, working status (blue vs. white-collar work), and formality of the work (waged or unwaged).

Figure 4 illustrates the literacy rates since the advent of formal (mission) education by sex for birth cohorts at the age of 20. Not surprisingly, literacy was virtually non-existent prior to the arrival of the missionaries in the late 1870s, after which it rapidly spread first to men and later women. Virtually all males had attained literacy within less than three generations after the first missionaries arrived and virtually all women within three decades later by the 1940s. Since basic schooling up until the 1950s was almost exclusively provided by mission schools (Etherington 2005: 261-284, Frankema 2012), the graph shows the immense effect of missionary schooling on literacy skills among our sampled population. The time lapse between men and women's literacy achievements in the period following the arrival of missionaries caused gender inequality in literacy to rise dramatically. But since women gradually caught up with men during the colonial era, gender inequality in literacy had practically disappeared by the mid-20th century.

One explanation for women's delay in attaining literacy could be to do with age-structure effects. Women married relatively young during the colonial period (Figure 3), on average around the age of 18. Men married later, around the age of 25. If literacy (contrary to what we expect) was attained between the ages of 18 and 25, then this could explain the time lapse. But when we control for this by limiting the sampled individuals to those who marry beyond the age of 25 (in the colonial period this was roughly 10% of our sampled population), then it becomes clear that age-structure effects do not explain the delay (cf. the dotted lines of Figure 4). In this case, a more plausible explanation for the discrimination of women in the early stages of missionary education is the lack of indigenous support of fathers' paying and supporting their daughter's education, as this was believed to conflict with girls' duties as future cultivators of the food of the household and the general power balance in the household (Hattersley 1908: 196-197).

Figure 4: Literacy rates by sex



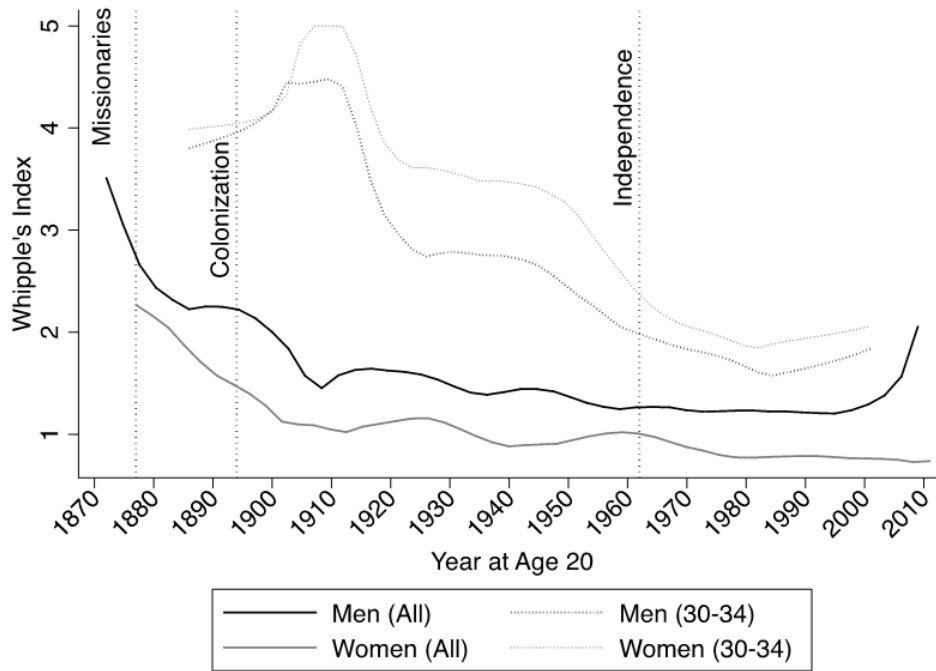
Note: The graph shows the literacy rates by birth cohorts 20 years from birth. Literacy is inferred from the spousal signature (or lack thereof) on the marriage certificate. The dotted lines illustrate the literacy rates among men and women marrying after the age of 25.

Turning to numeracy skills, we can use the fact that spousal age was self-reported to study the prevalence of age heaping in our sample, captured by the tendency to end one's age with a zero or a five (Shryock and Siegel 1976). Age-heaping behaviour is not widespread in our population: the overall imprecision in age reporting, measured by the Whipple index,⁸ is 0.9%, which is commonly considered to be highly accurate (Robine et al 2007). This means our sampled individuals are comparatively numerate relative to other populations living in developing regions in this period (Crayen and Baten 2010). Figure 5 demonstrates a gradual improvement over time in average numeracy skills.⁹ It suggests that age heaping was more prevalent among men than women across the entire period of observation. This supremacy in numeracy among women is, however, a consequence of the fact that females married younger on average than their male counterparts. When we adjust for this, by focusing on men and women marrying between ages 30 and 34, it appears that men age heap less than women (Figure 5, dotted lines).

⁸ The Whipple Index reports the sum of individuals in the age range of 23 and 62 inclusive, who report ages ending in 0 and 5, divided by the number of individuals between the ages of 23 and 62 years inclusive, and multiplied by 5.

⁹ There is no apparent reason why age heaping increases among men towards the end of our period.

Figure 5: Whipple's Index for numeracy by sex



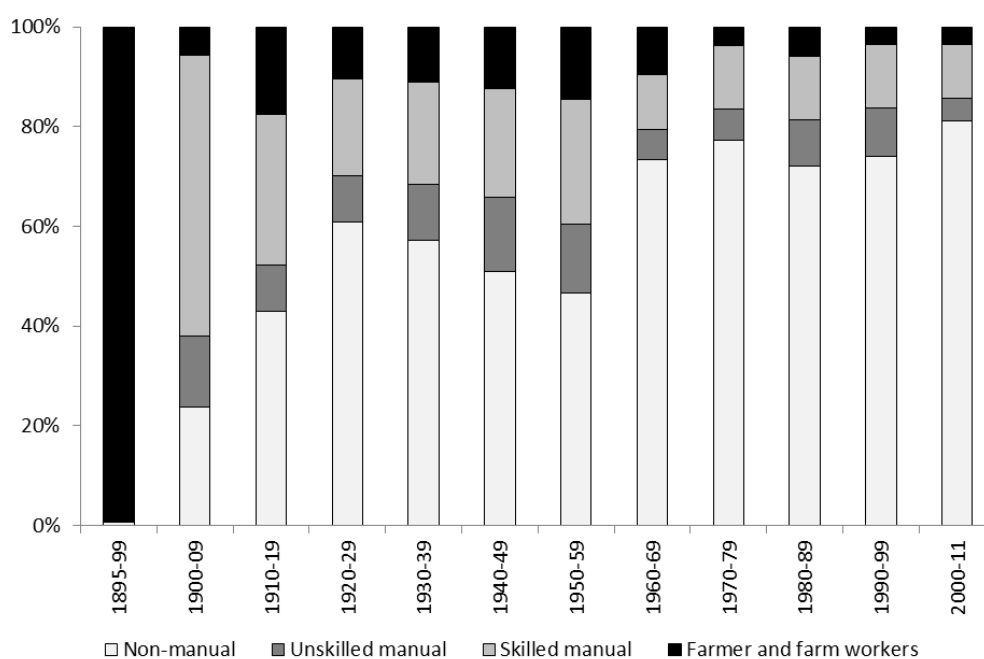
Note: The Whipple's Index score is obtained by summing the number of individuals in the age range 23 and 62 inclusive, who report ages ending in 0 and 5, dividing that sum by the number of individuals between ages 23 and 62 years inclusive, and multiplying the result by 5.

The rise in literacy and numeracy skills following the arrival of the missionaries no doubt helped the acquisition of more substantial human capital attainments. This is not to deny that knowledge accumulation did not take place in the pre-colonial era. Pre-colonial training built on learning-by-doing and intergenerational transmission of agricultural knowledge and production skills required to exploit the diverse and hostile ecological environments (Reader 1998: 243-256). But those traditional skills were arguably of limited use in the emerging technically-versed colonial economy, which emphasised the importance of literacy and numeracy skills – certainly for non-manual occupations.

Literacy and numeracy skills are of course rather crude proxies for human capital achievements. More extensive knowledge about human capital formation among our sampled individuals can be derived from their occupational titles. The HISCO/HISCLASS schemes already mentioned provide useful tools for this. The HISCO scheme classifies several thousand historical occupations from across the world by the nature of the work conducted (Van Leeuwen et al. 2002). The HISCLASS scheme ranks all the occupations listed in the HISCO by the social status of the work (blue- versus white-collar work) and by the skill requirements of the work described by the occupational title (Van Leeuwen and Maas

2011).¹⁰ Tables A1 and A2 in the Appendix list the most common occupational titles in our sample, by decade, showing how these titles were coded in HISCLASS concerning blue- and white-collar work, as well as skilled and unskilled work. It also shows the main sector of activity (agriculture or not).

Figure 6: Distribution of occupations by social class, men



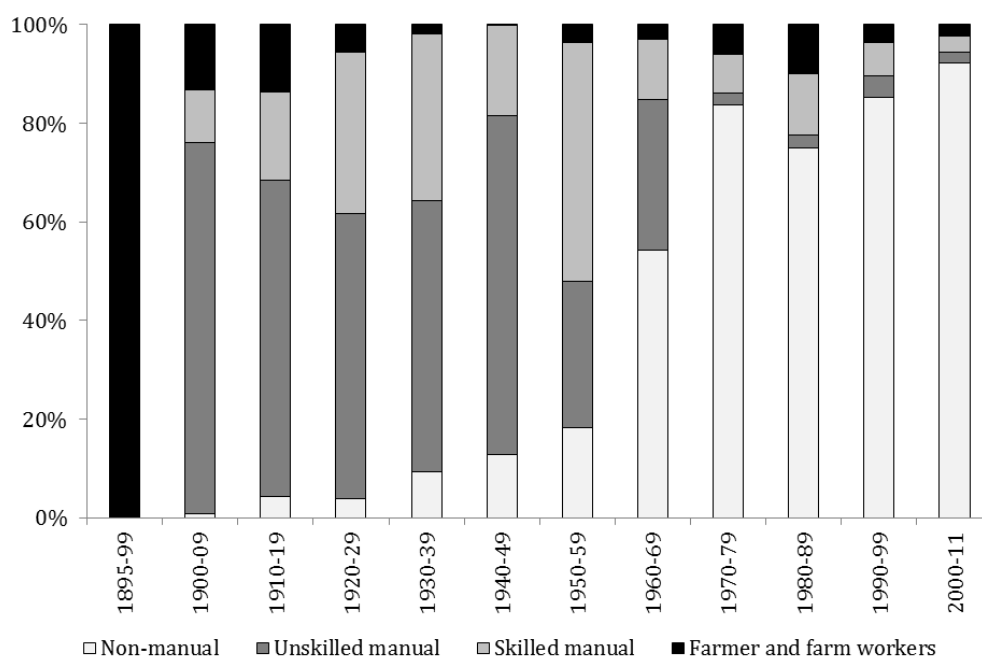
Note: The distribution of occupations into the social groups follows the HISCLASS scheme (Van Leeuwen and Maas 2011). *Data:* see text.

Building on the HISCLASS classification, Figures 6 and 7 illustrate the distribution of occupations of men and women by social group. It follows that Kampala was almost entirely dominated by agricultural activities (black) when Uganda became a British Protectorate in 1894: practically all our sampled males were recorded as ‘Peasant’ or ‘Farmer’ (Table A1). In the decade following the arrival of the British (i.e. 1900-09) Protestant Kampala (as represented by our sample) had already undergone a dramatic transformation. Skilled, non-agricultural, blue-collar work (light grey) had increased substantially among Protestant men, with occupations like ‘Carpenter’ and ‘Tailor’ starting to appear (Figure 6). White-collar work (white) also grew, from 1% to a staggering 20% in the first decade of the 20th century, with jobs such as ‘Clerk’, ‘Teacher’, and ‘Trader’ now emerging. White-collar work for men

¹⁰ We are grateful to Marco H.D. Van Leeuwen for annexing our Ugandan data into HISCO/HISCLASS, enabling us to extract information about individual working skills of our sampled population. In those rare cases for which the HISCO scheme does not contain our occupational titles (such as ‘witch doctor’) we have made individual assessments aided by Ugandan labour historians of Mountains of the Moon University.

became generally more common during the colonial era: by the time of Uganda’s independence, in 1962, nearly four in five males were employed in white-collar jobs. The occupational structure for women also changed dramatically following independence in the 1960s (Figure 7). However, while men chiefly ventured into skilled and white-collar work over the course of the colonial era, the range of economic opportunities open to women was comparatively limited. Women’s work was persistently dominated by manual labour, first unskilled (dark grey) and later skilled (light grey) work. Notably, less than 20% of sampled women were employed in white-collar (high-status) work toward the end of the colonial era, against 80% of all men. Those findings resonate with qualitative surveys from the 1960s of Kampala by Mandeville (1979), which state that in colonial Kampala “trade was virtually barred to a respectable woman”, and women’s employment outside the home rather uncommon (Elkan 1956a: 38-48, Elkan 1956b, Kyomuhendo and McIntosh 2006: 98-105).

Figure 7: Distribution of occupations by social class, women

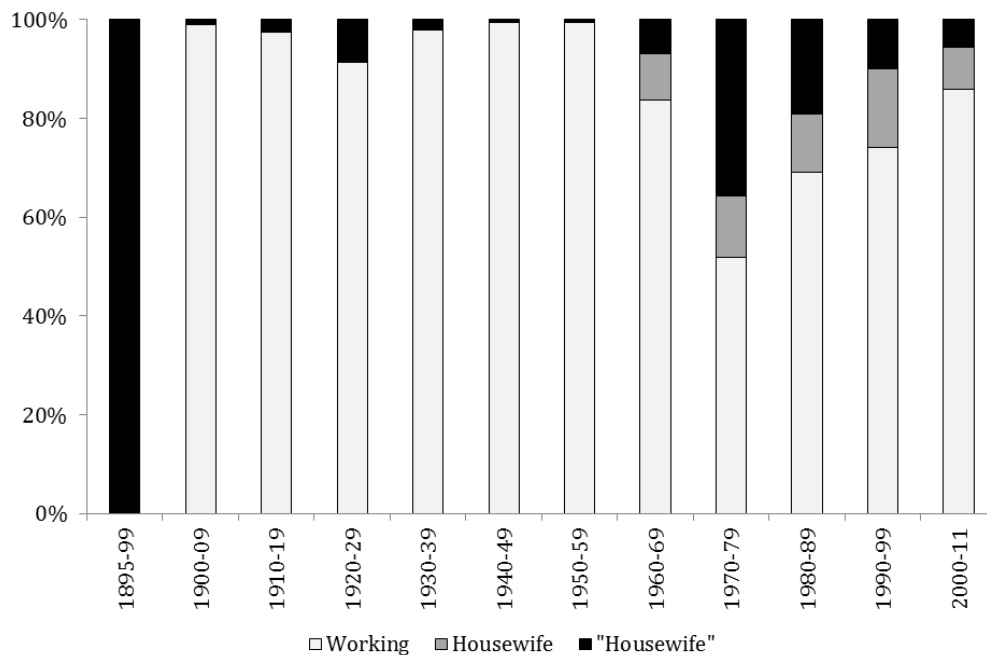


Note: The distribution of occupations into social class follows the HISCLASS scheme (Van Leeuwen and Maas 2011). Housewives and imputed housewives were excluded from the sample. The decade 1900-09 effectively only includes the years 1908-09.

The drastic changes in the occupational structures among men and women after 1900 deserve an explanation. It needs to be kept in mind that the church books covering the years 1899-1907 were lost, meaning that the decade 1900-1909 effectively only concerns the years 1908-09. That in turn means the transition was probably slightly less radical than Figures 6 and 7 suggest. The structural changes could of course also reflect an adjustment in the way

that the missionaries recorded occupational titles. However, more plausible appears that early male Protestant converts had attended missionary schools which qualified them for the new occupations that the missionary church and the British administration offered, explaining why job titles such as ‘Clerk’, ‘Carpenter’, and ‘Teacher’ had emerged so frequently among men during this period.

Figure 8: Women’s labour market participation rates by decade



Note: “Housewife” (in citation marks) means the occupation was imputed from the fact that the bride had no occupation recorded while the groom did (see text). The decade 1900-09 effectively only includes the years 1908-09.

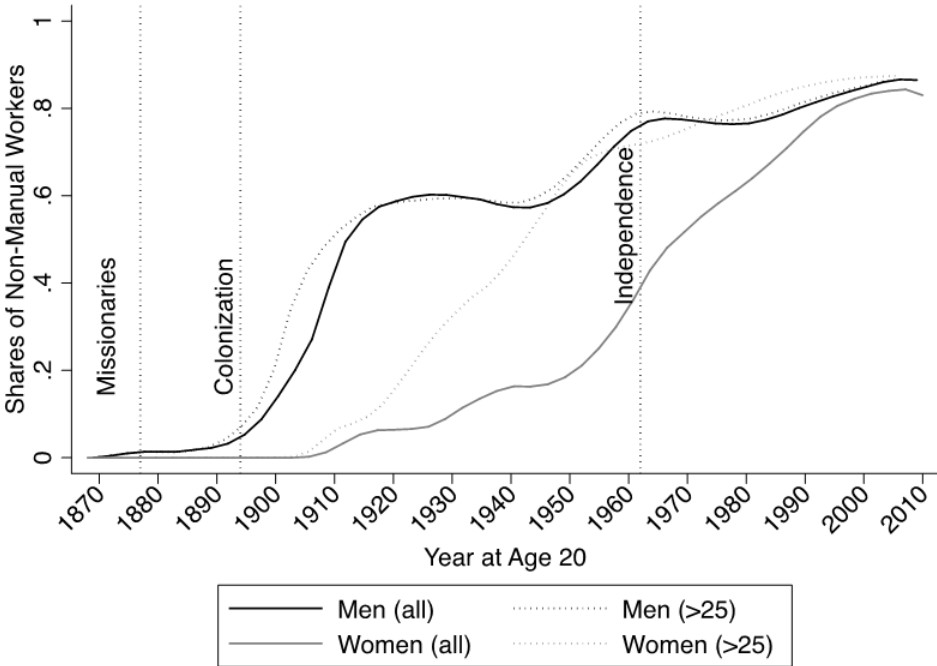
Female labour market participation rates can also be studied using our data. Figure 8 shows the evolution in the share of women recorded with an actual occupational title (white). Women recorded as ‘housewife’ (dark grey), or who had no title recorded at all, i.e. our so-called ‘imputed’ housewives (black), were very likely working in agriculture at home or contributing to the household income by ‘working on their own account in bazaar or service occupations’, as Boserup (1970: 178) phrases it. So the radical changes in women’s occupational structure after 1900 (Figure 7) could reflect a new practice among women of now reporting their by-occupation.¹¹ After largely disappearing during the colonial period, housewives (imputed and actual) re-emerge following Uganda’s independence. Their

¹¹ It’s noteworthy that in Kampala a frequent occupation, in particular among single women was prostitution (Elkan 1956b, Southall and Gutkind 1957, Little 1973: 90-92). However, we do not find such “occupations” reported in the Anglican sample for the reason that we are capturing married women who are generally not engaged in such occupations, and even if, they were unlikely to have been revealed at a church wedding.

frequency peaked in the 1970s, with nearly 50% of all women appearing in the church registers as housewife or imputed housewife. This, interestingly, coincides with Idi Amin’s notorious campaign against women working outside the household, suggesting that African post-colonial policy may have had temporary gender effects (Kyomuhendo and McIntosh 2006). Our regression analysis below sheds further light on that question.

The coding of our occupations using HISCLASS affords us a deeper look into the gendered evolution of work status captured by blue- versus white-collar work. Figure 9 shows how differences in the work status among men and women emerged during the colonial economy and continued to grow up until the 1940s. Three decades after Uganda became British – a point during which 50% of the sampled men were employed in white-collar work – only 10% of the sampled women engaged in this type of work. But from the 1950s on, the gender gap in work status narrowed, and today it is virtually gone. When we correct for age-structure effects (dotted lines) we can see that women marrying after the age of 25 caught up with men even earlier. This supports the Boserupian idea that African social norms encouraged women to marry young, and that women who were able to pursue a work career prior to marriage were perfectly capable of entering into high-status work (Boserup 1970). The regression analysis below addresses this question further.

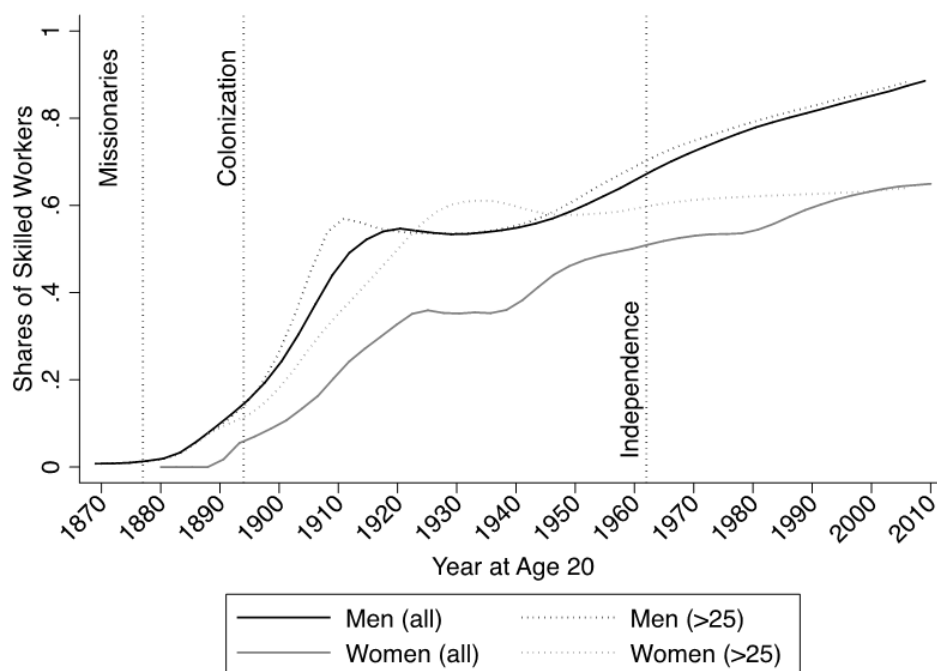
Figure 9: Share of white-collar workers by sex



Note: A white-collar worker is someone who is deemed so according to the HISCLASS scheme (Van Leeuwen and Maas 2011). Housewives and imputed housewives are not included in the graph. *Data:* see text.

Figure 10 illustrates the share of skilled workers by sex.¹² It shows skilled workers were highly uncommon during the pre-colonial era, but that they became much more common for both sexes after Uganda became British. Even by 1910, the share of skilled workers had reached 50% for men and 30% for women. Interestingly, although premium for skilled work was more than twice as large for male skilled labour than unskilled work in Kampala in the early 1920s, and more than three times in the early 1940s and late 1950s (Frankema and Van Waijenburg 2012), the shares of skilled male and female workers stagnated during large parts of these periods. After 1950, the share of skilled workers gradually rose to reach 90% for men and 60% for women today. Remarkably, most of the formation of human capital (measured this way) took place during the early colonial period, emphasising the role of Europeans for human capital accumulation among Christian Africans in Kampala. Figure 10 also shows that gender inequality in working skills increased steadily over the course of the colonial and post-colonial periods.

Figure 10: Share of skilled workers by sex

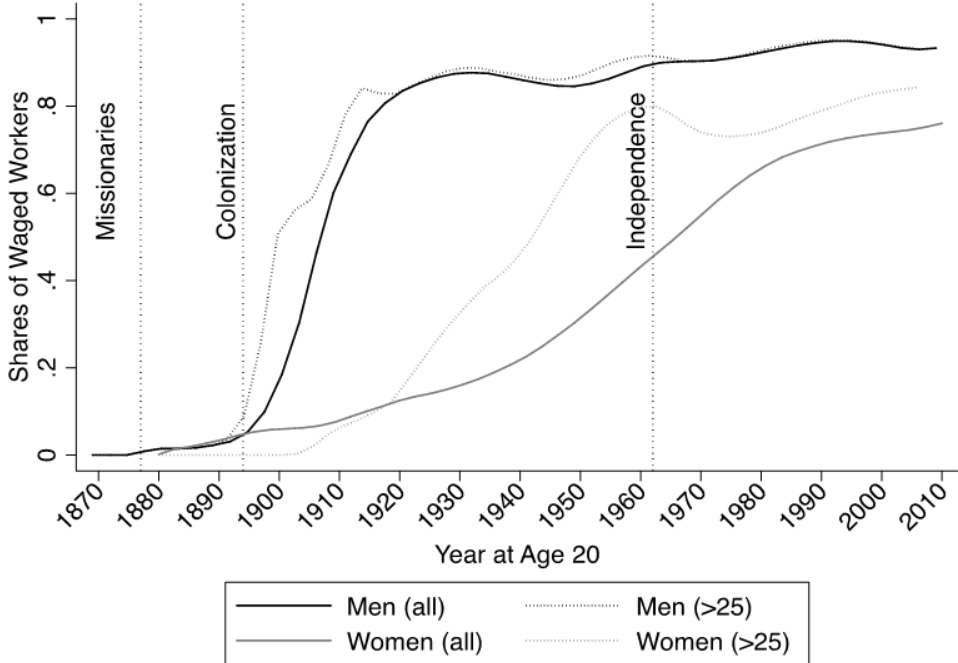


Note: A ‘skilled’ worker is a worker holding an occupation deemed medium-skilled or highly-skilled according to the HISCLASS scheme (Van Leeuwen and Maas 2011). Housewives and imputed housewives are not included. University students (2%) and chiefs and sub-chiefs (1%) are not coded by the HISCLASS scheme, but they appear in the graph coded as skilled workers due to their administrative labour. *Data:* See text.

¹² University students (2%) and chiefs and sub-chiefs (1%) are not coded by the HISCLASS scheme, so we have coded both these groups as skilled and waged workers.

The occupational titles can also be split into waged and unwaged work.¹³ This is especially helpful for shedding light on the extent of women’s formal labour market segregation. Interestingly, job titles that in a western context would be categorised as waged work, such as ‘Dressmaker’ and ‘Weaver’, indisputably fall into the category of self-employment in Uganda. Self-employment for women often meant informal work carried out in the realm of the domestic sphere, with the goods produced sold in a local market place (hence unwaged work). It exemplifies what Boserup (1970: 178) meant by women ‘working on their own account in bazaar or service occupations’. In contrast, job titles such as ‘Teacher’, ‘Nurse’, and ‘Midwife’ all fall into the category of waged (i.e. formal) employment.

Figure 11: Share of workers in waged employment by sex



Note: Housewives and imputed housewives are excluded. “Chief” and Sub-chief” are mapped into salaried professions, as ‘indirect-rule’ chiefs were on the British pay roll according to the Uganda Agreement of 1900. They operated as agents of colonial rule, collecting taxes and administering justice at the district and parish level (Mamdani 1996: 141-142).

The same categorisation applies to male jobs, with job titles like ‘Accountant’, ‘Clerk’, and ‘Teacher’ coded as formal (waged) labour and ‘Peasant’, ‘Farmer’, and ‘Tailor’ coded as informal (unwaged) work. Figure 11 illustrates the rates of waged employment by sex, showing the remarkable transformation of Kampala from a largely informal society to a

¹³ We are particularly grateful to former Ugandan Minister of Education, Prof Edward Rugumayo, for his help with coding our occupations into waged and unwaged work.

largely formal economy. It demonstrates how men rapidly found their way into formal-sector jobs after colonisation: in just 30 years the share of formally-employed men rose from less than 10% to an astonishing 90%.

Figure 11 also shows how gender inequality in waged employment was linked to women's segregation from formal work: as late as the 1940s, some 50 years after Uganda became a British Protectorate just 20% of the sampled women were employed in formal work compared with 90% of men. The reason is not that women did not work: only 12% on average were recorded as 'Housewife' or imputed housewife during the colonial era. It was more that most women earned a living outside of the formal labour market (Boserup 1970, Rodney 1972). The 20% of wage-earning females were overwhelmingly absorbed in health and educational occupations. In this sense, wage labour niches, outside the domestic context and open to (educated) women were exclusively provided by Christian mission schools and hospitals. Furthermore, the *Enumeration of African Employees* conducted in 1952 registered not more than 630 women¹⁴ for Kampala Municipality versus 29,600 males (Uganda Protectorate 1953). In this sense and despite women's evident marginalization in the formal labour market, Figure 11 illustrates that from the late 1920s onwards more than 10% of sampled women accessed waged labour, which suggests that our female Protestants might have been in a slightly better position to access paid labour during the mid and late colonial phase than the average female citizen of Kampala at that time.

It is often argued that colonial gender inequality was sustained in the post-colonial period, because male-dominated politics did little to correct the gender imbalances (Akyeampong and Fofack 2013, 2014). Our data thus tell a rather different story: after 1950, and shortly before Uganda's independence, the share of women employed in formal-sector jobs began to increase, growing from 20% in 1950 to reach 70% today. While it is true that a significant gender gap in wage labour market participation still remains, its contemporary size appears minor compared to that of the colonial era.

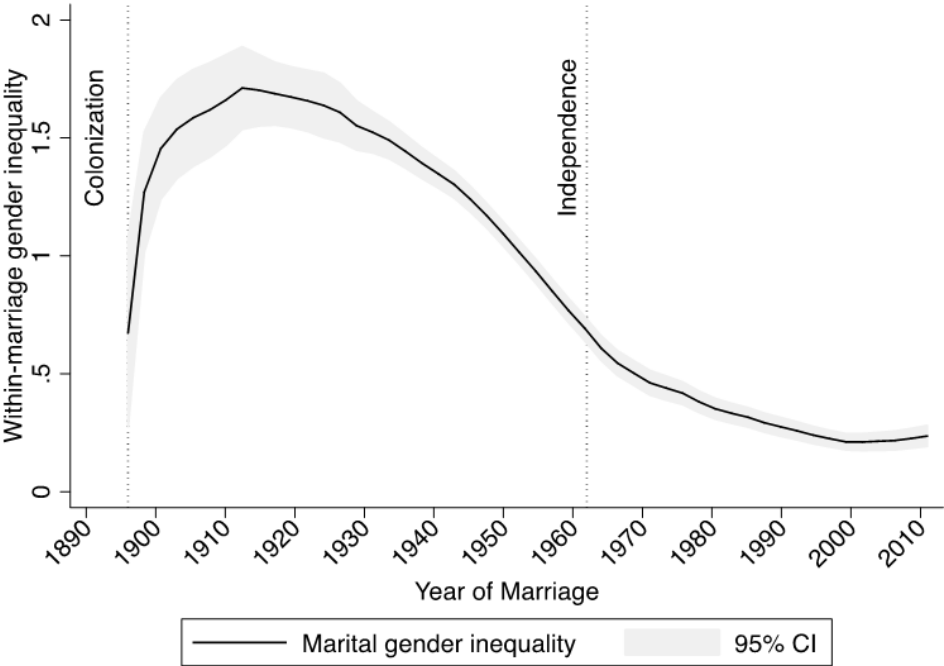
5. Multivariate regression and sensitivity analyses

Up to this point we have used our data to illustrate some developments in the aggregate. Our micro-level statistics enable us, however, to take a deeper look at the role of time and social

¹⁴ This figure is likely to underestimate women's wage labour. Note that the 1952 Enumeration excluded seasonal employees in ginneries and coffee plantations, in both of which women were commonly engaged in. Moreover, according to Elkan (1956a: 38) children's nurses and shop assistants did not appear in the enumeration because their employers rarely employed more than four persons, necessary to appear in the Enumeration. However, even if these omissions were to halve the actual figure for women's paid employment it becomes clear that the number would remain insignificant compared to the total labour force.

background for gender inequality and women’s economic segregation. To this end, we construct a performance score for each of our sampled individuals. The score is designed so that the individual receives one point for each of the following attainments: literacy, numeracy, working skills, white-collar work, and waged work. Hence, the performance score has a maximum of five and a minimum of zero. We then use the individual performance scores to calculate an index for gender inequality within marriage. This comes about simply by subtracting the bride’s performance score from the performance score of the groom.

Figure 12: Gender inequality within marriage



Note: Marital gender inequality is the difference between the groom’s and the bride’s performance scores (see text). *Data:* see text.

Figure 12 shows the index for marital gender inequality, confirming the message of previous graphs that gender inequality first increased and later decreased during the colonial era. Furthermore, in order to explore the role of the socio-economic background of our grooms and brides, we subdivide fathers of groom and bride into five crude social groups based on their occupational titles. The composition is shown in Table 3. These five groups are: chiefs, peasants, craftsmen, mission waged workers and non-mission waged workers.

Table 3: Individual performance scores of father’s social group

Chiefs	Peasants	Craftsmen	Mission workers	Non-mission workers
Chiefs	Cottongrower	Barkclothmaker	Archdeacon	Accountant
Sub-chief	Cowherd	Basketmaker	Bishop	Businessman
	Cultivator	Blacksmith	Catechist	Butcher
	Farmer	Brickmaker	Church minister	Clerk
	Fisherman	Builder	Church teacher	Cook
	Gardener	Carpenter	Church warden	Driver
	Hunter	Mason	Clergy	Engineer
	Peasant	Matmaker	Clerk in Holy Order	Headman
	Planter	Potter	Dispenser	Labourer
	Servant	Tailor	Doctor	Mechanic
	Shepherd	Weaver	Lay reader	Policeman
			Medical assistant	Printer
			Nurse	Shopowner
			Priest	Soldier
			Teacher	Trader

Table 4 reports the results of regressing the groom’s and bride’s performance score (columns 1 and 2, respectively) on a number of socio-economic factors, including the father’s social group and controlling for time fixed effects.¹⁵ This informs us about several matters. Starting with our individual background variables, it does not surprise us that grooms who are living in Kampala perform significantly better than grooms living elsewhere (i.e. beyond a radius of 10 km of the centre of Kampala). The same is true of brides married to a groom who lives in Kampala. The location of the groom has, however, no influence on marital gender inequality (Table 4, columns 3 and 4), so gender inequality within marriage is not a specific rural or a specific urban phenomenon. Another matter of interest concerns the size of the spousal age gap. While this plays no significant role for the performance of the groom, the size of the spousal age gap exercises a negative effect on the bride, both in terms of her individual performance and for her gender inequality within marriage. This conclusion chimes with the findings of Carmichael (2011) that the size of the spousal age gap is positively correlated with female disempowerment within developing countries.¹⁶

Social background, captured by the father’s social group, is important both for the performance of the offspring (the grooms and the brides) and for their gender inequalities within marriage. Not surprisingly, offspring of the elites (chiefs and sub-chiefs) perform significantly better than offspring of peasants (the social-group reference category in Table 4). Gender inequalities within marriage are also lower among elite offspring, mainly because

¹⁵ For ease of interpretation of the estimates, Table 4 reports the results of a standard OLS regression model. The results are identical, in terms of statistical significance, to using an Ordered Probit model.

¹⁶ Note that the size of the spousal age gap is independent of whether or not a previous customary marriage took place.

elites appear to put relatively large emphasis on the performance of their daughters (cf. the size of the estimate). Offspring of fathers employed in waged work (mission and other waged jobs) also perform significantly better than descendants of peasants. However, while offspring of fathers employed in mission work have the lowest gender inequality score among all social groups, offspring of fathers employed in non-mission waged work are subject to higher inequality within marriage than descendants of peasants. The reason for this may be that fathers in non-mission waged work place relatively greater emphasis on the performances of sons than daughters than others (cf. the size of the estimates). Descendants of fathers that are craftsmen, i.e. who engage in informal, unwaged work, perform even worse than descendants of peasants. This has no bearings on their marriage inequality, probably because craftsmen place equally little emphasis on the education of their daughters and sons.

The difference in the performances of females by social background show that discrimination against women was very much an African social class phenomenon, with certain groups placing more emphasis on the performances of daughters than others. The pattern is rather clear: daughters of fathers involved in activities directly linked to Europeans (i.e. chiefs, mission workers, and participants in the formal economy) performed significantly better than those whose fathers worked in the traditional sectors, either as peasants or in informal craftsmanship (i.e. basketmakers or barkclothmakers). Gender inequality within marriage largely repeats that pattern, being significantly lower among the offspring of elites or mission workers than among those of fathers working in traditional sectors.

One of the key questions we set out to ask was whether or not we can detect a colonial legacy of gender inequality and of female marginalization. The time fixed-effects in Table 4 can help cast light on those matters. We use decadal time dummies throughout, except for the initial period that covers the five-year period from 1895 to 1899 (the time reference category of Table 4). The reasoning behind this is that those couples that married very early into the colonial period were not yet influenced by colonial activities. Figures 6 and 7 above provide ample support for this: major changes to the occupational structures among men and women caused by the colonizers did not occur before 1900. Hence, the gender inequality existing in the pre-colonial period, seem to be captured well by those that married prior to 1900.

The time dummies show that Europeans exerted a positive influence on the average performance of males (Table 4, Column 1). In the first decade of the 20th century, the average performance score of men had increased by 1.76 points compared to their late 19th-century equivalents. From then on, the male performance score gradually increased. By the end of the colonial period (i.e. in 1950-99) the score was up by 2.54 points compared to pre-colonial

times. The post-colonial period witnessed further progress, and the average score of males today is 3.33 points higher than that of their pre-colonial counterparts. It is interesting to note that most of the improvements in the men's performance score took place during the colonial periods.

Table 4: Individual performances and marital inequality

Model: OLS	Performance Score Groom	Performance Score Bride	Marital Gender Inequality Score Groom	Marital Gender Inequality Score Bride
Groom living in Kampala	0.08*** (-0.66)	0.07*** (-0.61)	0.02 (-0.66)	0.02 (-0.61)
Spousal age gap	-0.01 (-7.28)	-0.02*** (-11.00)	0.01*** (-4.47)	0.01*** (-3.74)
Father chief	0.14*** (-2.91)	0.27*** (-5.13)	-0.04 (-0.57)	-0.15** (-2.46)
Father craftsman	-0.15*** (-2.71)	-0.08 (-1.56)	-0.06 (-0.77)	0.03 (-0.48)
Father mission worker	0.18*** (-4.80)	0.45*** (-11.06)	-0.06 (-1.18)	-0.34*** (-7.16)
Father other wage work	0.11*** (-3.90)	0.09*** (-3.38)	0.05 (-1.43)	-0.02 (-0.55)
1900-09	1.78*** (-7.06)	0.20 (-0.71)	1.57*** (-4.70)	1.55*** (-4.68)
1910-19	2.21*** (-9.90)	0.75*** (-2.99)	1.42*** (-4.83)	1.44*** (-4.93)
1920-29	2.70*** (-12.65)	1.21*** (-5.08)	1.44*** (-5.11)	1.51*** (-5.39)
1930-39	2.72*** (-12.67)	1.48*** (-6.17)	1.17*** (-4.15)	1.25*** (-4.42)
1940-49	2.70*** (-13.11)	1.57*** (-6.81)	1.08*** (-3.99)	1.14*** (-4.18)
1950-59	2.57*** (-12.48)	1.89*** (-8.16)	0.65** (-2.38)	0.70** (-2.58)
1960-69	2.96*** (-14.31)	2.56*** (-11.06)	0.34 (-1.26)	0.41 (-1.50)
1970-79	3.22*** (-15.57)	3.10*** (-13.39)	0.08 (-0.31)	0.13 (-0.49)
1980-89	3.08*** (-14.97)	2.96*** (-12.86)	0.08 (-0.29)	0.13 (-0.46)
1990-99	3.20*** (-15.56)	3.21*** (-13.95)	-0.05 (-0.18)	-0.01 (-0.04)
2000-11	3.36*** (-16.39)	3.35*** (-14.59)	0.00 (-0.01)	0.02 (-0.08)
Constant	1.05*** (-5.15)	0.85*** (-3.72)	0.20 (-0.74)	0.19 (-0.71)
N	10,372	10,372	10,372	10,372
R²	0.132	0.358	0.123	0.126

Note: Housewives and imputed housewives were excluded from the analysis. Individual performance scores summarise the score (one or zero) in each of these five areas: literate, numerate, skilled work, white-collar work, and waged work (see text). Marital Inequality is the groom's performance score minus that of the bride. The spousal age gap is the groom's age at marriage minus the age at marriage of the bride. The reference category for father's occupation is 'Peasant' and for time is the sub-period 1895-99. The OLS model is used for ease of interpretation; the statistical significances remain if we use an Ordered Probit model instead. Because of problems of multicollinearity between the occupational groups of fathers, the regression of marital inequality was run separately for grooms and brides (Columns 3 and 4). t-statistics in parentheses. * p<0.10, ** p<0.05, *** p<0.01. *Data:* see text.

Turning to women, it was only after 1910 that they statistically outperformed their pre-colonial counterparts. The average improvement – 0.76 points up since 1895-99 – was not as impressive as the male improvement of 2.19 points by that decade. But women gradually gain in on men, having increased their performance score by 1.90 points by the end of the colonial period (in 1950-59) against an increase of 2.54 points among men. They further gained in on men during the post-colonial period, and today the improvement in women’s average performance score matches that of men (3.35 point for women against 3.33 points for men). The only setback episode across the entire period of observation was during Idi Amin’s presidency in the 1970s. The setback concerned men and women alike, and it is barely detectable in terms of marital gender inequality.

Is there a colonial legacy of gender inequality among our sampled population? This question is easy to answer using the decadal dummies. Marital gender inequality increased significantly, immediately after 1900. After the initial peak in the 1920s, when men were on average one and a half points ahead of women, gender inequality gradually declined. By the end of the colonial era, in 1950-59, men were roughly half a point ahead of women. After independence, gender inequality within marriage was not significantly different from its pre-colonial level, which was some 0.2 points in the favour of men (cf. the constants in Table 4, Columns 3 and 4). Today, marital gender inequality among our sampled Protestant population, despite the fact that it was very large during the colonial era, is virtually non-existent.

Our conclusion regarding the trends in gender inequality faces the problem that the process of conversion to Christianity may have been uneven. Although Christian missionaries were undoubtedly dedicated to involving all sections of society in their religion, a likely scenario is that the first Africans to convert to Christianity were those that stood to gain from a close connection with the new colonial rulers, notably the local elites. Subsequently, as the gospel caught on, the elite movement grew into a mass-movement. An uneven process of conversion of this kind raises two concerns. The first is to do with compositional effects: if gender inequality among the local elites evolved differently from that of the rest of the population, then the pattern of gender inequality portrayed in Figure 12 may not reflect the actual trends in gender inequality. The second concern is that our time reference category in Table 4 would only apply to the elites and not to the wider population. For these two reasons, our conclusion above may be flawed.

A straightforward way in which to deal with such sample selection bias is to hold the social strata studied constant across time. To this end, we have constructed two sub-samples

based on our information about the social background of the spouses. In the first sub-sample we remove those brides and grooms whose fathers we suspect stood to gain from close contact with the colonial state, i.e. the chiefs, sub-chiefs, and mission workers. In the second sub-sample, we focus solely on those brides and grooms whose fathers belonged to the peasant class (see Table 3). Table 5 shows the results of running the same regression as in the main analysis (Table 4), but with the sub-sample not including spouses with an elite background.

Table 5: Individual performances and marital inequality, excluding elites

Model: OLS	(1) Performance Score Groom	(2) Performance Score Bride	(3) Marital Gender Inequality Score Groom	(4) Marital Gender Inequality Score Bride
Groom living in Kampala	0.09*** (-4.50)	0.07*** (-2.96)	0.03 (-1.28)	0.01 (-0.46)
Spousal age gap	-0.01*** (-7.30)	-0.02*** (-9.88)	0.01*** (-3.52)	0.017*** (-3.28)
Father craftsman	-0.13** (-2.39)	-0.09 (-1.59)	-0.04 (-0.59)	0.04 (-0.56)
Father other wage work	0.11*** (-3.89)	0.09*** (-3.33)	0.05 (-1.39)	-0.02 (-0.50)
1900-09	1.68*** (-6.25)	0.19 (-0.66)	1.48*** (-4.21)	1.51*** (-4.42)
1910-19	2.17*** (-9.47)	0.75*** (-2.94)	1.40*** (-4.66)	1.39*** (-4.66)
1920-29	2.71*** (-12.24)	1.25*** (-5.12)	1.40*** (-4.81)	1.51*** (-5.23)
1930-39	2.68*** (-12.19)	1.43*** (-5.80)	1.09*** (-3.76)	1.33*** (-4.61)
1940-49	2.71*** (-13.09)	1.58*** (-6.84)	1.11*** (-4.10)	1.13*** (-4.17)
1950-59	2.55*** (-12.34)	1.89*** (-8.19)	0.64** (-2.36)	0.70*** (-2.60)
1960-69	2.97*** (-14.34)	2.50*** (-10.78)	0.33 (-1.21)	0.46* (-1.69)
1970-79	3.23*** (-15.61)	3.10*** (-13.39)	0.08 (-0.28)	0.14 (-0.53)
1980-89	3.06*** (-14.86)	2.97*** (-12.88)	0.07 (-0.27)	0.12 (-0.45)
1990-99	3.20*** (-15.53)	3.22*** (-14.01)	(-0.0614) (-0.23)	-0.01 (-0.06)
2000-11	3.36*** (-16.37)	3.36*** (-14.65)	0.00 (-0.01)	0.01 (-0.05)
Constant	1.06*** (-5.16)	0.85*** (-3.72)	0.21 (-0.77)	0.19 (-0.71)
N	9,139	9,001	9,139	9,001
R²	0.139	0.349	0.111	0.117

Note: See Table 4. Here, those spouses whose fathers belonged to the elites, i.e. the social groups ‘Chiefs’ and ‘Mission Workers’ (see Table 3), are excluded. *t*-statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Likewise, Table 6 shows the results of using the sub-sample including only spouses with a peasant background. Inspection of Tables 4, 5 and 6 reveals that the patterns of gender

inequality among the sub-sample populations are identical to that of the full sample (Table 4). This builds confidence that our conclusion regarding the evolution of gender inequality is robust to an eventual sample selection bias driven by an uneven process of conversion to Christianity.

Table 6: Individual performances and marital inequality, only peasants

Model: OLS	(1) Performance Score Groom	(2) Performance Score Bride	(3) Marital Gender Inequality Score Groom	(4) Marital Gender Inequality Score Bride
Groom living in Kampala	0.14*** (-4.56)	0.07* (-1.84)	0.07* (-1.68)	0.03 (-0.74)
Spousal age gap	-0.01*** (-3.62)	-0.03*** (-7.33)	0.02*** (-3.83)	0.01** (-2.46)
1900-09	0.89 (-1.22)	0.97 (-1.62)	1.84* (-1.94)	1.80** (-2.56)
1910-19	2.02*** (-5.18)	1.04** (-2.01)	1.19** (-2.35)	0.84 (-1.39)
1920-29	2.45*** (-7.62)	1.60*** (-4.01)	1.26*** (-3.02)	1.61*** (-3.43)
1930-39	2.63*** (-8.69)	1.48*** (-3.97)	0.88** (-2.25)	1.17*** (-2.68)
1940-49	2.67*** (-9.61)	1.77*** (-5.06)	1.07*** (-2.95)	0.84** (-2.05)
1950-59	2.48*** (-8.90)	2.07*** (-5.97)	0.60* (-1.68)	0.51 (-1.25)
1960-69	2.95*** (-10.56)	2.65*** (-7.60)	0.37 (-1.02)	0.35 (-0.86)
1970-79	3.23*** (-11.58)	3.23*** (-9.26)	0.04 (-0.11)	-0.00 (-0.01)
1980-89	3.08*** (-11.07)	3.13*** (-9.00)	0.04 (-0.11)	-0.06 (-0.14)
1990-99	3.25*** (-11.69)	3.27*** (-9.40)	-0.04 (-0.11)	-0.12 (-0.29)
2000-11	3.40*** (-12.29)	3.54*** (-10.24)	-0.03 (-0.09)	-0.21 (-0.51)
Constant	1.01*** (-3.67)	0.73*** (-2.12)	0.17 (-0.48)	0.34 (-0.85)
N	4,220	3,645	4,220	3,645
R²	0.143	0.295	0.085	0.090

Note: See Table 4. Here, only those spouses whose fathers belonged to the social group ‘Peasants’ (see Table 3) are included. *t*-statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The gender Kuznets curve captured in Figure 12 above warrants further explanation. What caused the initial take-off in gender inequality, and what created the later turning point? Also of interest is whether the gender Kuznets curve was unique to Kampala, or if gender inequality evolved in a similar fashion elsewhere in Africa. The initial rise in gender inequality in Kampala may have been the result of two circumstances: pre-colonial gender norms and the introduction of the British colonial tax system. Because poll and hut taxes were explicitly collected from Ugandan men, alongside a number of (largely unpaid) labour

obligations (Ehrlich 1956, Hansen 1986), waged work was considered a male domain, both by the colonial state and African men (Powersland 1952, Elkan 1956a: 38-48, Boserup 1970: 42-43). Adding to that, formal work for women – for a male employer in particular – was despised by Ugandan men (Elkan 1956a: 38-45, Mandeville 1979, Kyomuhendo and McIntosh 2006: 98-105), which relegated women to the production of domestic handicrafts (Ilfie 1987: 182). Their views resonate with Boserup's hypothesis that a key reason why women were discouraged from entering into formal employment was that African men 'loathed the idea of their wives and daughters working under the authority of a foreign man' (Boserup 1970: 178).

Even in West Africa, where local trade was historically dominated by women and female literacy rates were comparatively high, there were relatively few African women employed in the formal sector compared to men (Boserup 1970: 178-81, Robertson 1984, Ekechi 1995, McIntosh 2009). For example, in the 1960 census of Accra Municipality in Ghana, there were ten times as many men than women employed in clerical work, including medical, administrative and managerial professions (Ghana 1964). Furthermore, Henderson and Whatley (2014) found that over the colonial era matrilineal systems in land and property inheritance, symbolizing elevated women's status, were increasingly replaced by patrilineal lineage rights.

The turning point in gender inequality in many African countries came around the time of independence. Having been a male preserve during most of Eastern Africa's colonial era, Boserup observed an increasing number of female Africans employed in public offices towards the end of the colonial period (Boserup 1970: 120-22). This event coincides with an expansion in African women's employment opportunities and in their freedom of mobility during the late colonial period (Elkan 1956a, 1956b, Kyomuhendo and McIntosh 2006: 98-104). Lawrance et al. (2006: 28) attribute these changes in part to the considerable efforts by colonial administrations to *Africanize* civil service positions.

But the role of missionaries should not be underestimated. In Uganda, mission hospital and school jobs as well as low-level bureaucratic positions became firmly established among educated African women – as early as the 1940s (Uganda Protectorate 1954, 1959) or even before that (Meier zu Selhausen 2014). This development may have spread to other Ugandan women who were more frequently witnessed to have gained positions outside the domestic sphere towards the end of the colonial period, including as market traders, street hawkers, cooks, beer brewers, and factory workers in textile, tea, and tobacco processing plants (Elkan 1956a, Southall and Gutkind 1957). Mission employment opportunities for women were also

observed in other urban centres of British Africa, including Kenya, South Africa, Ghana, and Nigeria (United Nations 1962: 38, Kuper 1965: 230, Boserup 1970: 178-181, Little 1973: 32, Robertson 1984, Ekechi 1995, McIntosh 2009).

Although the image of a gender Kuznets curve was not confined to Kampala, it remains an open question whether such trends in gender inequality also applied to African settler and mining colonies, where African males were often recruited, voluntarily or forced, for work in mines and on plantations (Boserup 1970: 7), or to countries and regions dominated by Islamic populations. Finally, a methodological challenge remains which is compounded by the absence of a counterfactual (i.e. how Africa would have fared without colonial rule) which complicates the measurement of the precise 'legacy' of past colonial interventions on present-day outcomes (Heldring and Robinson 2013).

6. Conclusion

The purpose of our study was to investigate the hypothesis that gender inequality and the marginalisation of women could be traced back to colonial times. Previous studies have emphasised that gender inequality and female disempowerment existed prior to the arrival of missionaries and colonisers, in terms of their exclusion from skill-intensive industries and autonomous market activities, as well as women's limited social and physical mobility (Hattersley 1908, Roscoe 1911, Reid 2002, Kyomuhendo and McIntosh 2006). But even if gender inequality and female labour market segregation did not arrive with European missionaries and colonial agents, their presence and influence significantly augmented imbalances between men and women concerning educational and occupational opportunities. Indeed, the new occupational opportunities that arrived with mission education and the development of colonial labour markets translated into unprecedented occupational mobility for men, while for women pre-colonial gender roles largely prevailed during most of Uganda's colonial history.

Nevertheless, both graphical and regression analysis shows that gender inequality after colonial independence was gradually decreasing and not significantly different from the pre-colonial period. Also, the colonial-period segregation of Anglican women, notably in terms of literacy skills, formal employment, and white-collar (high-status) work, appears minor compared to the levels of the colonial era. We thus contest the hypothesis of a colonial legacy of gender inequality and female labour market segregation among sampled Protestants in Kampala. Our social background analysis offers some hints, however, that rural Africa may look very different in this regard from urban Africa, today as well as in the past. Our data

showed that African men working in the realm of the traditional, informal economy (mainly peasants) appeared more likely to preserve gender inequality and female marginalization than men working in the modernized, formal economy. Higher female discrimination in present-day rural Africa seems to underscore this conclusion.

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Appendix

Table A1: The ten most common occupations and their coding, men

2000-11	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Businessman	0	0	1	0	432	15.0	15.0
2	Teacher	0	0	1	1	276	9.6	24.5
3	Accountant	0	0	1	1	269	9.3	33.8
4	Engineer	0	1	1	1	190	6.6	40.4
5	Farmer	1	1	1	0	110	3.8	44.2
6	Banker	0	0	1	1	100	3.5	47.7
7	Doctor	0	0	1	1	79	2.7	50.4
8	Driver	0	1	0	1	78	2.7	53.1
9	Technician	0	0	1	1	74	2.6	55.7
10	Marketer	0	0	0	1	59	2.0	57.7

1990-99	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Businessman	0	0	1	0	297	15.6	15.6
2	Teacher	0	0	1	1	203	10.7	26.3
3	Driver	0	1	0	1	101	5.3	31.6
4	Accountant	0	0	1	1	100	5.3	36.8
5	Farmer	1	1	1	0	94	4.9	41.8
6	Engineer	0	1	1	1	80	4.2	46.0
7	Technician	0	0	1	1	64	3.4	49.3
8	Banker	0	0	1	1	56	2.9	52.3
9	Doctor	0	0	1	1	47	2.5	54.7
10	Civil Servant	0	0	0	1	43	2.3	57.0

1980-89	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Businessman	0	0	1	0	349	16.9	16.9
2	Farmer	1	1	1	0	188	9.1	26.0
3	Teacher	0	0	1	1	133	6.4	32.4
4	Accountant	0	0	1	1	117	5.7	38.1
5	Driver	0	1	0	1	101	4.9	42.9
6	Technician	0	0	1	1	82	4.0	46.9
7	Mechanic	0	1	1	1	65	3.1	50.1
8	Clerk	0	0	0	1	63	3.1	53.1
9	Trader	0	0	1	1	58	2.8	55.9
10	Banker	0	0	1	1	57	2.8	58.7

1970-79	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Businessman	0	0	0	0	247	14.2	14.2
2	Clerk	0	0	1	1	115	6.6	20.7
3	Accountant	0	0	0	1	106	6.1	26.8
4	Teacher	0	0	1	1	104	6.0	32.8
5	Farmer	1	1	1	1	81	4.6	37.4
6	Trader	0	0	1	0	61	3.5	40.9
7	Salesman	0	0	1	1	59	3.4	44.3
8	Mechanic	0	1	0	1	54	3.1	47.4
9	Driver	0	1	1	1	43	2.5	49.8
10	Gardener	0	1	0	1	43	2.5	52.3

1960-69	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
	Clerk	0	0	0	1	172	15.7	15.7
2	Teacher	0	0	1	1	152	13.9	29.6
3	Farmer	1	1	1	0	68	6.2	35.8
4	Trader	0	0	1	1	58	5.3	41.1
5	Salesman	0	0	0	1	48	4.4	45.5
6	Mechanic	0	1	1	1	30	2.7	48.2
7	Accountant	0	0	1	1	28	2.6	50.8
8	Driver	0	1	0	1	24	2.2	53.0
9	Shopowner	0	0	1	0	21	1.9	54.9
10	Policeman	0	0	1	1	20	1.8	56.7

1950-59	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Clerk	0	0	0	1	294	16.7	16.7
2	Farmer	1	1	1	0	220	12.5	29.1
3	Teacher	0	0	1	1	157	8.9	38.0
4	Trader	0	0	1	1	141	8.0	46.0
5	Builder	0	1	0	1	126	7.1	53.1
6	Carpenter	0	1	1	1	126	7.1	60.3
7	Mechanic	0	1	1	1	84	4.8	65.0
8	Tailor	0	1	1	0	79	4.5	69.5
9	Driver	0	1	0	1	66	3.7	73.3
10	Medical assistant	0	0	0	1	34	1.9	75.2

1940-49	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Clerk	0	0	0	1	253	19.5	19.5
2	Trader	0	0	1	1	132	10.2	29.7
3	Farmer	1	1	1	0	127	9.8	39.5
4	Teacher	0	0	1	1	121	9.3	48.8
5	Carpenter	0	1	1	1	83	6.4	55.3
6	Driver	0	1	0	1	71	5.5	60.7
7	Builder	0	1	0	1	64	4.9	65.7
8	Mechanic	0	1	1	1	43	3.3	69.0
9	Medical assistant	0	0	0	1	40	3.1	72.1
10	Tailor	0	1	1	0	32	2.5	74.5

1930-39	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Clerk	0	0	0	1	198	19.8	19.8
2	Trader	0	0	1	1	105	10.5	30.3
3	Teacher	0	0	1	1	84	8.4	38.7
4	Farmer	1	1	1	0	79	7.9	46.6
5	Driver	0	1	0	1	58	5.8	52.4
6	Carpenter	0	1	1	1	45	4.5	56.8
7	Policeman	0	0	1	1	42	4.2	61.0
8	Chief	0	0	1	1	40	4.0	65.0
9	Medical assistant	0	0	0	1	31	3.1	68.1
10	Tailor	0	1	1	0	29	2.9	71.0

1920-29	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Clerk	0	0	0	1	139	22.6	22.6
2	Teacher	0	0	1	1	83	13.5	36.2
3	Trader	0	0	1	1	67	10.9	47.1
4	Medical assistant	0	0	0	1	36	5.9	52.9
5	Carpenter	0	1	1	1	33	5.4	58.3
6	Driver	0	1	0	1	33	5.4	63.7
7	Farmer	1	1	1	0	26	4.2	67.9
8	Peasant	1	1	0	0	26	4.2	72.2
9	Tailor	0	1	1	0	22	3.6	75.7
10	Chief	0	0	1	1	19	3.1	78.8

1910-19	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Clerk	0	0	0	1	89	17.0	17.0
2	Tailor	0	1	1	0	79	15.1	32.1
3	Peasant	1	1	0	0	65	12.4	44.5
4	Teacher	0	0	1	1	39	7.4	51.9
5	Chief	0	0	1	1	34	6.5	58.4
6	Carpenter	0	1	1	1	32	6.1	64.5
7	Trader	0	0	1	1	30	5.7	70.2
8	Sub-chief	0	0	1	1	19	3.6	73.9
9	Farmer	1	1	1	0	13	2.5	76.3
10	Soldier	0	1	0	1	11	2.1	78.4

1900-09	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Tailor	0	1	1	0	63	29.3	29.3
2	Trader	0	0	1	1	26	12.1	41.4
3	Teacher	0	0	1	1	18	8.4	49.8
4	Carpenter	0	1	1	1	17	7.9	57.7
5	Barkclothmaker	0	1	0	0	16	7.4	65.1
6	Clerk	0	0	0	1	10	4.7	69.8
7	Chief	0	0	1	1	9	4.2	74.0
8	Peasant	1	1	0	0	9	4.2	78.1
9	Bricklayer	0	1	1	1	6	2.8	80.9
10	Blacksmith	0	1	1	1	5	2.3	83.3

1895-99	Male Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Peasant	1	1	0	0	519	97.9	97.9
2	Chief	0	0	1	1	5	0.9	98.9
3	Teacher	0	0	1	1	3	0.6	99.4
4	Farmer	1	1	1	0	2	0.4	99.8
5	Clerk	0	0	0	1	1	0.2	100.0
6	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10								

Table A2: The ten most common occupations and their coding, women

2000-11	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Teacher	0	0	1	1	369	12.8	12.8
2	Businesswoman	0	0	1	0	314	10.9	23.7
3	Housewife	0	0	0	0	194	6.7	30.4
4	Accountant	0	0	1	1	172	6.0	36.3
5	Nurse	0	0	1	1	141	4.9	41.2
6	“Housewife”	0	0	0	0	128	4.4	45.6
7	Farmer	1	1	1	0	126	4.4	50.0
8	Secretary	0	0	0	1	112	3.9	53.9
9	Banker	0	0	1	1	109	3.8	57.7
10	Administrator	0	0	1	1	91	3.2	60.8
1990-99	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Teacher	0	0	1	1	291	15.3	15.3
2	Housewife	0	0	0	0	255	13.4	28.7
3	“Housewife”	0	0	0	0	157	8.3	36.9
4	Businesswoman	0	0	1	0	151	7.9	44.9
5	Secretary	0	0	0	1	123	6.5	51.3
6	Accountant	0	0	1	1	76	4.0	55.3
7	Tailor	0	1	1	0	62	3.3	58.6
8	Nurse	0	0	1	1	59	3.1	61.7
9	Farmer	1	1	1	0	56	2.9	64.6
10	University student	0	0	1	0	42	2.2	66.8
1980-89	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	“Housewife”	0	0	0	0	336	16.3	16.3
2	Housewife	0	0	0	0	208	10.1	26.3
3	Teacher	0	0	1	1	192	9.3	35.6
4	Secretary	0	0	0	1	186	9.0	44.6
5	Businesswoman	0	0	1	0	122	5.9	50.5
6	Farmer	1	1	1	0	121	5.9	56.3
7	Tailor	0	1	1	0	121	5.9	62.2
8	Craftswoman	0	1	1	0	76	3.7	65.9
9	Nurse	0	0	1	1	71	3.4	69.3
10	Clerk	0	0	0	1	62	3.0	72.3
1970-79	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	“Housewife”	0	0	0	0	582	33.3	33.3
2	Housewife	0	0	0	0	202	11.6	44.9
3	Secretary	0	0	0	1	186	10.7	55.6
4	Teacher	0	0	1	1	150	8.6	64.2
5	Nurse	0	0	1	1	67	3.8	68.0
6	University student	0	0	1	0	58	3.3	71.3
7	Clerk	0	0	0	1	57	3.3	74.6
8	Typist	0	0	0	1	53	3.0	77.6
9	Tailor	0	1	1	0	48	2.8	80.4
10	Farmer	1	1	1	0	47	2.7	83.1

1960-69	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Teacher	0	0	1	1	210	19.2	19.2
2	Needleworker	0	1	0	0	207	18.9	38.1
3	Housewife	0	0	0	0	101	9.2	47.3
4	Tailor	0	1	1	0	99	9.0	56.4
5	Nurse	0	0	1	1	80	7.3	63.7
6	“Housewife”	0	0	0	0	73	6.7	70.3
7	Typist	0	0	0	1	44	4.0	74.3
8	Secretary	0	0	0	1	40	3.7	78.0
9	Midwife	0	0	1	1	37	3.4	81.4
10	Weaver	0	1	0	0	27	2.5	83.8
1950-59	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Tailor	0	1	1	0	841	47.7	47.7
2	Weaver	0	1	0	0	389	22.0	69.7
3	Teacher	0	0	1	1	160	9.1	78.8
4	Nurse	0	0	1	1	95	5.4	84.1
5	Matmaker	0	1	0	0	90	5.1	89.2
6	Farmer	1	1	1	0	64	3.6	92.9
7	Midwife	0	0	1	1	33	1.9	94.7
8	Basketmaker	0	1	0	0	32	1.8	96.5
9	Clerk	0	0	0	1	10	0.6	97.1
10	Typist	0	0	0	1	9	0.5	97.6
1940-49	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Weaver	0	1	0	0	645	49.8	49.8
2	Tailor	0	1	1	0	230	17.8	67.5
3	Matmaker	0	1	0	0	177	13.7	81.2
4	Teacher	0	0	1	1	112	8.6	89.8
5	Basketmaker	0	1	0	0	46	3.6	93.4
6	Nurse	0	0	1	1	31	2.4	95.8
7	Midwife	0	0	1	1	18	1.4	97.2
8	Gardener	0	1	1	0	13	1.0	98.2
9	“Housewife”	0	0	0	0	8	0.6	98.8
10	Dressmaker	0	1	1	0	4	0.3	99.1
1930-39	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Matmaker	0	1	0	0	369	36.9	36.9
2	Tailor	0	1	1	0	324	32.4	69.2
3	Weaver	0	1	0	0	87	8.7	77.9
4	Teacher	0	0	1	1	67	6.7	84.6
5	Basketmaker	0	1	0	0	54	5.4	90.0
6	“Housewife”	0	0	0	0	21	2.1	92.1
7	Farmer	1	1	1	0	18	1.8	93.9
8	Midwife	0	0	1	1	15	1.5	95.4
9	Seamstress	0	1	0	0	10	1.0	96.4
10	Gardener	1	1	1	0	8	0.8	97.2

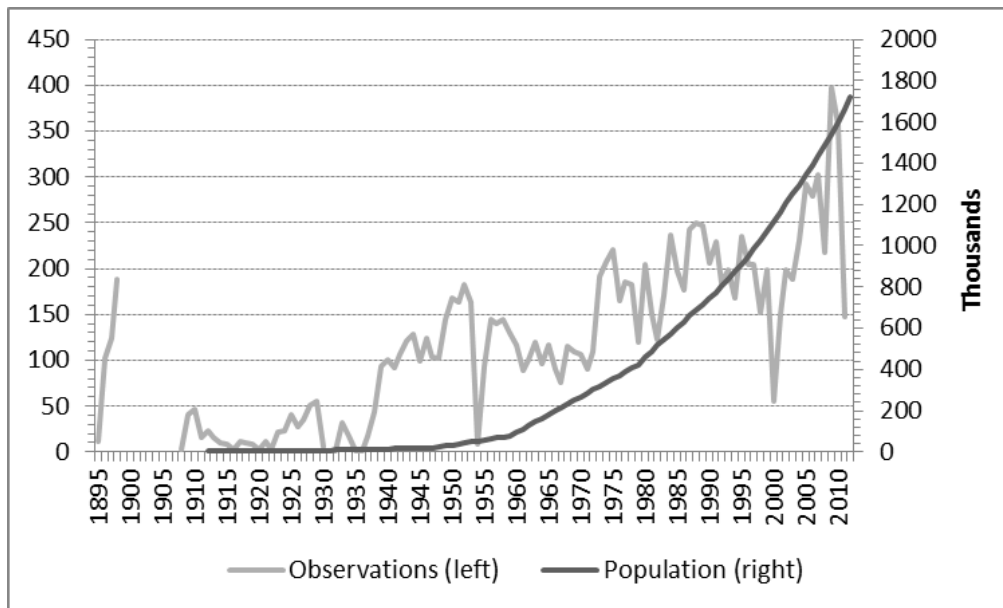
1920-29	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Matmaker	0	1	0	0	220	35.8	35.8
2	Tailor	0	1	1	0	182	29.6	65.5
3	Basketmaker	0	1	0	0	100	16.3	81.8
4	“Housewife”	0	0	0	0	53	8.6	90.4
5	Farmer	1	1	1	0	31	5.1	95.4
6	Teacher	0	0	1	1	16	2.6	98.1
7	Trader	0	0	1	1	3	0.5	98.5
8	Nurse	0	0	1	1	2	0.3	98.9
9	University student	0	0	1	0	2	0.3	99.2
10	Midwife	0	0	1	1	1	0.2	99.4

1910-19	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Matmaker	0	1	0	0	253	48.3	48.3
2	Tailor	0	1	1	0	83	15.8	64.1
3	Farmer	1	1	1	0	70	13.4	77.5
4	Seamstress	0	1	0	0	42	8.0	85.5
5	Basketmaker	0	1	0	0	30	5.7	91.2
6	“Housewife”	0	0	0	0	13	2.5	93.7
7	Teacher	0	0	1	1	11	2.1	95.8
8	Cook	0	1	1	1	7	1.3	97.1
9	Clerk	0	0	0	1	4	0.8	97.9
10	Nurse	0	0	1	1	3	0.6	98.5

1900-09	Female Occupation	Agri.	Manual	Skilled	Waged	Freq.	%	Cum.
1	Matmaker	0	1	0	0	124	57.7	57.7
2	Gardener	1	1	0	0	42	19.5	77.2
3	Farmer	1	1	1	0	17	7.9	85.1
4	Tailor	0	1	1	0	13	6.1	91.2
5	Basketmaker	0	1	0	0	12	5.6	96.7
6	Cook	0	1	1	1	3	1.4	98.1
7	“Housewife”	0	0	0	0	2	0.9	99.1
8	Teacher	0	0	1	1	2	0.9	100.0
9	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-

1895-99	Female Occupation	Skilled	Manual	Skilled	Waged	Freq.	%	Cum.
1	“Housewife”	0	0	0	0	509	96.0	96.0
2	Gardener	1	1	0	0	19	3.6	99.6
3	Farmer	1	1	1	0	2	0.4	100.0
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-

Figure A1: Sample size by marriage year and estimated population of Kampala



Note: The population of Kampala has been backwards projected on the basis of available census data. 5-year averages are applied.

Figure A2: Namirembe Cathedral in Kampala, c. 1894-1901



Source: Namirembe Diocese Archive, Kampala.

Figure A3: Drawing of a Sunday congregation at Namirembe Cathedral, c.1895



Source: Namirembe Diocese Archive, Kampala.

Figure A4: St. Paul's Cathedral Namirembe in Kampala, 1915-present



Source: Author (July 2012).

Figure A5: Example of marriage register page from St. Paul's Cathedral, Kampala, 22 May 1909

Page 5

1909 MARRIAGE solemnized in the cathedral church of st paul Hamirembe
in the Country of Uganda

No.	When Married	Name and Surname	Age	Condition	Rank or Profession	Residence at the Time of Marriage	Father's Name and Surname	Rank or Profession of Father
1957	May 22	Tomasi Zilidamu	25	Bachelor	carpenter	Bukesa	Mburo	carpent
		Evina Tumbiama	27	Spinster	mat maker	Kulambiro	Schaboya	part cloth maker

Married in the church of st paul according to the Rites and Ceremonies of the Church of England
by _____ or after banns By me H. W. D. Katakule

This Marriage was solemnized between us, Tomasi Zilidamu in the Presence of us, Evina Tumbiama + Elizabeth Sembalame + Elizabeth Kakama +

1909 MARRIAGE solemnized in the cathedral church of st paul Hamirembe
in the Country of Uganda

No.	When Married	Name and Surname	Age	Condition	Rank or Profession	Residence at the Time of Marriage	Father's Name and Surname	Rank or Profession of Father
1958	May 22	Uasito Salakaki	20	bachelor	Tailor	Keanbye	Nwera Muzimba	carpenter
		Solome alibauhe	24	Spinster	mat maker	Ksambya	sebu	part cloth maker

Married in the church of st paul according to the Rites and Ceremonies of the Church of England
by _____ or after banns By me H. W. D. Katakule

This Marriage was solemnized between us, Uasito Salakaki + in the Presence of us, Solome alibauhe + Seaka Sembalame + Semali Sembalame +

Figure A6: Example of marriage register cover from St. Paul's Cathedral, Kampala, 1897



Chapter 3: Missionaries and female empowerment in colonial Uganda: new evidence from Protestant marriage registers, 1880-1945

Abstract: Protestant missionaries have been praised for their comparatively ‘benign’ features concerning female education in Africa. Using a new dataset of 5,212 Protestant brides born between 1880 and 1945 from urban and rural Uganda, this paper offers a first pass at analyzing empirically the role of mission education on African women’s socio-economic position within the household. The paper finds that although, mission education raised the sampled brides’ literacy skills way above female national levels, they were largely excluded from participating in the colonial wage labour market. In this context, the missionary society presented an almost exclusive source of female wage labour in areas of religious service, schooling and medical care. While literacy alone did not affect women’s marriage behaviour, women who worked for the missionaries married significantly later in life and married men closer to their own age, signaling a shift in the power balance between parents and daughters and between husband and wife. On average, daughters of fathers deeply entrenched in the missionary movement had the highest chances to access wage employment, emphasizing the importance of paternal mission networks for Protestant women’s work outside the household during colonial times.

Keywords: Missions, Protestantism, Uganda, colonial economy, African women, education, wage labour, marriage patterns

JEL classification: J12, J16, N37, N97, Z12

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1. Introduction

The scholarly consensus holds that the colonial era led to a long-term deterioration of women's socio-economic position in sub-Saharan Africa.¹ Some of the oft-cited determinants include women's exclusion from the cultivation of cash-crops and agricultural training (Powersland 1954, Boserup 1970: 42); women's discrimination in the colonial cash-based economy and urban labour markets (Boserup 1970: 109, Little 1973: 32, Rodney 1972: 227, Lawrance et al. 2006: 27), as well as women's marginalization from political representation (Van Allen 1972, Rodney 1972).

Another strand of literature argues that Christian missionary societies, that provided the bulk of education in colonial British Africa (Frankema 2012), introduced and provided gender biased education that secluded women in the domestic realm (Boserup 1970, Rodney 1972, Akyeampong and Fofack 2014), and thus shaped another critical aspect in delineating African women's socio-economic position. On the contrary, according to John Iliffe (2007: 245), missionary societies also had an emancipating aspect, furthering female African's formal education and occupational skills through the creation of mission employment opportunities. Moreover, recent empirical studies have presented evidence that the historical presence of Christian missionaries generated important long-term effects on African culture (Nunn 2010), education (Gallego and Woodberry 2010, Frankema 2012, Okoye and Pongou 2014) and newspaper readership (Cagé and Rueda 2014). According to Nunn (2014), Protestants placed greater importance on female education than their Catholic contenders, because reading the Bible for both sexes was important for salvation.² Also Fourie et al. (2014) show that African women, residing at Protestant mission stations in the Cape Colony, proportionally even had higher literacy rates than men.

Using a newly collected longitudinal dataset of 5,212 African women, born between 1880 and 1945, drawn from Anglican marriage registers in rural and urban Uganda, this study investigates this claim one step further by empirically exploring whether Protestant missionary education had an emancipating effect on women's relative status and position within the household, *beyond* literacy achievements. In Uganda, marriage registers of the Anglican Church Mission Society (CMS) are among the earliest written records documenting the vital history of native spouses for the entire colonial era, comprising brides' and grooms' self-reported age at first marriage, occupations, location of residence and literacy status (inferred from signatures), as well as their fathers' occupations. Thus, this case-study follows

¹ Hereafter the shorter term 'Africa' is used for 'sub-Saharan Africa'.

² Similarly, Becker and Woessmann (2008) have demonstrated that Protestant education decreased the gender gap in basic education in nineteenth-century Prussia.

the recent wave of scholarship (e.g. Moradi 2009, Cogneau and Rouanet 2011, Austin et al. 2012, Wantchekon et al. 2013, Cogneau and Moradi 2014) that has demonstrated that case-studies using historical African micro-data present a real alternative to broad-brushed macro-studies, avoiding ‘compressing’ the history of different time periods and paths (Austin 2008, Hopkins 2009). Yet, compounded by the paucity of data on African women during the colonial era, previous work using archival data has focused almost exclusively on African men as units of analysis. In that sense, Anglican marriage registers present a unique source for studying African women in the past.

To assess the influence and mechanisms of Protestant mission education in shaping the sampled Protestant women’s socio-economic status three measures are constructed from the parish records: (1) literacy status, as a measure of human capital and proxy for female mission school attendance; (2) occupational titles, assessing women’s capacity to attain occupational skills and access wage employment; (3) women’s age at first marriage and spousal age difference, as an indicator of the power balance between parents and daughters and between husband and wife. In addition, the influence of the paternal occupational background on daughter’ socio-economic status is explored for each of the above measures.

This paper provides a first empirical look at the influence and mechanisms of Protestant mission education in Africa on women’s socio-economic position within the household. It shows that, although mission education raised the sampled women’s literacy skills markedly above the national average, women were largely excluded from colonial labour markets, accept for mission labour. In this sense, the missionary society presented an exclusive and culturally legitimate mechanism for female converts to enter a new life-cycle in which they could further their formal education and acquire occupational skills through employment opportunities in areas of religious services, schooling and medical care. Female labour market participation significantly delayed women’s uptake of marriage and decreased the spousal age difference, signaling enhanced autonomy in women’s choice of marriage partner. Yet, literacy alone had no statistically significant effect on female brides’ age at first marriage, or the spousal age difference. On average, daughters of fathers deeply entrenched in the mission movement had the highest likelihood to access wage (mission) labour, highlighting the importance of paternal missionary networks for female offspring.

2. Historical background

Women’s status in pre-colonial Buganda and Toro

The Buganda kingdom, situated along the fertile northern shore of Lake Victoria (see Figure 2), was a centralised state with feudal structures comprising a *kabaka* (king, Luganda), territorial lordships (different level of appointed chiefs) and a peasant class. Before colonial rule in 1894, Kibuga, today's location of Kampala, was the capital of the kingdom, where trading, political and administrative activities were centered. Its rain-fed fertile soils supported an extensive plantain cultivation which gave rise to a densely populated civilization (Ofcansky 1996). Greater Kibuga provided a home to about 70,000 tax-paying peasants, most of them owning their own plot of land for crop and livestock farming (Reid 2002: 38).³ The Toro kingdom in the West of Uganda, stretching along the Rwenzori Mountains, and sharing many of the environmental characteristics of Buganda, was originally part of the Bunyoro-Kitara kingdom founded in 1830 but only became fully independent in 1891 (Ingham 1975). Fort Portal was the capital of the Toro kingdom where the Toro royal enclosure was located, and regional trade was centralized.

Admittedly, little is known about African women's pre-colonial position because of a paucity of sources for the early periods. Yet, colonial missionary accounts, as well as narrative and anecdotal evidence can provide insights on the historical role of women in Buganda and Toro society. In both kingdoms men worked in the esteemed and skill-intensive barkcloth, tanning, pottery, canoe-building, and iron-working professions (Reid 2002: 97) from which women generally were excluded from. Men were also responsible for most of the regional and local commerce in ivory, slaves and handicraft products, as it was considered an ideological taboo for women to go out of the home to a market or to trade (Roscoe 1911).⁴ While men tended towards external labour, women worked within the confines of the household, responsible for the cultivation and preparation of food crops, provision of water and firewood, and the rearing of children (Hattersley 1908, Roscoe 1911, Wrigley 1957, Perlman 1966). The domestic weaving of baskets and mats is considered as the only 'industry' available for women in Buganda (Reid 2002: 89). Within the two societies women were subordinate to men (Perlman 1966) and cultural norms constrained women's mobility and appearance in public spaces (Roscoe 1911, Kyomuhendo and McIntosh 2006). Within this patriarchal system positions of power and authority (e.g. king and chiefs) were confined

³ There are no population numbers for the pre-colonial era. One of the earliest population estimates were provided by the *Colonial Blue Book* of 1910, revealing that about a quarter of the total population of Uganda resided in Buganda (667,387), while less than 5% of the Protectorate's population belonged to the Toro kingdom (93,946).

⁴ This contrasts with West Africa where women participated in local trade in colonial Nigeria (Ekechi 1995, McIntosh 2009) and Ghana (Robertson 1984a).

to men, with the exception of the Queen Mother of Buganda who hold some political authority and land ownership but which started to fade in the 19th century (Hanson 2002).

In Buganda and Toro, marriage was arranged by parents while their children were relatively young, typically after the onset of menarche (Roscoe 1911, Taylor 1958, Perlman 1966). Polygamy was widespread and was viewed as a conjugal mark of male prestige. Marriage was seen more in terms of the clan than of the nuclear family and therefore, the choice of girls' marriage partner was made largely by parents or other senior members (Hastings 1973, Banja 2013), ensuring chastity, future bride-wealth, and labour power. Buganda men and women were not allowed to marry a person of the same clan to which their parents belonged (Taylor 1958), thus excluding inter-clan and inter-family marriages. The customary marriage consisted of a potential groom's application, the consent of the parents, the handing over of bridewealth and the ceremonies surrounding the handing over of the bride to the groom, culminating in their official cohabitation and consummation of the marriage (Hastings 1973). Buganda's and Toro's patrilineal and patrilocal cultures implied – and still do⁵ – ownership of children by the patrilineage with the bride upon marriage residing with or near the husband's family. Thus, decision-making power in these families largely lay in the hands of the male and the elderly. Indigenous education for girls, provided by their mothers, prepared them for adulthood in their homes, while boys were often sent to the court of the *kabaka* to receive training outside the home (Fallers 1964). Overall, this gives the impression that women's socio-economic position within the household and society, compared to men's, was far from egalitarian in pre-colonial Buganda and Toro.

The arrival of Christian missionaries to Uganda

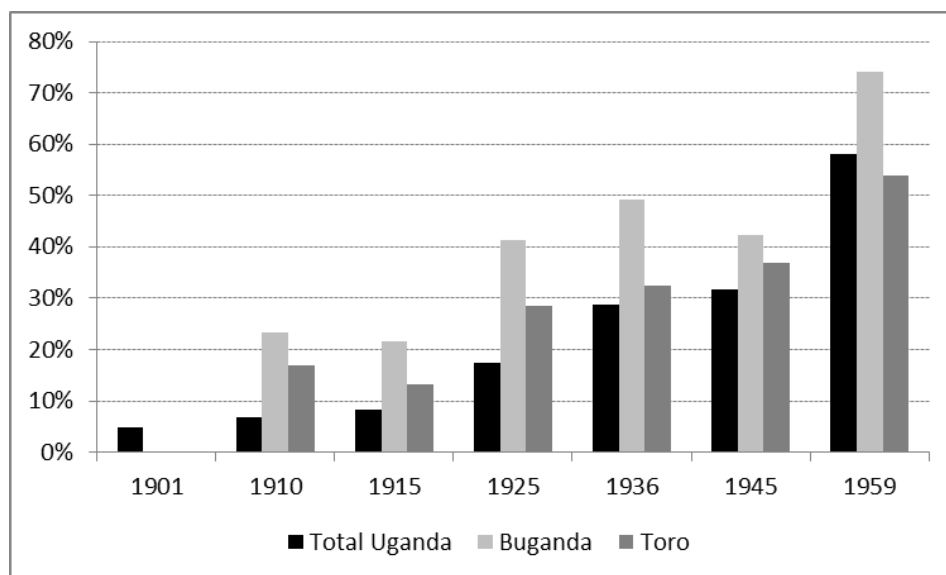
In the late 19th century the Anglican CMS (1877) and the Catholic White Fathers (1879) arrived in Buganda ahead of the colonial representatives. In Toro, Catholic and Protestant missionaries established stations a little later, around 1898. After Britain declared Uganda its Protectorate in 1894, Christian conversion and mission school enrollment thrived like nowhere else in British Africa (Oliver 1952: 184, Hastings 1994: 464-78, Ward 1999). In Uganda, the colonial state and the missionaries from all denominations selectively accommodated each other within the British system of *indirect rule*, with mission schools and hospitals providing the bulk of education and medical care for Africans at low cost.⁶

⁵ Those traditions vary considerably in their manifestation between rural and urban areas today.

⁶ The relationship between Christian missionaries and British colonialism was much more complex, than can be portrayed here. Generally, when imperial Britain and missionary interests aligned they worked together – when they conflicted, they competed (e.g. Hansen 1986, Stanley 1990, Porter 2004, Etherington 2005).

Figure 1 portrays the extraordinary indigenous reception and spread of Christianity among the total population of Uganda, Buganda, and Toro during the colonial era. According to Kaplan (1995: 9-23) and Frankema (2012), a crucial pre-requisite for the spread of the gospel was the *Africanization* of the mission, i.e. African converts taking the initiative in preaching the gospel, teaching pupils in mission schools as well as contributing to the financing of the mission. By 1925, a remarkable 41% of the population of Buganda, and 29% of Toro had already converted, which was substantially higher than the total Ugandan population at 17%. By 1959, 58% of the population of the Protectorate, 74% of the Buganda population and 54% of the Toro population had converted. Throughout the colonial era, about a third of Christian followers in Uganda were Protestants, the remaining two-thirds Catholic (Figure A1).⁷

Figure 1: Share (%) of Christian followers in Uganda, Buganda, and Toro, 1901-59



Source: Blue Book of the Ugandan Protectorate, various issues 1901-45; Uganda Protectorate Census 1959. The percentage of the Christian population of Toro for the year 1959 is based on figures for the Western province of Uganda.

The rapid spread of Christianity was also accompanied by a growing African demand for Western education. As a result enrollment figures of Ugandan mission schools increased from 11,954 in 1900 to 267,837 in 1938 – constituting the highest numbers in the whole of British Africa by 1938 (Frankema 2012). Yet, Protestant schools serviced more than half of all primary school pupils in Uganda’s 1920s (Frankema 2012). Mission schools sought girls as pupils as well as boys, with more than a third of all primary school pupils (Catholic and

⁷ Data were taken from various issues (1901-45) of the *Blue Book of the Uganda Protectorate*.

Protestant) being girls between 1910 and 1938.⁸ The CMS was particularly attentive to women's education as, although the CMS only claimed 31% of Ugandan Christians in 1922, 64% of total Christian females were in fact enrolled in schools run by the Protestants.⁹ This conviction rested on the Protestant belief that men and women had souls of equal spiritual value and therefore both sexes should be able to read the Bible.

Customary marriage and the bridewealth system continued throughout the colonial era and typically preceded or succeeded a Christian *ring-marriage* (Hastings 1973, Hansen 1984). Thus, African marriages were often validated within two institutions. There were a number of reasons for this. Firstly, African Protestants who had married under customary law but remained without ring-marriage were suspended from Holy Communion and excommunicated, which carried substantial social stigma within the Christian congregation (Parr 1947, Hansen 1984: 260), giving its members a strong incentive to have their customary marriage rapidly sanctified. Secondly, Protestant marriage indicated significant social prestige and according to Mair (1969: 71), 'in Buganda to marry without Christian ceremony was regarded as little better than not marrying at all'. Thirdly, though there was no marriage ordinance in Uganda making fornication before Christian marriage a criminal offence, it was a highly anti-social practice condemned by Christian religion as a mortal sin (Parr 1947). Similarly, Toro tradition attached very strong values to female pre-marital virginity and there were strong sanctions against unmarried girls bearing children before marriage (Perlman 1966). Finally, parents unmarried by the rites of the Anglican Church were unable to baptize their infants, thus providing a strong incentive to legitimize their customary union in the Christian manner before the birth of their first child (Taylor 1958: 243).

3. Conversion to greater freedom?

The role of Christian missionaries on African women's socio-economic position in colonial Africa is ambiguous, largely relies on anecdotal evidence, and has been scarcely investigated using empirical evidence, reflecting the inadequacy of data available before the 1950s. We take as a departure point the observation that African girls in 1950 were 'outmanned' in primary education: the percentage of girls among pupils of primary schools in Africa was less than a quarter in Southern Nigeria, Uganda, and the Gold Coast, and constituted below a third in Kenya, Tanganyika and Sierra Leone (Hailey 1957). But even when girls attended mission schools, whether Catholic or Protestant, the content of mission school teaching was typically

⁸ Girls' primary school enrollment was calculated on the basis of annual primary mission school attendance from Ugandan Blue Books based on Frankema (2012).

⁹ Data were taken from the *Blue Book of the Uganda Protectorate* (1922).

different for girls, stressing, basic literacy and domestic skills in class (e.g. cooking, cleaning, handicrafts, sewing), training girls for Christian marriage and motherhood, rarely qualifying them for employment in the modern sector (Boserup 1970, Gaitskell 1983, 1990, Labode 1993). The emphasis on female domesticity was a central component of the ‘civilizing mission’ which spread the British Victorian ideal of the proper role for women, stressing patriarchal ideology side-lining women as housewives (Van Allen 1972, Comaroff and Comaroff 1992, Musisi 1999). Akyeampong and Fofack (2014) even argue that the missionaries’ gender-biased educational system is among some of the ‘most critical determinants of persistent gender inequality in the region’. However, it’s also important to note that while mission schools made gender distinctions in teaching content, distinctions were already present in the local culture before their arrival, as highlighted earlier. Hence, the contention, that missionaries lowered African women’s status also needs to be carefully interpreted in light of their pre-colonial resilience.

On the other hand, Fiona Leach’s (2012) study of early 19th century letters written by African women from CMS mission stations in Sierra Leone cautioned not to rely too heavily on the argument that women unconditionally accepted the new Christian values of appropriate female behaviour but points to the neglect of women’s agency in historical accounts. In addition, mission schools, clinics and hospitals started to employ women and, thus, allowed a small number of them to work outside the household and generate their own income. Because school-teaching and hospital nursing required literacy and vocational training, these positions were initially only open to Christian women. Kyomuhendo and McIntosh (2006: 58) provide anecdotal evidence from Uganda that the CMS particularly encouraged educated young women to enter wage mission labour as teachers, midwives and nurses, insisting that marriage should not terminate a woman’s career. Apparently, Christian clubs for women appeared which strengthened women’s position in both Ugandan society and within the household. For example, during the early colonial era within the CMS of Uganda, the Anglican Mother’s Union, a shared spiritual and social club for Anglican British and African married women, became ‘...a formidable rival in arenas that may otherwise have preserved the male-centred hierarchy, including literacy and healing’ (Prevost 2010: 32).

According to John Iliffe (2007: 245), missionary societies emancipated African women by furthering their formal education and building occupational skills through the creation of employment opportunities in areas of religious services, schooling and medical care which in turn raised women’s marriage ages. Also, Etherington (2005: 263) argues that mission stations offered ‘unprecedented opportunities for African women to escape social control-.’

However, both do not cite any empirical support for their claims. Larsson (1991) claims that in Uganda conversion led to more say in girls' choice of marriage partner for those who had the opportunity to attend mission school and attain professional training in teaching and nursing which eroded the 'gains' of (early) marriage, as it made women less economically dependent. Similarly, John Taylor's (1958) account of the growth of the Church in Buganda, observed that among educated and urban women marriage ages had increased during the colonial era. Further narrative evidence from a Quaker mission's boarding school in Western Kenya suggests that female education, despite its strong emphasis on domesticity (i.e. bear children, cook, wash, sew) increased girls' control over their choice of marriage partner, postponing marriage for schoolgirls relative to girls living outside the mission (Thomas 2000). Parallel to this, Perlman (1966) suggests that Ugandan fathers were beginning to lose control over their daughters because mission schools and churches provided opportunities for boys and girls to mingle, militating against arranged marriages. Similarly, Van Allen (1972) observes the weakening of kinship bonds and the emergence of free partner choice in Christian monogamous marriage due to the opening of schools in southern Nigeria. Along the same vein, Christine Oppong's (1970) survey of Christian married Ghanaian civil servants from Accra found that joint decision-making was higher among couples in which husbands and wives were of the same or adjacent age group and educational level than among those in which the husband was considerably older and more educated.

4. Data

New micro-data from colonial Uganda

Since the mid-19th century, systematic vital registration of Christian Africans was carried out by missionary stations in many parts of Africa. Despite the prevalence of parish registers across Africa they have been seldom used for the reconstruction of Africa's demographic or socio-economic past (Siiskonen et al. 2005).¹⁰ Because parish registers, documenting African baptism, marriage and death, were crucial for the (future) functioning of mission stations, they continued to remain on African soil, and thus cannot be obtained from European archives. However, African parish registers can sometimes suffer damage (caused by insects, theft, fire, or poor storage), have simply disappeared, or are troublesome to access. Furthermore, the vital information from Christian parish registers differs substantially by religious denomination. For example, contrary to the CMS, the White Fathers did not record spouses'

¹⁰ Some notable exceptions include: Nhoni (1954), Thornton (1977), Katzenellenbogen et al. (1993), Notkola and Siiskonen (2000), Walters (2008), Doyle (2013), Meier zu Selhausen and Weisdorf (2014).

or fathers' occupations in their Ugandan marriage registers, nor had they to be signed by the spouses.

The data for this study were collected from hitherto unexplored hand-written Anglican marriage registers of the Diocese of Namirembe, located in Uganda's capital city Kampala,¹¹ and the two rural parishes of Fort Portal (St. John's Cathedral) and Butiti (St. Peter's Church), in the Toro kingdom in Western Uganda. The locations of the sampled parishes are mapped as white crosses in Figure 2. Data from the two rural Toro parishes, aims at adding a rural comparative perspective, compared to more urban Kampala. Namirembe Diocese, founded by Bishop Alfred Tucker in 1890 under the *Diocese of Eastern Equatorial Africa*, was the earliest and largest Anglican missionary station and the main Anglican place of worship in Buganda. In 1904, the newly built brick cathedral represented the largest house of God in Africa with no less than 1,800 Africans gathering on Sundays (Hattersley 1908, Fisher 1900).¹² In the West, St. John's Cathedral in Fort Portal and Butiti's mission station were inaugurated in 1898 by Bishop Tucker.

The very first marriage register (1891-95) from Kampala, as well as the books from 1898-1907, had gone missing.¹³ The first marriage book from was also absent. Hence, its documentation of marriages begins in 1911. Butiti, the second rural parish in the West, 35km to the east of Fort Portal, held archived marriage registers from 1927-1989. The early registers were pre-printed in London and then shipped to Uganda where they until today represent the earliest systematically written records, documenting Ugandan vital history on the micro-level. Moreover, their layout remained identical throughout the colonial and post-colonial phase, thus lending themselves to comparison across time and parishes.

¹¹ Over the course of the colonial era Kampala grew in size, from an urban population of 2,850 in 1912, to 24,000 in 1948 and 46,735 in 1959 (Omolo-Okalebo et al. 2010).

¹² This cathedral burned down due to lightning and was replaced by another brick-walled and tile-roofed structure, completed in 1919 (Moon 1994).

¹³ Only recently, the first marriage register (1891-95) was located at the Africana Section at Makerere University Library (Kampala), indicating that the first marriage solemnized at Namirembe took place on 17 February 1891.

Figure 2: Map of Uganda (around 1900) with geographical location of sampled parishes



Source: Kingdom boundaries adapted from Steinhart (1977: 2).

The marriage registers provide details such as the year, date and place of marriage, age at marriage, spouse's prior marriage status (bachelor/spinster or widower/widow), spouses' occupations and residence at marriage, as well as their fathers' occupation. Grooms' and brides' literacy status is inferred from the capacity of spouses to sign their marriage certificate. When the marriage partners were unable to sign, they instead placed their mark or a cross under the signature of the person who signed in their name. This is a universal technique for measuring historical literacy (Schofield 1968, Rachal 1987).¹⁴ Yet, marriage ages may be misreported as a result of innumeracy, digit preference or rounding (ages ending in 0 or 5). A statistical technique, known as the Whipple's Index (WI), can shed light on the tendency of individuals (aged 23-72) to misreport their ages. A'Hearn et al. (2009) offer a

¹⁴ According to Rachal (1987) and Schofield (1968: 317) when the motives for literacy were largely religious, there were greater benefits for being able to read (the Bible and hymn-books) than knowing to write.

lineal transformation of the WI demonstrating that the share of individuals who correctly reported their age was 95.3% for Kampala and 86.9% for the rural parishes.¹⁵ This indicates relatively moderate overall age-heaping for females born 1880-1945, raising confidence that one can trust female self-reported ages.¹⁶

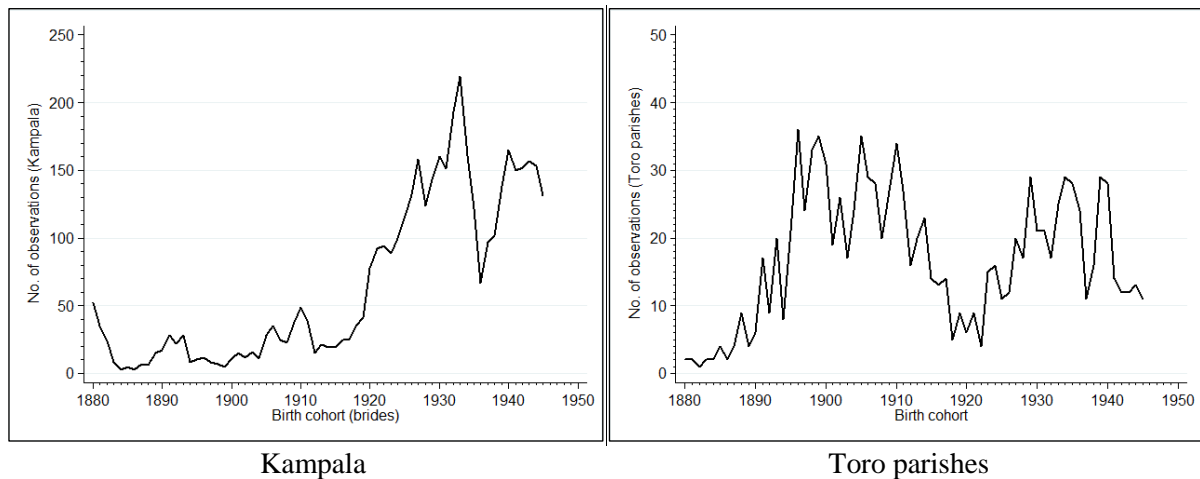
Because in this paper we are interested in the era in which missionary education was exclusively responsible for primary education the sample is restricted to women born between 1880 and 1945. The dataset with known female marriage ages for Kampala comprises 4,278 observations and 1,145 observations for rural Toro. The sample size used in this paper is further truncated according to the following criteria. First, women who were not spinsters (i.e. widows) were omitted to avoid multiple entries of the same individual and to ensure capturing brides' age at first marriage. Second, records of missing signature information were also excluded. Third, outlier ages above the age of 35 were excluded because these women are very likely to have been in traditional marriage for a long time and much later were getting their marriages solemnized in the church. Figure A2 presents the frequency distribution of brides' showing that more than 1.5% of Kampala and 7.2% of Toro brides married after the age of 35. Fourth, rather than being excluded, brides with no occupation recorded in the registers (178 for Kampala and 21 for the rural Toro) are presumed to be housewives (with numerous domestic duties). In sum, one remains with a sample of 4,166 brides from Kampala and 1,036 brides from rural Toro born between 1880 and 1945. In addition, we arrive at 4,091 husbands of the Kampala brides and, 1,032 husbands of the brides from Toro with full occupational and literacy information.

Figure 3 presents the frequency distribution of sampled brides by birth year. For Kampala brides and grooms born between 1880 and 1910 there are less than 50 annual marriages. From 1925 onwards we count more than 100 observations per year for each sex. The mean yearly observation for the two rural Toro parishes is 16 for women and men. Hence, in order to have sufficient observations for later graphical analysis, five-year birth cohorts are applied.

¹⁵ Their 'ABCC index' ranges between 0 and 100 (100 = no age-heaping, 0 = only ages ending on multiples of 5 are reported).

¹⁶ Note that this estimate is affected by how the WI is constructed, including only ages ranging 23-72, which as a result fails to capture 82.3% of female marriage ages from Kampala and 70.9% of those from rural parishes as mean marriage age was below 23 on average in both locations.

Figure 3: Sampled brides by year of birth, Kampala and Toro (Fort Portal and Butiti)



4.2 Ugandan marriage registers: nature and bias

Marriage was close to universal in mid-colonial Uganda. The Uganda Protectorate census of 1921 published that in Uganda about 80.3% of males older than 18 years and 88.9% of females older than 15 years had married during their lifetime, either under customary or Christian rites. However, despite the unique mass conversion to Christianity in Uganda (Oliver 1952, Hastings 1994), and Buganda in particular (Wrigley 1959), historical Christian marriage registers are not without potential biases, as not everybody who adopted the Christian faith ended up marrying in the house of God. Those were many: according to the colonial census of 1931, 28.9% of all married women in Buganda (and 29.2% of greater Kampala) and 11.0% in Toro (and 17.0% in the districts of Kyaka and Mwangi near the sampled parishes) had their union sanctified under Christian Law (Catholic or Protestant). And this seems to have persisted over time, as John Taylor's 1956 survey of all 24 pastorates in Buganda found that no more than 25% of married Protestants had had a church marriage. However, in towns, owing to a greater prevalence of adopted Western social patterns, Taylor expected a higher percentage of church marriages. Furthermore, according to the annual colonial blue books of the Uganda Protectorate for the years 1901-1914, marriages at the CMS represented about a third of total Christian marriages taking place during the early colonial era in Uganda (Figure A3). In order to celebrate an Anglican marriage, both marriage partners had to be baptized in the Anglican Church and be at least of age 16. Thus, Protestant couples who had not entered a church marriage but relied on customary marriage remain unobserved.

Taylor (1958) suggests two important reasons that may have prohibited a church-marriage. Firstly, not all Protestant followers complied with the monogamous and statutory

obligations that came with Christian wedlock, such as the building of nuclear families. Yet, many Christians who never married in church may have lived sound Christian lives but, in the eyes of the Church, they were not properly married and were thus ex-communicated and cut-off from Holy Communion (Hansen 1984: 260, Hastings 1994: 46). Taylor’s survey also uncovered that only half of those marriages that had been celebrated in the Anglican Church remained monogamous. The richer and powerful men in Africa, in particular chiefs, were still frequently polygamous despite living in Christian wedlock (Hastings 1973: 36, Wilson 1976). Their second wife under customary law typically lived away on another estate. Despite the widespread prevalence of polygamy, the Protestant missionaries only permitted one Christian marriage with one Protestant woman, banning the heathen practices of polygamy. Finally, besides the traditional bridewealth, the additional marriage expenses of paying for clothes, food for the wedding ceremony, as well as raising the church fee ate into the budget of the groom and his family and therefore may have had a deterrent effect for the poorer layers of society.¹⁷ Taking a look at the occupational background of fathers of the Protestant brides in Table 1 can provide some indication whether church marriage was mainly taken-up by the wealthier segments of society, although there is no adequate comparison group due to a lack of occupational data for Catholics or non-Christians for the colonial era.

Table 1: Brides by fathers’ occupational background (%), female birth cohort 1880-1945

	Chief	Farmer	Craftsman	Mission	Clerk	Others	Total
Kampala	16.21	36.90	10.83	10.80	23.94	1.32	100.0
Toro parishes	16.72	55.75	13.11	3.15	11.21	0.06	100.0

Note: Number of father’s occupations from Kampala: 3,647; Rural Toro: 1,017. No occupational information was present for 519 fathers from Kampala and 19 from rural Toro in the marriage registers, being deceased or without occupation at the time of their daughter’s marriage. Table A1 provides a list of the top 15 occupations of brides’ fathers.

Table 1 presents the share of daughters by their fathers’ occupational group. Five broad occupational groups were constructed comprising of: Chiefs/Sub-chiefs; Farmers; Craftsmen/Builders; Mission employees; and non-mission wage workers (see Table A1 for the most common occupations for each group). The proportionally high number of chiefly and clerical fathers for the Kampala and rural sample suggests that the opportunity to marry in the Anglican Church during the colonial era may be related to some degree of paternal socio-

¹⁷ According to correspondences of Bishop Tucker and Baylis in 1910, the CMS complained about the decrease in Christian marriages, which was mainly due to opposition to the newly set marriage registration fee of one rupee for both Christian and Muslim marriages which was introduced by the colonial state in 1902 (Uganda Protectorate 1905).

economic success. However, Anglican marriage at the head missionary stations of Buganda and Toro was by no means only confined to the upper classes of society, as 48% of Kampala brides and 69% of rural Toro brides had a father working as a farmer, herder, fisherman or traditional craftsman. In Kampala, a significantly larger number of fathers were working for the missionary society than in the rural sample which is probably due to a higher density of mission schools and hospitals, the earlier arrival of missionaries, as well as a more populous Protestant congregation within Kampala.

5. Results and discussion

The following discussion distinguishes among three measures of how missionaries may have affected women's socio-economic position within the household: (1) mission education; (2) labour market participation; (3) marriage patterns. In addition, each sub-chapter explores the effects of fathers' occupation on their daughters' socio-economic position.

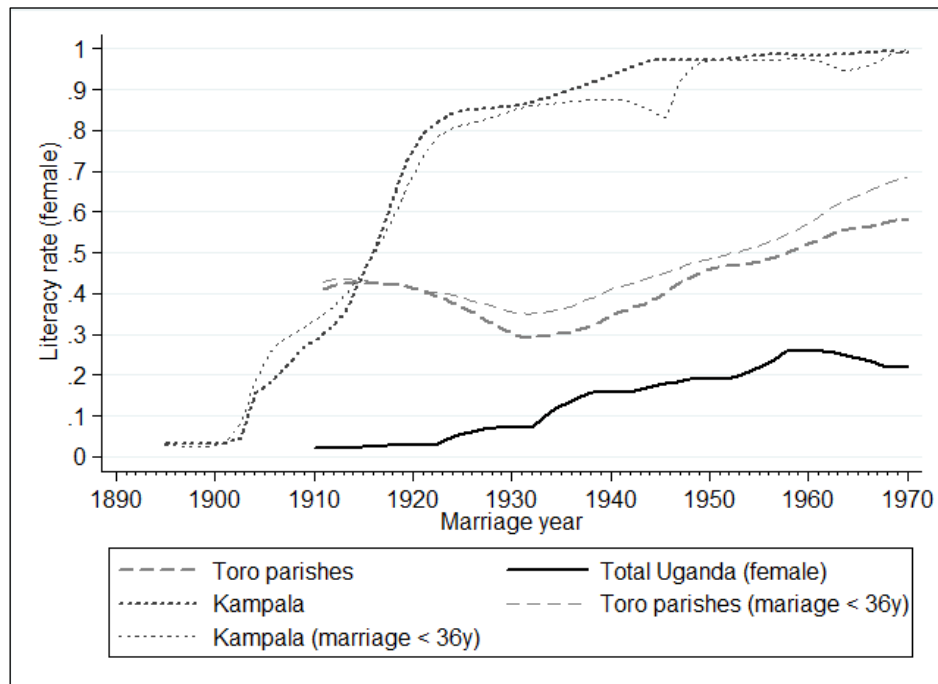
Female mission education

One way in which women can gain a more equal footing in both household and the labour market is through gains in human capital formation. Literacy status is a widely used measure to ascertain human capital formation. Also, literacy and the gaining of necessary occupational skills can be assumed to be important pre-conditions for accessing employment opportunities in the colonial economy. Until the late 1940s, education and thus the transfer of literacy skills, was almost entirely attributable to mission schools (Hailey 1957, Frankema 2012). In the Ugandan context, despite Christian teachings of women's domestic roles (Kyomuhendo and McIntosh 2006), mission school and church attendance enabled Christianized women to gain new freedoms of movement (beyond the homestead), to an extent not possible in the past which could be judged as an important first step for women's emancipation (Perlman 1966).

Figure 4 plots rural and urban Protestant women's annual literacy rates for total brides and those who married before the age of 36, and compares those with newly reconstructed decadal estimates for total Uganda, which were calculated on the basis of interpolating the growth rates of girls' mission school enrolment for the period 1910-40 based on Frankema (2012), taking the female literacy rate of 1950 from Hailey (1957: 1186) as starting point. For the years 1960 and 1970, figures from Cooper (2002) were adopted, who calculated female literacy rates (aged 15 and above) from the basis of Statistical Yearbooks of the United Nations. Clearly, there are several limitations regarding this comparison. Because literacy rates are unavailable for the colonial period a comparison cannot be made on the basis of

literacy rates in the specific regions but, admittedly, a rather crude comparison with total adult female Ugandans instead of comparing by religious faith or region. Given that during the colonial era the great majority of the Ugandan population Uganda was living in rural areas the reconstructed literacy rates obviously compare better to the estimates of rural Toro than to relatively urban Kampala.

Figure 4: Female literacy rates of total Uganda and sampled Protestants, 1895-1970



Note: Number of observations for total ‘Kampala’ (N=7,513) and total ‘Toro parishes’ (N=1,787) by marriage year.

Figure 4 shows that by the end of the colonial era on average about a quarter of Ugandan adult women possessed the ability to read and write. Literacy rates of the sampled Protestant brides from Kampala¹⁸ and the Western parishes were considerably higher than for the total female population throughout colonial times, highlighting the essential emphasis set by Protestant schools to instruct Bible-reading skills. Within only a quarter of a century, since the onset of colonial rule, 80% of urban female Protestants that had married in church also had acquired literacy status. Moreover, female converts from Kampala achieved significantly higher literacy rates than those from the rural Toro parishes, suggesting that the Protestant brides from Kampala were more likely to have attended mission schools than their peers from

¹⁸ See Meier zu Selhausen and Weisdorf (2014) for comparative long-term Protestant male literacy statistics for Kampala.

the Toro sample, possibly due to a higher availability and density of mission schools in Buganda and relatively earlier arrival of the CMS.

Table 2: Female literacy rate (%) by father’s occupational background, Kampala

	Birth cohort	<i>Fathers’ occupation</i>				
		Chief	Farmer	Craftsman	Missionary	Clerk
Daughter waged (%)	1880-1909	80.53	33.33	42.54	64.00	59.52
	1910-1929	96.91	97.49	93.33	98.26	97.52
	1930-1945	97.35	98.03	97.87	99.22	98.7
	Total	93.93	93.49	74.17	96.71	96.46
	N	593	1,367	333	395	876

Table 3: Female literacy rate (%) by father’s occupational background, Toro parishes

	Birth cohort	<i>Fathers’ occupation</i>				
		Chief	Farmer	Craftsman	Missionary	Clerk
Daughter waged (%)	1880-1909	47.37	40.57	22.86	100.00	44.44
	1910-1929	50.94	39.26	39.47	61.54	50.00
	1930-1945	57.41	39.69	70.00	56.25	50.00
	Total	51.36	40.03	35.15	62.50	49.11
	N	183	607	128	31	112

Note: No occupational information for 26 deceased fathers at time of daughter’s marriage. The occupational group “Clerk” refers to non-mission wage labour.

On the family level, how did fathers’ occupational background affect daughters’ prospects of attaining literacy skills in mission schools? To explore this, Tables 2 and 3 present the average likelihood of brides being literate by fathers’ occupational status for daughters early, mid-, and late colonial birth cohorts. In both sampled Kampala and Toro the first generation of Protestant females entering mission schools were from chiefly families. These findings resonate the claims of an older strand of literature, such as in the missionary account of Mullins (1908: 107), and Cartey and Kilson (1977: 77) that state that chiefs ‘derived educational advantages for their offspring with the result that sons and other kin of chiefly families were disproportionately represented among the well-educated new elites in both British and French Africa’. We can add to this that during the early colonial era also daughters of fathers working for the CMS or otherwise engaged in wage labour had increased chances of being sent to mission schools compared to daughters from more traditional backgrounds (i.e. farmer and craftsmen). Remarkably, in Kampala, from the mid-colonial era onwards family background ceased to determine daughters’ educational input, as the large majority of Protestant brides from all walks of life were admitted at mission schools, echoing the Protestant policy that every convert was supposed to be able to read the Bible. In contrast, the rural brides of fathers from traditional sectors (i.e. farmers and craftsmen) were

significantly less likely to attain literacy throughout colonial times, while daughters of fathers working for the mission had the highest likelihood to acquire literacy status, followed by the offspring of chiefs and wage-earning clerks.

Accessing colonial labour markets

Reading and writing skills were necessary accomplishments to access wage employment in the formal colonial economy. Hence, did the relative high share of female literacy, displayed in Figure 4, also translate into women taking an active role in colonial labour markets? In order to assess women's ability to access wage labour in the colonial economy, their occupations were coded according to wage and non-wage labour in Table 4. To further explore the role of the missionary society acting as a potential entry-mechanism into wage employment as stated by Iliffe (2007), wage labour was further broken down into mission and non-mission labour. Table 4 lists the top 15 female occupations for urban and rural Protestant birth cohorts 1880-1945.

Table 4: Top 15 female occupations in Kampala and Toro, by birth cohort 1880-1945

Kampala parish			Toro parishes		
Occupation	Freq.	Share (%)	Occupation	Freq.	Share (%)
Weaver	1,102	26.53	Basketmaker	273	26.38
Tailor	1,078	25.95	Farmer	245	23.67
Matmaker	553	13.31	Matmaker	232	22.42
Teacher ^a	447	10.76	Tailor	91	8.79
Housewife	231	5.56	Seamstress	48	4.64
Nurse ^a	181	4.36	Teacher ^a	43	4.15
Basketmaker	145	3.49	Needleworker	29	2.80
Midwife ^a	90	2.17	Nurse ^a	28	2.71
Farmer	86	2.07	Housewife	21	2.03
Needleworker	44	1.06	Weaver	4	0.39
Secretary ^b	40	0.96	Clerk ^b	3	0.29
Clerk ^b	27	0.65	Domestic servant ^b	3	0.29
Typist ^b	25	0.60	Hospital assistant ^a	3	0.29
Stenographer ^b	11	0.26	Trader ^b	2	0.19
Dressmaker	8	0.19	Midwife ^a	1	0.10
Other	86	2.07	Others	9	0.87
Domestic labour	3,256	78.38	Domestic labour	945	93.30
Mission labour	731	17.60	Mission labour	75	7.25
Non-mission labour	167	4.02	Non-mission labour	15	1.45
Total	4,154	100.00	Total	1,035	100.00

Note: ^a Mission labour; ^b Non-mission wage labour. 13 'University students' not considered as an occupation, and thus not counted; age at first marriage < 36.

We note that during the colonial era formal job opportunities, outside the domestic sphere, were relatively scarce for women, as nearly eight out of 10 females from Kampala and

more than nine out of 10 rural females worked in traditional home-industries such as basket-, cloth- and mat-weavers, farmers, housewives, or self-employed needle-workers or tailors. However, while in rural Toro, about one out of four women were engaged in agricultural production, only 2% of sampled Kampala brides stated to work as farmers, indicating an ongoing shift towards urban home-industries and an increasing availability of wage jobs in the city's labour market. Moreover, according to Kyomuhendo and McIntosh (2006: 57), craft and food works produced by wives were usually taken by their husbands or other male relatives to local markets for selling – not by women themselves. Hence, it seems as if there has been relatively little change in terms of women's occupational mobility during the early and mid-colonial era, suggesting the presence of deeper pre-colonial roots of female labour segregation in Uganda that continued to play an important role for women's subsequent agency during the colonial era – something largely overlooked in Boserup (1970) and Rodney (1972), and already criticized by Huntington (1975).

Conversely, the minor but emerging appearance of women working outside the household in wage labour during the colonial era can also be interpreted as an important change from pre-colonial conditions. Notably, the shares of literate Protestant women, observed in the previous sub-section, seem to have rarely translated into female employment opportunities outside the traditional domestic and handicraft niches. In contrast, the acquisition of literacy was a necessary pre-requisite to participate in the colonial economy, as literally all rural and urban women employed for a wage knew how to read and write. The large gap between literacy rates and female labour market participation seems to suggest that on average parents' decision to send their daughters to mission schools was not strongly motivated by the incentives of economic returns from human capital investment but rather points to the importance of spiritual and cultural gains for women to enter the Protestant religion.

Table 4 also reveals that the Protestant missionary society represented an almost exclusive (and culturally legitimate) window of opportunity for Protestant brides to participate in the wage labour market, as more than four out of five urban and rural females that participated in the colonial labour market, in fact worked for the Protestant missionary society during the period of observation, taking an important role in the institutional spread of Christianity. The three most common mission occupations observed were: teachers, nurses and midwives. This resonates with Walter Elkan's (1956a: 45) description of Ugandan men objecting to their wife working outside the home, as women were exempt from paying poll tax, wage earning opportunities ought to be reserved for men, except for teaching, nursing and

child care that were regarded not as typical male occupations.¹⁹ The most common wage labour occupations held outside mission employment comprised of administrative jobs, such as: secretaries, clerks, typists and stenographers. Thus, despite some feminization in women's occupations, deemed acceptable for women, the mission society encouraged African girls to enter a new life-cycle in which they were able to further their formal education and acquire a set of new occupational skills through employment opportunities in areas of religious service, schooling, and medical care. This new freedom challenged the ideological opposition concerning women's work outside the domestic context. According to Kyomuhendo and McIntosh (2006: 82), although mission and administrative labour did not pay large salaries, women profited from access to wage labour outside the household which gave women new occupational mobility and physical freedom, an independent income, and new autonomy to delegate family duties to others or hire someone else to cultivate the family fields.

Figures 5 and 6 illustrate the long-term trend of women's Protestant mission and other wage labour market participation by birth cohort for decades 1880-1949. Figures 7 and 8 provide a comparative perspective, presenting shares of males' mission and non-mission labour market participation. We note that whereas Protestant grooms rapidly entered the colonial wage economy with more than 20% of late 1880s male birth-cohorts earning a wage, it took women more than half a century to break the 20% ceiling at the end of the colonial era.²⁰ Non-mission employment, largely administrative jobs, only became available for women in the late colonial era which resonate earlier claims of Lawrance et al. (2006: 28) that female Africans entered increasingly colonial bureaucracies during the waning days of colonialism, in order to expand the civil service and to Africanize it. Figures 5 to 8 reveal three important results. Firstly, there were clearly fewer opportunities to work in the labour market in rural areas than in urban areas for both sampled Protestant women and men. Secondly, compared to men, rural and urban women had limited opportunities for occupational mobility and wage employment during the colonial period. Thirdly, for rural and urban women, mission employment represented an almost exclusive source of wage labour outside the household during the colonial era, while men witnessed rapidly expanding employment opportunities, beyond missionary employment.

¹⁹ Already, Robertson (1984b: 37) emphasized that in African capital cities women 'do slightly better in the professional category alone, because of their roles as teachers and nurses'. Anecdotal evidence brought together by Little (1973: 31-33) holds that this has been the case in a number of other African countries.

²⁰ For international comparison with the homeland of the Anglican missionaries, Humphries and Sarasúa (2012) offer British female adult labour market participation rates from 1920s for Leeds (37%), Bradford (54%), and Middlesbrough (20%). It indicates that labour market participation was significantly higher in Britain than for the sampled female Protestants from Uganda born around 1900. Note that those values are for total females (i.e. married and unmarried).

Figure 5: Share (%) total female wage and mission labour, Kampala



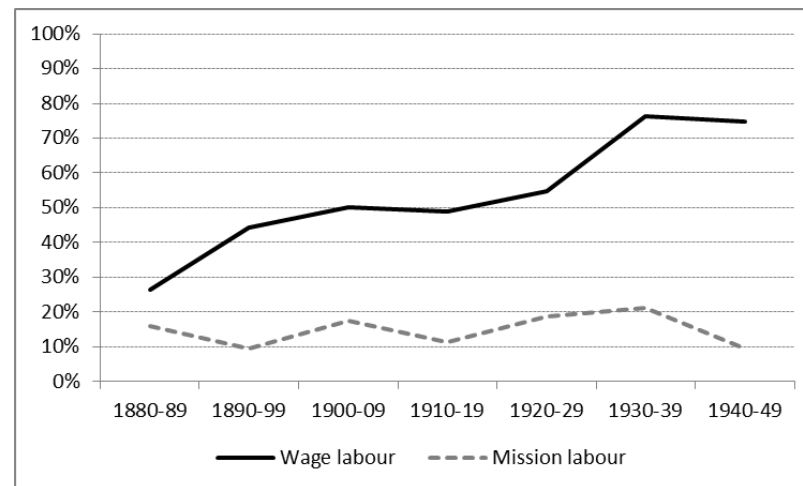
Figure 6: Share (%) total female wage and mission labour, Toro



Figure 7: Share (%) total male wage and mission labour, Kampala



Figure 8: Share (%) total male wage and mission labour, Toro



Note: Female mission labour includes: Dispensers, Doctors, Evangelists, Hospital assistants, Matrons, Medical assistants, Midwives, Missionaries, Nurses, Priests, Teachers. Male mission labour includes: Catechists, Clergy, Clerks in Holy Order, Dispenser, Doctors, Evangelists, Lay readers, Medical assistants, Nurses, Priests, Teachers.

To what extent did family background influence women’s waged careers? Knowledge about the occupations of brides’ fathers provides the opportunity to explore the relationship between fathers’ background and daughters’ propensity to earn a wage (see Table 5 and 6). For that purpose, the occupations of rural and urban fathers were categorized into five groups: “Chiefs”, “Farmers”, “Craftsmen”, “Mission labourers”, and “Clerks” (see Table A1). Next, the share of waged daughters born in the early, mid and late colonial period was calculated and assigned to their fathers’ occupational group. Notably, in Kampala, daughters of chiefs and fathers working for the missionary society were on average more likely to enter (mission) wage jobs in the early colonial phase than daughters from other backgrounds. Missionary daughters held this advantage throughout the colonial era, making them the most likely group among Protestant brides to pursue a mission career, suggesting that missionary fathers were acting as sort of ‘occupational brokers’. Despite this initial social network advantage, (mission) wage labour was not only confined to daughters of paternal chiefly or missionary origin, but also included those of clerks, craftsmen, and farmers from the early-colonial era onwards. Similar trends are found for the rural sample, although with a smaller number of observations. Yet, in rural Toro girls from agricultural and craftsmanship backgrounds were least likely to enter waged positions while daughters of chiefs and missionaries enjoyed greatest access.

Table 5: Share of women’s access to wage labour by father’s occupational group, Kampala

		<i>Fathers’ occupation</i>				
		Chief	Farmer	Craftsman	Missionary	Clerk
Daughter waged (%)	Birth cohort					
	1880-1909	7.96	4.30	5.22	8.00	4.76
	1910-1929	18.62	17.27	5.71	31.30	12.72
	1930-1945	24.34	25.99	15.96	50.78	22.45
	Total	18.41	22.21	8.41	42.39	18.44
N	593	1,367	333	395	876	

Table 6: Women’s access to wage labour by father’s occupational group, Toro

		<i>Fathers’ occupation</i>				
		Chief	Farmer	Craftsman	Missionary	Clerk
Daughter waged (%)	Birth cohort					
	1880-1909	2.63	1.28	4.28	0.00	11.00
	1910-1929	16.98	6.74	0.00	30.77	2.94
	1930-1945	22.22	7.63	10.00	40.00	10.00
	Total	12.57	4.12	3.91	32.26	8.04
N	183	607	128	31	112	

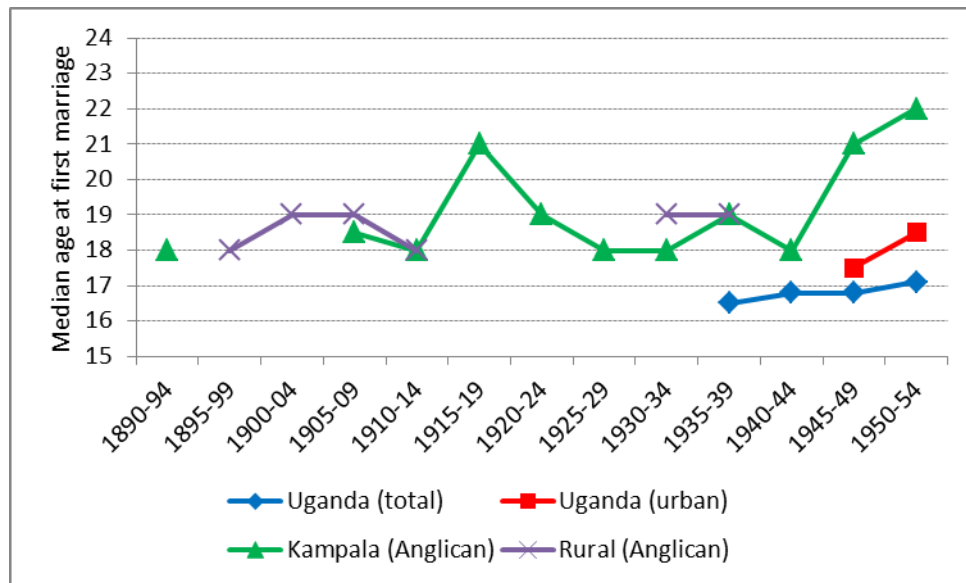
Note: No occupational information for 25 deceased fathers at time of his daughter’s marriage.

Marriage patterns and wage labour

Did the new wage opportunities for young women also translate into greater decision-making power regarding their choice of marriage partner and decisions within their new household? In the absence of historical indices of female empowerment, a new literature exploring the status and position of women in the past has proposed a turn towards female age at first marriage and the age difference between spouses as proxies of the bargaining position between sexes and generations (Kaufmann and Meekers 1998, Jensen and Thornton 2003). The underlying idea is that marriage constitutes a turning-point in girls' lives and that the onset of marriage and individual partner choice largely depends on how much a girl is in a position to decide on this. Young girls who are married off to much older men are likely to be left with little say as to the terms of the union. This lack of free choice from the 'start' is likely to continue limiting women's bargaining power within the new household (Carmichael 2011, Carmichael et al. 2011, Van Zanden 2012, World Bank 2011). According to Kenneth Little (1973: 7), the fact that 'the position of African women is bound up inextricably with such fundamental institutions as marriage and kinship, renders it particularly sensitive to fresh developments', making it '...one of the best indices available for judging and predicting social change...'

We start by placing the marriage ages of the sampled Anglican brides into a comparative perspective. Female median marriage ages for rural and urban Uganda are derived from Garenne (2004) who computed women's marriage ages from Demographic and Health Surveys (DHS) for total and urban Uganda by five-year birth cohort. First, we compare the urban and rural Anglican nuptiality trends with those of urban and total Uganda by five-year birth cohorts in Figure 9. Unfortunately, DHS surveys do not allow reconstructing marriage patterns pre-1935 birth cohorts. We see, when taking the median age at first marriage, rural and urban Protestant brides marry around the same age. This may be the case because labour opportunities were not significantly different for urban than for rural Protestant women for most of the colonial era (see Figure 5 and 6). Urban Ugandan girls married about one year later than their rural counterparts. Rural Ugandan girls born 1935-1954 married at median age 17, while both sampled urban and rural female Protestants born 1935-1939 married at 19 years. This gap widened considerably, between three and four years, for girls marrying after independence. This partial evidence indicates that both urban and rural Anglican brides married about two years later than the average urban and rural Ugandan woman born in the 1930s. And Anglican urban brides, born 1945-54, married between two and three years later than the average Ugandan 'city girl'.

Figure 9: Anglican urban and rural median age at first marriage in Ugandan perspective



Note: Median age at first marriage for total and urban Uganda derived from Garenne (2004). Anglican 5-year birth cohorts excluded whenever $N < 100$. Coverage: Women aged 15-49.

Due to the limited number of observations going back in time in the macro comparison, a more suitable strategy to study the impact of mission labour on female marriage behaviour may lie in a *within*-analysis of marriage patterns. This would entail comparing age at first marriage and spousal age difference of women deeply entrenched in the mission movement versus women who were not and asking whether the transfer of occupational skills and subsequent mission employment prior to marriage delayed the uptake of women's marriage, as suggested by the views of Iliffe (2007) and Taylor (1958), and in turn also narrow the spousal age difference? However, admittedly, there is an element of reverse causality in this relationship. It is likely that women that earn a wage do indeed have more autonomy and can therefore influence their marriage to a greater extent. However, it may also be the case that later marriage simply gives women time to build up their human capital, which makes them more likely to have a waged career. For the following interpretations this reciprocal relationship should be kept in mind.

Figures 10 and 11 illustrate age at first marriage and Figures 12 and 13 spousal age difference of urban and rural Protestant women engaged in mission medical and educational labour, waged non-mission labour, as well as non-waged labour (informal) for birth cohorts 1880-1945 who married before their 36th birthday. The latter figures tell a consistent story: on average, whenever urban and rural girls worked for the mission society they married more than three years later than a non-wage earning woman. Non-mission wage-earning employment, arising approximately two decades later than mission employment, had a similar

effect, delaying women's marriage by more than three years in Kampala and rural Toro relative to non-wage earning brides. As a result, the spousal age gap was also considerably smaller, by about three years, for the average mission and non-mission wage-earning bride in Kampala and Toro. This suggests that whenever young women had the ability to work for the mission (before marriage) as teachers, nurses, midwives, or otherwise participate in the labour market, they seemed to have gained more say in their choice of partner, as well as within the new household, in comparison to their female counterparts excluded from participation in the labour markets. This may be because wage-earning women were able to contribute to their household income, which might have weakened the economic basis for parental influence, which increased women's ability to decide on marital affairs, as well as affected the power-balance between them and their husbands. Conversely, the causal direction could also run through later marriage enhancing women's chances for human capital formation and working for a wage. If we continue this line of thought, based on the idea that demographers assume that age at first marriage is an important proximate determinant of fertility, one could hypothesize that employment opportunities largely offered by the missionary society also affected women's marital reproductive career. Furthermore, the age difference between wage-earning wives and their husbands was more than two years less than for the average non-mission working bride, and more than three years in rural Toro, indicating a better bargaining position within the union. Also, Figures 12 and 13 reveal an increasing spousal age difference for 1880-1920 Kampala and 1920-1940 Toro for non-wage-earning women, largely motivated by their husbands marrying considerably later in life, indicated by the relatively flat marriage age curves for informal labourers (Figures 10 and 11). Given that the majority of sampled husbands were wage labourers, this puts doubt on the hypothesis formulated by Kitching (1983) and Iliffe (2007: 247) that unprecedented access to wage employment and thus bridewealth resources resulted into a reduction of the age of marriage for men.

Figure 10: Age at first marriage, mission/non-mission labour, Kampala

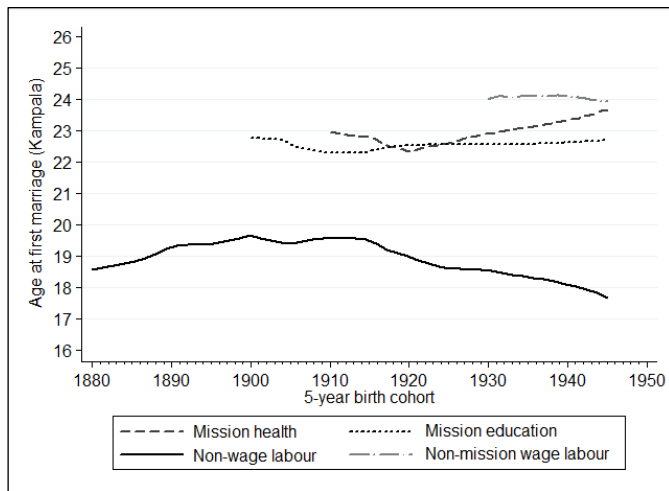


Figure 11: Age at first marriage, mission/non-mission labour, Toro

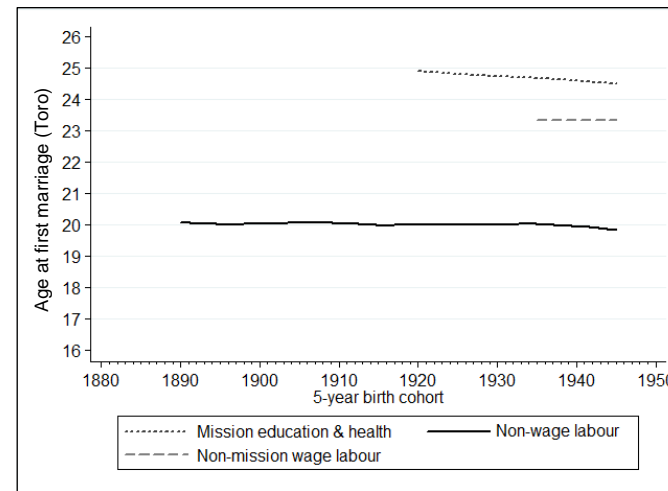


Figure 12: Spousal age gap, mission/non-mission labour, Kampala

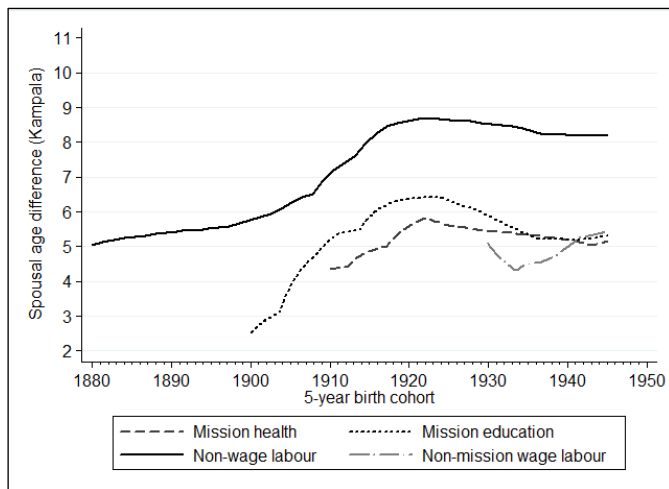
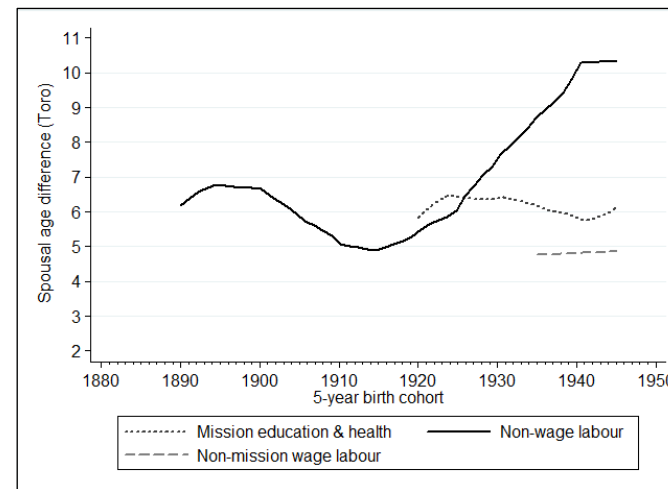


Figure 13: Spousal age gap, mission/non-mission labour, Toro



Note: Figure graphs: local polynomial smoothed line. Coverage: age at first marriage < 36 years. Illustration if N > 10 per decade. ‘Mission health’: e.g. hospital nurse, midwife, dispenser, matron, medical assistant, doctor. ‘Mission education’: e.g.: school teacher, clergy. ‘Non-mission waged labour’: e.g.: clerk, typist, secretary, stenographer.

In this final section, some of the determinants of women's age at first marriage and spouses' age difference are jointly explored in a multivariate regression framework. The following analysis should be regarded as complementary and exploratory. The relatively small sample size for early Kampala birth cohorts (1880-1920) and the general much lower annual sample size of rural Toro means we have to treat the results of the first decades with caution. Furthermore, the limited number of variables in the marriage registers does not allow controlling for other unobserved factors. The OLS model is specified as:

$$y = \beta_0 + \beta_1 \textit{literacy} + \beta_2 \textit{labour} + \beta_3 \textit{father_occ} + \mu_{bc} + \varepsilon$$

where y represents the two outcome indicators: brides' age at first marriage or spousal age difference, and μ_{bc} are birth-cohort and parish fixed effects, while ε is the error term. The β_1 coefficient captures the effect of brides' literacy status, while β_2 takes the coefficient of the effect of two dummy variables: brides' mission employment and brides' non-mission wage employment, while β_3 denotes the coefficient of a number of dummy variables for fathers' occupational background used already in the previous sections. The reference category for the interpretation of the coefficients of paternal background is farming background. Whenever y denotes the spousal age difference it is also controlled for groom's wage employment and literacy status in the specification. The correlation matrix is presented in Table A2. The OLS regression results for Kampala and Toro, with robust standard errors, and birth cohort and parish fixed effects are reported in the Appendix Tables A3 to A5.

The regression results show that women's literacy from mission education is not statistically significantly related to women's age at first marriage in Kampala and Toro (Table 3 and 4). Furthermore, mission schooling has no significant effect on the age difference between groom and bride in both parish samples. Those findings are consistent in a range of specifications, including testing for different colonial time period interaction terms. This is somewhat surprising as it is commonly stated in the literature that mission education led African women to marry later in life. Two possible explanation for the present result could be that the effect of Protestant mission schools' propagating women's domesticity and motherhood may have encouraged women to marry early in combination with schools and churches providing new mating opportunities for boys and girls, introducing them to a broader marriage market. Yet, our literacy dummy does not inform us about length of schooling or skills obtained at school. Hence, a better indicator for the level of brides' human

capital may lie in their occupational skills gained through schooling and subsequent vocational training, in both mission and other waged employment.

Keeping in mind an element of reverse causality in the relationship of wage labour and marriage age, i.e. wage labour leads to later marriage but later marriage can also increase the chances of working for a wage, we find that mission wage employment yields the expected positive effect in both Kampala and Toro, confirming the prior graphical analysis that both urban and rural sampled women employed by the mission society married more than three years later in life, reflecting a greater bargaining power regarding their marital affairs. Hence, literacy per se, in the absence of employment opportunities outside the household, was not sufficient to delay women's marriage, nor in reducing the spousal age gap. An interaction variable between distinct colonial birth cohorts and mission labour was added to the regression to explore the historical dynamics a little further. In both Kampala and Toro parishes, mission labour started to significantly affect female marriage ages from the mid-colonial birth cohorts (1910-45) onwards. The dummy for non-mission related wage labour is significant for the late-colonial birth cohorts (1930-45) in Kampala which is in line with the previous finding that for women non-mission employment niches only opened up in the late colonial era. The coefficients for women's non-mission employment in Toro are to be interpreted with caution, as they are based on only 12 observations for the entire period. Moreover, Table A5 presents evidence that in Kampala female mission (1930-45) and non-mission labour, and groom's wage labour and literacy status reduced the age gap between grooms and brides, carrying potential gains of women's household bargaining power. In Toro, groom's literacy status and bride's non-mission wage labour narrowed the spousal age gap.

Lastly, we control for women's parental background with brides' fathers' engaged in farming acting as reference group. We find that girls from Kampala who had a father deeply entrenched in the missionary movement married about one year later than girls with agricultural social origin. Other paternal occupational groups yielded no statistically significant results. This suggests that mission fathers may have given their daughters greater agency regarding marriage choice. The alternative mechanism may be that daughters who had a father working for the missionary movement were more likely to work for the mission themselves, already suggested in Table 5. On the contrary, father's mission background had no significant effect for rural daughter's' marriage timing. However, daughters who had a father working for a wage outside the mission and coming from chiefly families married nearly one year later than girls from agricultural backgrounds.

6. Conclusion

Recent studies of women's educational development in Africa have given ample credit to the 'benign' features of Protestant missionary education. Yet, little is known about the influence and mechanism of Protestant missionary education on African women's social and economic standing beyond its long-term effect on literacy. Using a novel dataset of Ugandan Protestant brides drawn from rural and urban Anglican marriage registers of the colonial era, this case study has traced the development of female Protestants' literacy, labour market participation, and age at marriage and offered a first pass at analyzing empirically the role of missionary education in shaping women's socio-economic position within the colonial economy and the household. Moreover, it has been demonstrated that African parish records can offer an exciting avenue for research to study Africans gender-specific past on the micro-level.

This paper finds that while mission education raised rural and urban Protestant women's literacy rates far above the female national levels, women were largely isolated from participating in the emerging wage economy. Thus, beyond the spiritual gains, the acquisition of literacy at mission schools seems to have been a necessary but not sufficient achievement for successful participation in the colonial wage economy. Within the colonial economy the Protestant missionary society presented an almost exclusive entry mechanism for Protestant women to acquire new occupational skills through wage labour opportunities in areas of religious service, schooling and medical care until the late colonial era when administrative employment niches opened up. On average, daughters of fathers deeply entrenched in the missionary movement had the highest likelihood to access waged (mission) labour, highlighting the importance of the paternal missionary network for female employment. This resonates with recent findings by Wantchekon et al. (2013) that parents' mission schooling and enhanced social networks had large positive effects on their children's education and social mobility in colonial Benin.

Literacy per se did not affect women's marriage ages, unless coupled with their participation in wage labour which allowed women to contribute to the income of their households. However, girls who obtained vocational training and subsequent wage labour with the missionary society or another employer married significantly later in life and married men closer to their own age, signaling a shift in the power balance between generations and between husband and wife. Thus, access to the labour market played a key role in the emancipation process of female Protestants, which seemed to mark a clear break from their pre-colonial status.

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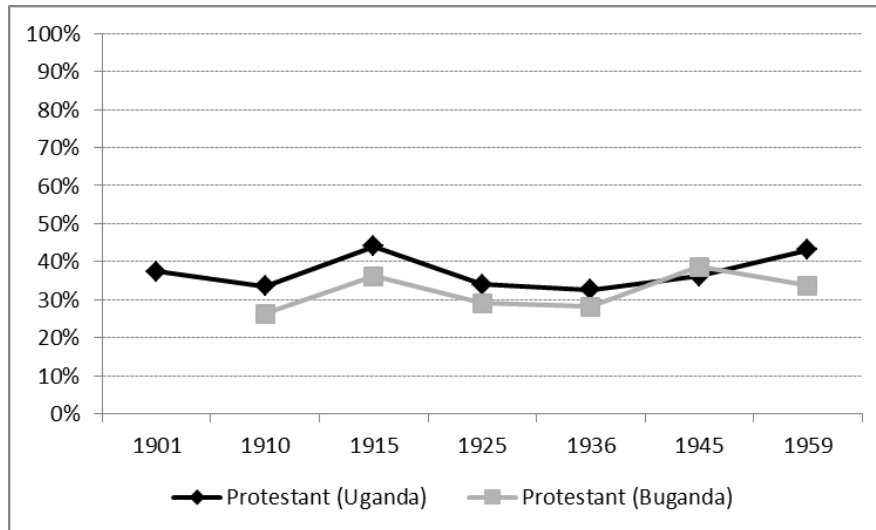
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Appendix

Figure A1: Share of Protestants among Christian followers in total Uganda and Buganda, 1901-1959



Source: Uganda Protectorate Blue Books 1901-1945, Uganda Protectorate Census 1959. Entebbe: Government Printer.

Figure A2: Women's age at first marriage frequency distribution, birth cohorts 1880-1945

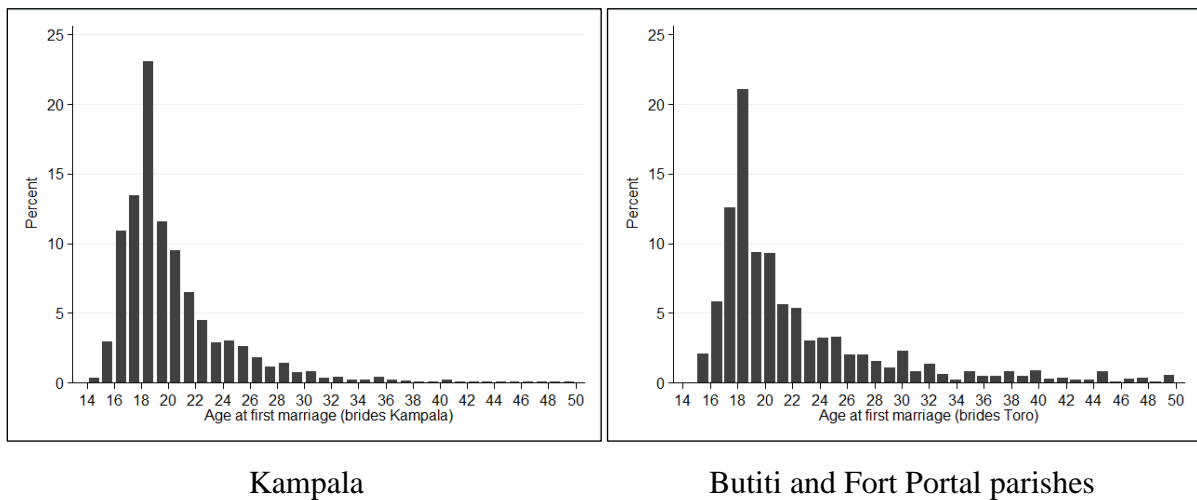
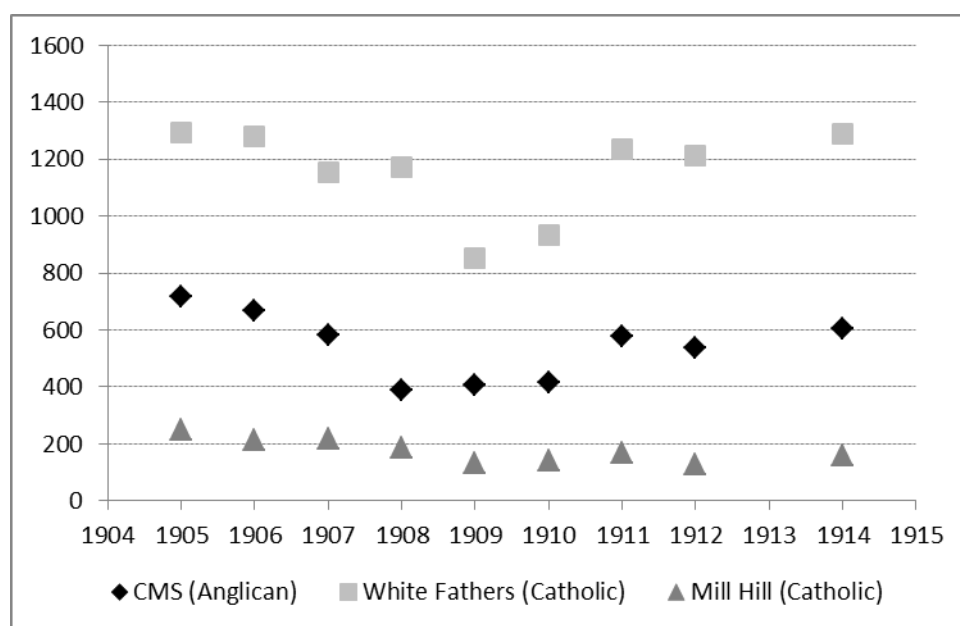


Figure A3: Number of marriages per year and by denomination, 1905-1914



Source: Uganda Protectorate Blue Books 1905-1915.

Note: Before 1904 the CMS had solemnized 4,586 marriages, the White Fathers 8,694 and the Mill Hill sanctified 691 unions (Uganda Protectorate 1905).

Table A1: Fathers' occupational groups with respective top 15 occupations

Chief	Farmers	Craftsmen & Builders	Mission wage labour	Other wage labour
Chief	Cotton grower	Barkclothmaker	Archdeacon	Accountant
Sub-chief	Cowherd	Basketmaker	Bishop	Butcher
	Farmer	Blacksmith	Catechist	Businessman
	Fisher	Brickmaker	Clergy	Clerk
	Fisherman	Builder	Clerk in Holy Order	Cook
	Hunter	Carpenter	Lay teacher	Driver
	Planter	Maker	Church minister	Engineer
	Shepherd	Mason	Church warden	Headman
		Matmaker	Dispenser	Labourer
		Potter	Doctor	Mechanic
		Tailor	Lay reader	Policeman
		Weaver	Medical assistant	Printer
			Nurse	Shopowner
			Priest	Soldier
			Teacher	Trader

Table A2: Correlation matrix

		Lit_B	ML_B	OWL_B	Lit_G	WL_G	Mi_WB	Cr_FB	Mi_FB
Kampala	Mission labour bride	0.113	1.000						
	Other wage labour bride	0.035	-0.096	1.000					
	Literate groom	0.464	0.055	0.025	1.000				
	Wage labour groom	0.214	0.122	0.069	0.201	1.000			
	Chief father bride	0.012	-0.031	-0.015	0.024	0.012	1.000		
	Craftsman father bride	-0.212	-0.095	-0.043	-0.080	-0.080	-0.157	1.000	
	Mission father bride	0.051	0.155	0.069	0.017	0.031	-0.158	-0.125	1.000
	Clerk father bride	0.075	-0.045	-0.002	0.038	0.010	-0.254	-0.066	-0.201
Toro	Mission labour bride	0.215	1.000						
	Other wage labour bride	0.053	-0.026	1.000					
	Literate groom	0.345	0.068	0.006	1.000				
	Wage labour groom	0.065	0.154	0.089	0.138	1.000			
	Chief father bride	0.075	0.112	-0.018	0.120	0.039	1.000		
	Craftsman father bride	-0.062	-0.051	-0.039	-0.007	-0.055	-0.178	1.000	
	Mission father bride	0.081	0.150	0.159	-0.018	0.063	-0.078	-0.068	1.000
	Clerk father bride	0.048	0.026	0.027	-0.009	0.133	-0.160	-0.085	-0.063

Table A3: Regression results (Kampala) – OLS (dependent variable: bride's age at first marriage)

	(1)	(2)	(3)	(4)	(5)	(6)
Literacy	-0.048 (0.347)		-0.230 (0.332)	-0.233 (0.335)	-0.075 (0.346)	-0.129 (0.341)
Literacy 1880-1909		0.498 (0.305)				
Literacy 1910-1929		-1.069 (0.773)				
Literacy 1930-1945		-0.149 (0.846)				
Mission labour			3.723*** (0.158)			3.585*** (0.170)
Mission labour 1880-1909				0.453 (0.836)		
Mission labour 1910-29				2.887*** (0.880)		
Mission labour 1930-45				3.887*** (0.194)		
Non-mission wage labour, 1880-1909					0.487 (0.617)	
Non-mission wage labour, 1910-29					-0.665 (0.933)	
Non-mission wage labour, 1930-45					4.548*** (0.338)	
Mission labour father						0.998*** (0.201)
Chief father						-0.119 (0.152)
Craftsman father						0.209 (0.194)
Non-mission wage labour father						-0.155 (0.152)
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	26.349*** (0.340)	20.667*** (0.635)	26.433*** (0.372)	26.411*** (0.355)	21.049*** (0.513)	25.790*** (0.194)
R²	0.084	0.085	0.233	0.135	0.135	0.241
N	4,166	4,166	4,166	4,166	4,166	3,582

Note: *Significant at 10% level **Significant at 5% level ***Significant at 1% level. Robust standard errors in parentheses. Coverage: brides' age at first marriage < 36 years.

Table A4: Regression results (Toro parishes) – OLS (dependent variable: bride’s age at first marriage)

	(1)	(2)	(3)	(4)	(5)	(6)
Literacy	0.202 (0.264)		-0.285 (0.260)	-0.299 (0.258)	0.166 (0.264)	-0.300 (0.261)
Literacy 1880-1909		-0.412 (0.375)				
Literacy 1910-1929		1.049* (0.622)				
Literacy 1930-1945		0.678 (0.532)				
Mission labour			4.571*** (0.517)			4.150*** (0.515)
Mission labour 1880-1909				1.984 (1.164)		
Mission labour 1910-29				2.870** (1.326)		
Mission labour 1930-45				4.689*** (0.702)		
Non-mission wage labour, 1880-1909					-1.193** (0.265)	
Non-mission wage labour, 1910-29					8.343*** (3.252)	
Non-mission wage labour, 1930-45					2.920 (2.623)	
Mission labour father						0.912 (0.759)
Chief father						0.772** (0.374)
Craftsman father						-0.772 (0.310)
Non-mission wage labour father						0.932** (0.467)
Birth year & Parish FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	28.673*** (0.404)	32.026*** (0.569)	29.057*** (0.394)	29.077*** (0.395)	28.756*** (0.404)	31.954*** (0.574)
R²	0.147	0.150	0.208	0.216	0.156	0.220
N	1,036	1,036	1,036	1,036	1,036	1,011

Note: *Significant at 10% level **Significant at 5% level ***Significant at 1% level. Robust standard errors in parentheses. Coverage: brides’ age at first marriage < 36 years.

Table A5: Regression results (Kampala and Toro) – OLS (dependent variable: spousal age difference)

	Kampala			Toro parishes		
	(1)	(2)	(3)	(1)	(2)	(3)
Literacy bride	-0.132 (0.497)	-0.069 (0.504)	-0.005 (0.502)	-0.258 (0.424)	-0.040 (0.445)	-0.183 (0.428)
Mission labour 1880-1909		-0.546 (1.101)			-1.802 (1.391)	
Mission labour 1910-1929		-1.814 (1.172)			1.536 (1.636)	
Mission labour 1930-1945		-2.221*** (0.241)			-1.820 (1.331)	
Non-mission wage labour			-1.819*** (0.369)			-4.431*** (1.517)
Literacy groom	-1.998*** (0.663)	-2.220*** (0.690)	-2.135*** (0.689)	-2.584*** (0.587)	-2.582*** (0.591)	-2.574*** (0.591)
Wage labour groom		-0.882*** (0.264)	-1.062*** (1.099)		-0.396 (0.438)	-0.427 (0.431)
Birth year & Parish FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.131*** (0.744)	3.150*** (0.770)	6.122*** (0.876)	12.839*** (0.539)	5.650*** (0.992)	5.876*** (0.970)
R²	0.056	0.090	0.066	0.144	0.148	0.149
N	4,101	4,026	4,026	1,007	1,003	1,003

Note: *Significant at 10% **Significant at 5% ***Significant at 1%. Robust standard errors in parentheses. Coverage: women's age at first marriage < 36 years.

Chapter 4: Social mobility among Christian Africans: evidence from Ugandan marriage registers, 1895-2011

with Marco H.D. van Leeuwen (Utrecht University) &

Jacob L. Weisdorf (University of Southern Denmark and CEPR)

Abstract: This paper presents evidence on intergenerational social mobility among Christian Africans between 1895-2011, using a large new dataset of fathers and sons from Anglican marriage registers in rural and urban Uganda. Following a relatively socially static pre-colonial society, the colonial era opened new windows of opportunity for upward social mobility which enabled men to take leaps between ones social origin and destination. Achievement gradually challenged ascription in which the *Africanization* of the mission offered significant opportunities of occupational mobility to Christian Africans. To this end, literacy became a clear pre-condition for status attainment and sons benefitted from their fathers' occupational ties to the mission and the colonial state. We also demonstrate that colonial influences in Uganda, besides facilitating the emergence of a new educated elite, gave rise to a more equal society in terms of social mobility which withered pre-colonial power structures rather than preserving them. Rural-to-urban labour migration became a common strategy to ascend the social ladder, although migrants faced lower chances of high-status attainment than initial residents.

JEL Classification: J62, N27, O15

Keywords: Colonial era, intergenerational social mobility, missionaries, occupations, Uganda, urban migration

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1. Introduction

“There is little doubt, in spite of the variable persistence of traditional criteria of social status that occupation, income, and education are becoming increasingly important in the placement of individuals within the “emergent” social structures of the new nations of Africa.” (Foster 1963: 150)

Over the past decade, a growing body of literature has emerged that aims at shedding new light on the ‘legacy’ of colonial rule on long-term African development.¹ Increasingly, evidence points to the historical presence of Christian missionaries that had long-term impacts on African culture (Nunn 2010) and educational attainment (Gallego and Woodberry 2010, Frankema 2012 Wantchekon et al. 2013, Moradi and Cogneau 2014, Nunn 2014). However, it remains largely unknown whether Christian Africans were able to improve their *occupational position*. Existing studies on African intergenerational social mobility have been limited to the post-independence era because African micro occupational data from censuses and surveys remain unavailable for most African countries until the 1980s.²

The existing economic and social history literature is characterized by an optimistic view of the colonial period having opened windows of opportunity to skilled Africans, especially in urban centres (Iliffe 2007, Frankema 2012, Reid 2012). The scholarly consensus holds that once it became clear that European rule would define a new era, mission schools were “welcomed” by Africans as a means to adjusting to the new status quo in which Christianity and formal education offered visible social benefits (Porter 2004: 317, Iliffe 2007: 219-229, Frankema 2012).³ Typically, African parents sent their children to mission schools for strategic reasons related to occupational mobility – not merely for their spiritual needs (Foster 1965: 66, Berman 1975: xi). Further, Reid (2012: 210) has argued that the expansion of the colonial economy, in which newly acquired formal skills could be put to use, opened up “worlds very different from those of their parents”, and thus became “colonial Africa’s chief generator of social mobility and stratification” (Iliffe 2007: 229).

For Uganda the literature remains divided. On the one hand, Uganda has been described as a country in which African mass-conversion and demand for mission schooling was exceptional by any standard in the whole of British Africa (Oliver 1952, Hastings 1994, Frankema 2012). On the other hand, scholarship has taken a rather pessimistic view on the

¹ In this article, we alternate the terms “Africa” and “Sub-Saharan Africa”.

² Notable works include: Foster 1963, Hurd and Johnson 1967, Kelley and Perlman 1971, Lam 1999, Louw et al. 2007, Dumas and Lambert 2010, Bossuroy and Cogneau 2013, Pasquier-Doumer 2013. Further evidence includes the study by Piranino et al. (2014) on the multigenerational transmission of longevity among 18th and 19th century Cape Colony settlers. One salient exception includes Wantchekon et al. (2013) that present a social mobility study on the earliest students of mission schools in colonial Benin and that of their descendants.

³ Ekechi (1993) argues that this was particularly important for male adults. Meier zu Selhausen (2014) has also shown that mission employment was crucial to women’s social mobility.

extent to which the colonial era resulted into occupational mobility for Ugandans. Evidence points to Europeans and mainly Indians dominating the modern sector of the (urban) economy, providing skilled labour, entrepreneurship and capital, while Africans were relegated to unskilled labour at the bottom of the market (Ehrlich 1973, Jamal 1976). Low urban real wages, few employment possibilities and lucrative incomes from cash crop cultivation are held to have further discouraged unskilled Africans to move into urban centres (Elkan 1960, De Haas 2014). This implies that opportunities of socio-economic mobility were rather minor for Ugandan Africans over the colonial era.

This paper sheds new light on the claim that the colonial economy facilitated *socio-economic mobility* for educated Africans by presenting long-term trends on African intergenerational occupational mobility and investigating the determinants of occupational attainment. To achieve this, we use hitherto untapped data from Anglican marriage registers, containing close to 20,000 historical marriages from rural and urban Uganda, covering Uganda's entire colonial and post-colonial era. Anglican marriage registers of the Church Mission Society (CMS) offer an excellent opportunity to study African social mobility in the past, comprising individual-level information on the occupations of spouses and those of their fathers as well as (signature) literacy, marriage ages, and the location of their residence.

Our contribution to the debate is fourfold. Firstly, we exploit African occupational data from hitherto unexplored Anglican marriage registers from Uganda to provide new empirical insights into the colonial and post-colonial patterns of intergenerational social mobility of Christian Africans. Secondly, in order to achieve this we assign historical class categories and status attainment scores for the first time to African occupational titles. Thirdly, we move beyond describing social mobility trends to explaining them. In particular, we explore the inter-connections between father's occupational status, son's education, rural-urban migration, rural-urban divide, traditional power structures, and social status attainment. Fourthly, the measure of intergenerational social mobility and our applied methods complement a wider research frontier of recent attempts to reconstruct measures of African living standards over the colonial era.⁴

We find that the colonial era opened numerous windows of opportunity for upward social mobility for men. Following a relatively socially static society during the first years of colonial rule, we show that upward intergenerational occupational mobility rapidly exceeded downward mobility and leaps between social classes were possible. In this highly mobile Christian society achievement gradually challenged ascription. The missionaries played an

⁴ Notable recent examples include: Moradi 2009, Cogneau and Rouanet 2011, Frankema and Van Waijenburg 2012, Prados de la Escosura 2013, De Haas 2014, Jerven 2014, and Meier zu Selhausen and Weisdorf 2014.

important role in *Africanizing* formal work, which offered significant opportunities of occupational mobility to Christian Africans. As such, literacy became a clear pre-condition for status attainment and sons stood to gain from their fathers' occupational ties to the mission and the colonial state. We also show that colonial influences in Uganda gave rise to a more equal society in terms of social mobility and altered pre-colonial power structures. Sons of chiefs had a clear advantage to enter the top classes for most of the colonial era, however by the late colonial era sons of low status backgrounds exceeded that of high-status chiefs. To our surprise, we find no indication that the economically devastating presidency of Idi Amin (1971-79) lowered the overall trend of upward social mobility. Urban Kampala consistently offered greater opportunities for social mobility than rural areas. Thus, labour migration to Kampala became a common strategy to climb the social ladder, although migrants faced lower chances of social attainment than those who grew up in Kampala.

The paper proceeds as follows. Section 2 provides the historical background of Uganda's pre-colonial and colonial social stratification against which we attempt to measure changes in occupational structures. Section 3 presents the data and methods applied. Section 4 presents the long-term trends of social mobility. Section 5 uses regression analysis to examine the factors affecting African status attainment. Section 6 concludes.

2. Historical background: social mobility in Uganda

Pre-colonial Uganda

During the heyday of the "scramble for Africa", the kingdom of Buganda, situated along the northern shore of Lake Victoria, emerged as the dominant force among several co-existing interlacustrine central states: Ankole, Busoga, Bunyoro, and Toro. The affluent Buganda kingdom possessed particularly well-drained and fertile soils, capable of supporting a relatively dense population (Ofcansky 1996). Moreover, Buganda was a feudal economy ruled by a *kabaka* (king) who administered his kingdom through a *katikkiro* (prime minister) and a complex hierarchy of appointed chiefs at various levels who commanded the local *bakopi* (peasants) on behalf of the state (Wrigley 1964: 19, Reid 2002: 3-5). Then, on the bottom of society there were the slaves who disappeared with colonialism. In Buganda, political office and territorial chieftainship was not awarded on a hereditary basis or on royal blood kinship, but depended on direct appointment by the *kabaka*. This system of meritocracy created acquisitive and competitive social structures based on achievement in which men competed for advancement at the royal court (Wrigley 1959: 73, Fallers 1959, Kiwanuka 1971, Twaddle 1974, Berman 1974). A man's social status was determined by those with

whom he established close relationships, and one of the most efficient ways of securing this relationship was through one's children. Therefore, chiefs as well as peasant families frequently sent their young boys to the court to serve as pages to establish avenues of social mobility to their children by increasing their recruitment opportunities as future chiefs (Fallers 1959, 1964: 10, Sundkler and Steed 2000: 565). In that sense, there was a "strongly marked differentiation of wealth and status but at the same time something like equality of opportunity" (Wrigley 1957: 20).

Colonial change

According to Low (1957, 1971) and Fallers (1964), it were those relatively "fluid" pre-colonial social structures that became peculiarly favourable to the indigenous reception of Christianity once missionaries arrived to Buganda in 1877. After the Buganda court adopted Christianity as state religion and Britain proclaimed Uganda its Protectorate in 1894, Christian mass-conversion and the demand for mission education, from all echelons of society, thrived like nowhere else in British Africa (Oliver 1952: 184, Berman 1975: 13, 26, Hastings 1994: 464-78, Frankema 2012).⁵ The British governed the tropical Protectorate through *indirect rule* which perpetuated, rather than destroyed, traditional African power structures. Under this system chiefs became salaried officials who operated as agents of the colonial state, collected taxes, administered justice, and allocated land (Twaddle 1969, Reid 2012: 185).

The colonial state left the provision of education entirely in the hands of Christian missionary societies for most of the colonial era. They offered their teachings at low-cost, as education was central to their conversion efforts. According to Berman (1975: 26), once Protestant and Catholic missionaries arrived in Buganda in the late 1870s and "established schools based on achievement criteria, status achievement and social mobility quickly became associated with schools, schooling and mobility soon became synonymous", replacing royal service as the training and recruiting ground for the elite. Anecdotal evidence suggests that when the economic advantages of education became apparent, in the form of clerical and administrative waged labour (Apter 1961: 74) which carried large skill premiums (Frankema and Van Waijenburg 2012), fathers invested their limited resources in the education of their sons (Isichei 1995: 240). As a result, it has been claimed that this facilitated "significant changes in Ugandan society and enabled successful students to enjoy a degree of social mobility unknown to their parents" (Iliffe 2007: 252). Kelley and Perlman (1971) identified,

⁵ See Meier zu Selhausen (2014) for long-term statistics of Christian conversion in Buganda, Toro and total Uganda between 1901 and 1959, based on British colonial blue books.

in their study of intergenerational social mobility in Western Uganda, that conversion to Christianity (both as a mark of status and indicator of the knowledge of formal skills) acted as a key aspect for status attainment in 1960. Moreover, they argue that mission education was important for social attainment as literacy was typically transmitted early in life, so that, unlike inheritance of wealth or land, the son would gain a persistent advantage throughout his life, independent from his father losing his wealth or status position. From the 1920s onwards the colonial state increased its demand for more African skilled positions, taking a more active interest in secondary education. This led to the foundation of the technical training college of *Makerere*.

Under colonial rule, Kampala emerged as the Protectorate's hub of economic activity, most populous city, and the principal "node" of the British administration and the Buganda kingdom. It also possessed the country's largest concentration of commercial enterprises, transport infrastructure (railway and roads), commercial enterprises, colonial bureaucracy, the Buganda parliament and the royal enclosure, and constituted the heart of missionary efforts.⁶ Hence, in Kampala the prospects of occupational mobility attached to acquiring literacy and the comprehension of the metropolitan language one would expect to be highest in the whole of Uganda.

However, for Kampala this picture is less clear. Conversely, it has been argued that colonial policies in Uganda made indigenous incipient commercial enterprise virtually impossible (Ehrlich 1963). Although, Africans were not officially restricted from private and public positions, it was the growing Asian migrant community that came to dominate the modern administrative and clerical sectors of the Protectorate's economy (Jamal 1976). Consequently, it has been claimed that the colonial era culminated in a de facto ethnically divided labour market in which Africans operated at the bottom of the market system, contributing their manual labour as "peasants, porters, and clerks" or labourers in cotton ginneries (Ehrlich 1963, Jamal 1976), while clerical positions within the colonial administration and privileged retail licenses were granted to Indians (Uganda Protectorate 1906, Kabwegyere 1976, Kyomuhendo and McIntosh 2006: 13, 51). Moreover, few attempts were made to accommodate Africans as urban dwellers in Kampala city (Van Zwanenberg and King 1975: 261-262). Also, both prospect of finding labour and real wages for unskilled labour in Kampala were low compared to relatively lucrative incomes possible from export crop cultivation (mainly cotton and coffee) in rural areas (De Haas 2014), which arguably discouraged Buganda farmers from migrating to urban labour markets (Elkan 1960). Those

⁶ For a more elaborate historical background of Kampala's development in the 20th century see Meier zu Selhausen and Weisdorf (2014).

few market opportunities outside agriculture are also emphasized by Bossuroy and Cogenau (2013) who estimated that sons of farmers, born in the 1930s, stood a 16% conditional probability of becoming non-farmers in Uganda. Overall, this paints a rather pessimistic picture for African prospects of social mobility in colonial Kampala. This competes with the common view that the colonial economy in urban areas provided considerable social mobility premiums (Iliffe 2007, Reid 2012).

3. Data and method

Analysing mobility with Anglican marriage registers

To assess long-run African social mobility in Uganda we collected a novel data set from marriage registers of the Anglican Church in Uganda, comprising four parishes for the period 1895-2011. Data was collected from St. Paul's Cathedral in the capital city of Kampala and three rural parishes of the Rwenzori Diocese in Western Uganda: St. Barnabas' Church in Bundibugyo, St. Peter's Church, located in Butiti, and St. John's Cathedral in Fort Portal. Figure 1 shows their geographical locations. While Kampala has always been the urban centre of commercial and political activity, the three sampled parishes from the western Toro kingdom are set in an agricultural environment, stretching along the Rwenzori Mountains, about 300km road-distance from Kampala. Although Fort Portal remained a small town during colonial rule, it stood out as the regional headquarter of the colonial administration, the seat of the *omukama* (king) of Toro and the Christian missionaries in Western Uganda. Between Fort Portal and Butiti a number of tea-processing factories started to expand from the early 1950s onwards (Ofcansky 1996). Bundibugyo, next to the Congo border, is the most isolated location in our sample in which the population is primarily engaged in agriculture.

Marriage registers are widely used by historians to study intergenerational mobility. To the best of our knowledge Anglican marriage registers furnish the earliest available individual-level data for the study of intergenerational social mobility since colonial times in Uganda. The marriage registers provide self-declared occupational information of spouses, and those of their fathers. They also contain additional information, such as age at marriage, pre-marital status (i.e. widow/er), date of marriage, and place of residence.⁷ The records also reveal information about literacy of the spouses, derived from the ability to sign one's name. In the absence of capacity to sign their name, we find "x" marks or thumbnails. Signature literacy is widely used by historians (Schofield 1973, Rachal 1987). It signals school

⁷ The occupations of brides and that of their fathers are also present in the data but not the occupations of their mothers which impede an analysis of social mobility between mother-daughter.

attendance, which typically falls below reading skills and above writing skills, but in fact runs fairly parallel to the two. Moreover, each hand-written marriage register was filled by a Protestant priest. The constant and systematic pre-printed format of the Anglican records ensures good comparability of the figures across time. Several occupational titles from the earliest marriage registers from Kampala (1895-1898) have been translated by us from Luganda (i.e. language spoken in Buganda) into English with the help of dictionaries and local translators.

Figure 1: Map of Uganda with geographical location of sampled Anglican parishes



Source: Kingdom boundaries adapted from Steinhart (1977: 2).

In total we collected 16,783 marriage certificates from the urban parish of Kampala and 3,069 from the three selected rural parishes for the years 1895-2011. From the original database we made several limitations. First, as is common in the literature, this study focuses on occupational mobility of men, as the registers do not contain information on the occupational background of the mothers of brides. Second, we only take into account records of couples marrying for the first time (urban: 98.5% of cases and rural: 96.3% of cases) to ensure that sons were at comparable career stages and to avoid individual over-representation. The Anglican Church banned polygamous marriages, thus men could only marry one wife in the Anglican Church (Hastings 1973). Third, we were able to assign HISCO (Historical International Standard Classification of Occupations) codes to 16,175 (97.8% of cases) occupations of grooms from Kampala and 2,922 (99.0% of cases) grooms from the three rural parishes in Western Uganda. Subsequently, HISCO classifies the occupational titles on the basis of tasks and duties to 1,675 different occupational groups (Van Leeuwen and Maas 2011: 13). Fourth, for the study of intergenerational social mobility, we also need to know the occupational title of the father of the groom.

Typically, marriage registers provide occupational information only of fathers who were alive and present at the time of their sons' wedding. Of the marriage records for which a HISCO code could be allocated 11,419 (70.6% of cases) urban and 2,610 (89.3% of cases) rural marriage certificates stated the occupation of both father and son at the time of the son's marriage. The lower number of observed fathers in Kampala is likely due to fathers of rural-urban migrant sons being less likely to attend the son's wedding ceremony. Because a customary marriage in the son's family home typically preceded the Christian wedding (Taylor 1958) some fathers probably spared the costly journey to the capital. Compared to European datasets built from historical marriage registers (e.g. Zijdeman 2009, Knigge et al. 2014) we "lose" comparatively few observations due to an unobserved father which is probably due to lower marriage ages of grooms of 26 years in the colonial era and 31 years for the post-colonial era. The frequency of the data is displayed in Figures 2 and 3, where the time dimension is the marriage year. In total, from the original sample we remain with 14,029 father-son pairs for our historical analysis.

Figure 2: Observations on father and son occupations, Kampala, 1895-2011

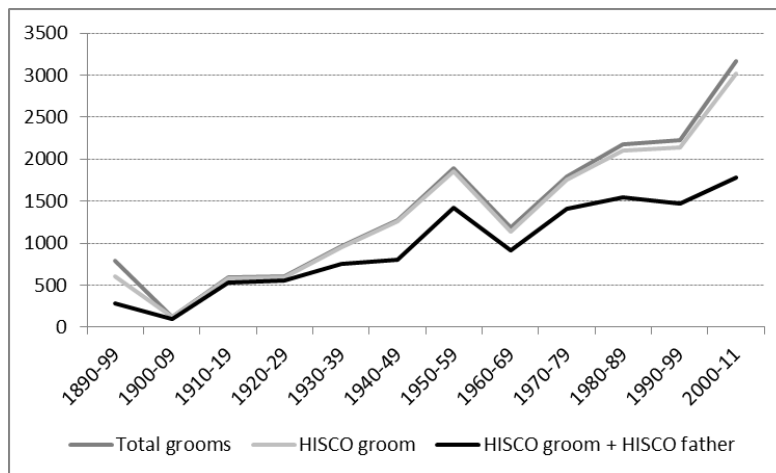
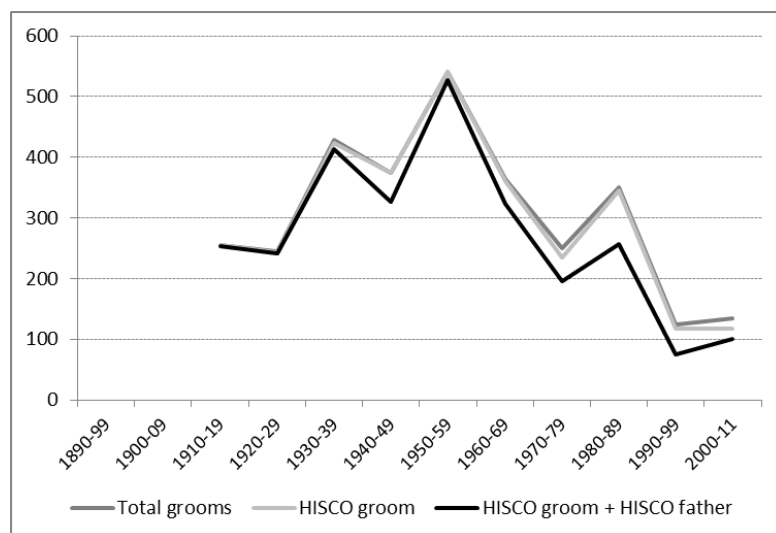


Figure 3: Observations on father and son occupation, three rural parishes, 1911-2011



Note: Includes the following parishes: Butiti (1928-2001; N = 736), Bundibugyo (1936-1974; N = 422), Fort Portal (1911-2011; N = 1,452). Total: N = 2,610

Possible selection biases

Of all vital registers, marriage records are the most informative for the study of social mobility in the long-run (Van Leeuwen and Maas 2010). This seems also true for Africa, in particular for the records of the Anglican Church. However, historical data also do not come without drawbacks. Firstly, an obvious limitation of using Christian marriage certificates is that we do not capture those who did not marry in a church. The Uganda census of 1931 reveals that about a third of African adult men residing in Buganda or Toro had celebrated a Christian marriage. This resonates with the findings of the Anglican survey in Buganda, conducted by Taylor (1958), which reports that about one quarter of African baptized Anglicans married in church, while the majority relied on customary marriage.

Secondly, another common characteristic of historical marriage registers is missing information on the occupation of the father, usually caused by father's death at the time of his offspring's marriage. Delger and Kok (1998) warn that this could bias fathers' social status upwardly if early deaths of fathers are not "socially random" but related to their lower occupational status, since grooms from the lower classes of society are then potentially underrepresented in the dataset. Conversely, a father's death may have stepped up sons' social status through inheriting a farm, a workshop, or money and livestock. To investigate this potential bias we use HISCLASS (Historical International Social Class Scheme) to aggregate grooms' occupations into six classes (Figures A1 and A2). We find that the cases for which one has data do not significantly differ with regard to grooms' occupational structure from the cases for which fathers' occupations are lacking. This inspires confidence that we can safely assume that the dataset used for analysis contains no upward bias. A comparison of grooms' age at first marriage between those grooms with father's occupational information present and those without reveals that grooms without a reported father's occupation married on average 3.5 years later than those fiancés without their father's occupation stated. However, this is not surprising given that the younger a son married the more likely it was that his father would be alive at his child's wedding, and state his occupation.

Thirdly, a further potential bias stems from the fact that marriage registers compare father and son at different stages in the life-cycles could be that marriage registers capture sons at an early stage of their career when fathers may be at the height of their working life, which may overestimate sons' downward or lateral mobility. On the other extreme, anecdotal evidence holds that some former wage earners moved back to the countryside after retirement from wage labour (Elkan 1967, Robertson and Hughes 1978). The nature of this circular migration could mean that some fathers may have changed occupations over time, back to the farming sector from their previous occupational title. Once again, this may upwardly bias intergenerational social mobility of sons. We check both hypotheses in Tables A1 and A2 by comparing urban and rural fathers' occupational structures across those different ranges of their son's age at marriage. Tables A1 and A2 reveal that the occupational class structure of fathers does not considerably vary the later their sons' married. This suggests that we do not capture a systematic bias of fathers being more likely to be reported as farmers the later his son marries, and thus the older a father on average must be.

Analytical Method: HISCO on safari

Occupations form the “DNA” of social history (Jones et al. 2012). Fathers and sons occupational status stated in the marriage certificate was coded into HISCO. HISCO is a scientific instrument that facilitates comparable classification of occupational titles across different periods, countries and, languages (Van Leeuwen et al. 2002), and is rooted in the 1968 version of ISCO (International Standard Classification of Occupations) of ILO (1969). HISCLASS is HISCO-based and defines social class positions by historical occupational titles (Van Leeuwen and Maas 2011). Both methods have been used across 18th, 19th and 20th century Europe (e.g. Dribe and Lundh 2009, Fonseca and Guimaraes 2009, Zijdeman 2009, Lippényi et al. 2013, De Pleijt and Weisdorf 2014, Knigge et al. 2014), but also in the Latin American context (e.g. Holt 2005, Botelho and Van Leeuwen 2009, 2012), as well as in Asia (e.g. Vladimirov and Van Leeuwen 2009, 2012, Gealogo 2010). Originally HISCLASS comprises 12 occupational groups. In this paper we have condensed the 12 occupational groups into the commonly used seven major HISCLASSes. Of the condensed seven HISCLASSes we collapsed classes VI (lower skilled farm workers and unskilled labourers) and VII (unskilled farm workers) into one class (now class VI) because of the negligible amount of observation in the original class VI. Table 1 displays the six occupational groups of the HISCLASS scheme which our occupations from the marriage registers have been assigned to. A detailed breakdown of the occupational composition of each class is provided in the appendix (Tables A3 and A4). In this article we treat HISCLASS as hierarchical.

Table 1: Occupational groups according to the original and our adapted HISCLASS scheme

HISCLASS 12	HISCLASS 6*	HISCLASS label	Examples	Manual/ non- manual
I	I	Higher managers	Accountant, Chief,	non-manual
II		Higher professionals	Interpreter, Lawyer, Medical doctor, Teacher	
III	II	Lower managers	Banker, Businessman, Clerk,	non-manual
IV		Lower professionals	Medical assistant, Shop owner, Sub-chief, Trader	
V		Lower clerical/sales		
VI	III	Foremen	Carpenter, Electrician,	manual
VII		Medium skilled workers	Mechanic, Tailor, Printer	
VIII	IV	Farmers and fishermen	Cultivator, Farmer, Fisherman	manual
IX		Lower skilled workers	Barkclothmaker, Builder, Domestic servant, Matmaker, Soldier	
X	VI	Lower skilled farm workers	Cowherd, Fisherman,	manual
XI		Unskilled workers	Gardener, Houseboy,	
XII		Unskilled farm workers	Shepherd	

Source: Van Leeuwen and Maas (2011: 57). * Condensed from seven classes and applied in this article.

Obviously, HISCLASS cannot capture all the qualitative characteristics that determine an individual's position in every society in the world. Therefore, it is necessary that certain occupations are coded within their context. Because this paper presents the first attempt to apply HISCO to colonial and post-colonial Africa we have been careful to correctly interpret and classify some of the more context-specific African occupational titles that have hitherto not been coded into HISCO. We put in some effort to code some of the more traditional and context-specific occupations, such as "Chiefs" and "Sub-chiefs", and a small variety of local crafts occupations (e.g. "Barkclothmaker").⁸ In order to reflect colonial Ugandan society's social class and hierarchy, "Chiefs" were coded as "legislative officials", while "Sub-chiefs" were coded into "managers", reflecting their subordinate position, with the help of historical description of their labour function (Lawrance 1956, Richards 1960, Apter 1961, Gartrell 1983) and the confirmation by Ugandan labour historians.⁹

Although traditional forms of social differentiation co-existed and were reinforced by indirect rule, their influence arguably was of declining importance, in particular in towns and cities. Moreover, the expanding modern sector within the colonial economy altered and complemented the traditional class division through the availability of new manual and non-manual occupations that were equally to be found in Western Europe. Further, the colonial administration, railway companies and mission schools and hospitals generated a growing demand for clerical and administrative services which emphasized the importance of literacy and formal skills, while the traditional accumulation of knowledge (i.e. agriculture and cattle herding), passed on within the family and became of less practical use within the emerging formal economy. Moreover, the ILO (1969) classified Ugandan occupations of 1968 using ISCO. Since HISCO is rooted in ISCO we simply follow the ILO classification. Within this context we are confident that a HISCO-based class scheme can be applied to 20th century Ugandan occupational titles.

Finally, to control for a number of factors affecting grooms' occupational position and to exploit our individual-level data more effectively we perform a multivariate analysis in Section 5. To this end, we translate occupational titles coded in HISCO into a status score using HISCAM (version 1.31.1) – a stratification scale (Lambert et al. 2013) that uses the same technique as CAMSIS (Cambridge Social Interaction and Stratification) for contemporary societies (Stewart et al. 1980). The scale is derived from patterns of

⁸ Also seven slaves were recorded, falling into the period 1895-98, but were excluded from the analysis, being not a "free" occupation.

⁹ Edward Rugumayo, chancellor of Kampala University and Mountains of the Moon University has been helpful in coding the context specific occupations into the common coding grid.

intergenerational occupational connections, which replicates the “social interaction distance” analysis and is commonly applied in contemporary sociology and used within hierarchical linear regression analysis. In theory the scale ranges from 0 to 100 but we observe figures of 37.18 (e.g. domestic cleaner) to 99 (e.g. lawyer, university lecturer). Table 2 provides the summary statistics on all variables.

Table 2: Descriptive statistics, all parishes

	Min.	Max.	Mean	Freq.
HISCAM groom	37.18	99	65.89	
HISCAM father	41.43	99	59.48	
Literacy groom ^a	0	1	0.92	
Year of marriage	1895	2011	1968*	
Age at first marriage groom	15	98	30.16	
Literacy wife ^a	0	1	0.85	
Working wife ^a	0	1	0.82	
Father dead ^a	0	1	0.24	
Migrant ^a	0	1	0.48	
Parish ^a				
Kampala				0.86
Fort Portal				0.08
Butiti				0.04
Bundibugyo				0.02
Period ^a				
Colonial (1895-62)				0.43
Post-colonial (1963-70)				0.07
Amin (1971-79)				0.10
Post-Amin (1980-2011)				0.40

Note: ^a Dummy variable, ‘0’ = no, ‘1’ = yes. * Median.

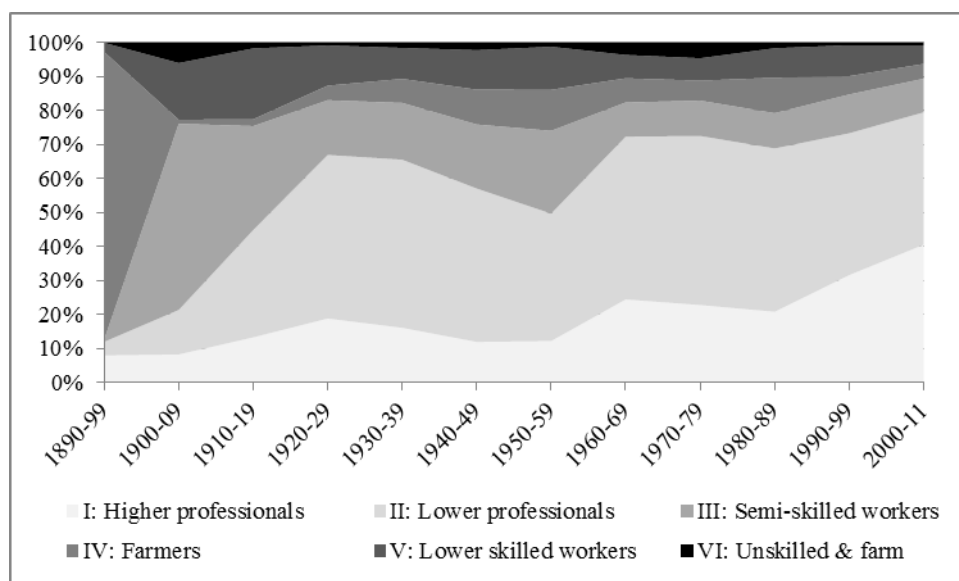
4. Ugandan mobility over the long-run

This section illustrates the occupational structure and intergenerational occupational mobility of our sampled grooms over time using HISCLASS. It shows that the colonial period exercised a large influence on the occupational structures, both in our urban and rural parishes, with the mission society as a major player, both in terms of educational training and formal-sector employer. Our findings below suggests that the colonial era saw the traditional, pre-colonial power structures vanish: towards the end of the colonial period, Uganda had become a more equal society in the sense that social background played a minor role in determining social status, with aptitude rather than inheritance leading to occupational success.

Occupational structure

To study social mobility, we split our sample into grooms marrying in Kampala (the urban centre) and grooms marrying in Fort Portal, Butiti, and Bundibugyo (rural towns). Figure 4 shows the evolution of the occupational structure in Kampala and points out two chronological waves of occupational changes over the course of the long 20th century: an abrupt shift from traditional to modern jobs, and later on a gradual change from lower-skilled to more advanced non-manual occupations. Among the first generation of grooms, namely those marrying between 1895 and 1900, 87% were employed either in agriculture, as farmers, cowherds and hunters, or in traditional craftsmanship, as barkcloth- or matmakers. But already two decades into the 20th century, this pattern had changed dramatically: by 1930 only one in five grooms was employed in traditional craftsmanship, and the occupation “farmer” was hardly observed.¹⁰ Instead, new and formal jobs had emerged, comprising lower professional (class II) and skilled labour (class III), including school teachers, medical assistants, interpreters, clerks, carpenters and tailors. The training required by Africans in order to hold these positions came from mission schools in Uganda, which were entirely responsible for primary education for most of the colonial era (Frankema 2012). Not only did mission schools provide literacy skills and technical training in carpentry and sewing (Hattersley 1908: 198-199, Mullins 1908: 18, Taylor 1958: 85), the training of African teachers and medical workers was also crucial to the spread of the gospel and the recruitment of mission hospital personnel (Kaplan 1995, Frankema 2012).

Figure 4: Sons’ occupational structure Kampala, 1895-2011



¹⁰ This abrupt change is enhanced by the missing registers between 1899 and 1907.

The second wave of change contained a further modernization of the urban economy taking place both during the colonial and the post-colonial eras. From the 1920s on, every second groom held a non-manual profession (class I and II), meaning they had entered into the higher layers of Ugandan society working as salaried chiefs, clerks, traders, policemen, teachers, or medical workers. Interestingly, between 1910 and 1959, a quarter of those jobs were related to mission work (i.e. clergy, dispenser, medical assistant, and teacher). Thus, more than the spread of gospel, the mission played an important role in *Africanizing* formal work, offering significant opportunities of occupational mobility to Christian Africans.¹¹ Over the course of the post-colonial period, the occupational structure further shifted towards non-manual professional and managerial labour, sparked not least by the mission's efforts to introduce Africans to formal employment.

Table 3 turns attention to the occupational structure of the rural sample. Here, the trend was similar to those in Kampala, with an emerging shift from agriculture towards non-agriculture work mainly in the parishes of Fort Portal and Butiti. But unlike Kampala the majority of the sampled men still remained in agricultural and crafts work throughout the colonial era. It is clear that Kampala, with its greater concentration of businesses, industries and European-like administrative structures, offered far greater scope for men to work outside the traditional sector than was the case in the rural towns. Interestingly, the absence of formal employment opportunities in rural areas made the mission society a key modern-sector employer: almost half of all class I and II positions in the rural parishes concerned mission work. The remote parish of Bundibugyo remained almost completely agricultural. The rural parishes were also more affected by the era of post-colonial political regimes than was Kampala. In Fort Portal, the sudden increase of men working in the agricultural sector (class IV) between 1970 and 1989 coincides with the large cuts in public expenditures under Idi Amin, 1971-1979, and later under Milton Obote, 1980-1985 (Ofcansky 1996: 42-47, Meredith 2011: 231-238).

¹¹ On the importance of missionaries for female African's employment in colonial Uganda, see Meier zu Selhausen (2014).

Table 3: Social structure (HISCLASS) of Kampala and three rural parishes, 1895-2011

Kampala	I	II	III	IV	V	VI	N
1890-99 ^a	8.0	4.0	0.7	84.6	2.7	0.0	299
1900-09 ^b	8.3	13.1	54.8	1.2	16.7	6.0	84
1910-19	13.4	31.6	30.6	2.0	20.9	1.6	494
1920-29	18.9	48.2	16.1	4.3	11.9	0.8	540
1930-39	16.2	49.5	16.7	7.1	9.1	1.5	736
1940-49	12.0	45.1	18.8	10.2	11.6	2.1	791
1950-59	12.3	37.5	24.4	12.1	12.7	1.1	1,403
1960-69	24.5	47.9	10.1	7.1	6.9	3.6	902
1970-79	22.9	49.8	10.4	5.9	6.6	4.5	1,395
1980-89	20.9	48.0	10.4	10.4	8.7	1.6	1,532
1990-99	31.7	41.7	11.4	5.4	9.1	0.7	1,462
2000-11	40.6	39.0	9.9	4.3	5.5	0.7	1,774
Fort Portal	I	II	III	IV	V	VI	N
1910-19 ^c	13.9	15.1	31.8	10.2	22.9	6.1	245
1920-29	18.2	33.2	19.9	8.8	15.5	4.4	181
1930-39	8.3	28.3	15.0	22.5	23.3	2.5	120
1940-49	16.5	17.4	8.7	18.3	25.2	13.9	115
1950-59	20.1	27.5	10.7	18.8	14.8	8.1	149
1960-69	20.2	38.2	11.2	15.7	9.0	5.6	89
1970-79	18.3	29.4	3.3	37.9	6.5	4.6	153
1980-89	20.8	15.3	4.7	46.2	2.5	10.6	236
1990-99	31.4	48.6	4.3	10.0	2.9	2.9	70
2000-11	42.6	31.9	12.8	5.3	7.5	0.0	94
Butiti	I	II	III	IV	V	VI	N
1920-29 ^d	8.0	22.0	14.0	8.0	28.0	20.0	50
1930-39	9.5	16.9	13.6	30.4	16.5	13.2	273
1940-49	20.5	24.4	7.1	29.1	15.8	3.2	127
1950-59	8.0	32.4	17.1	15.9	23.3	3.4	176
1960-69 ^e	18.4	18.4	14.9	26.4	8.1	13.8	87
Bundibugyo	I	II	III	IV	V	VI	N
1940-49	19.7	1.3	2.6	65.8	6.6	4.0	76
1950-59	21.3	7.5	2.7	67.0	1.1	0.5	188
1960-69	17.3	0.8	3.0	79.0	0.0	0.0	133
1970-79 ^f	9.5	0.0	0.0	85.7	4.8	0.0	21

Note: ^a Coverage: 1895-1898; ^b Coverage: 1907-1909; ^c Coverage: 1911-1919, 1970-74; ^d Coverage: 1928-1929; ^e Coverage: 1960-1965; ^f Coverage: 1970-1974.

Intergenerational social mobility flows

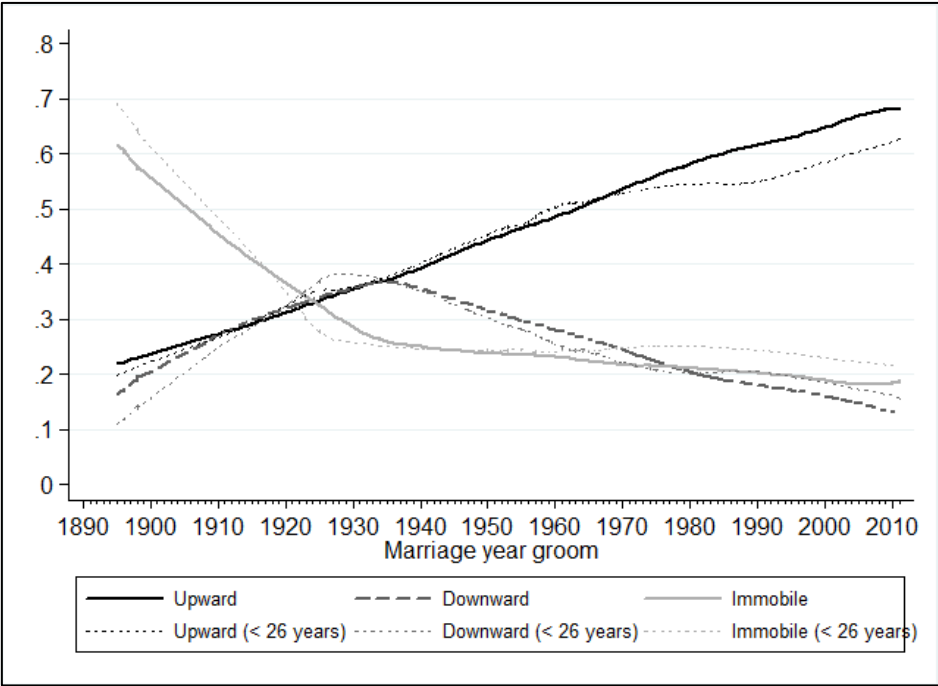
What did the changing occupational structures involve in terms of social mobility? To find out, we study upward and downward mobility between fathers and sons using HISCLASS. Figure 5 presents the trends, by grooms' year of marriage, for Kampala, while Table 4 reports those of our three rural parishes. In Figure 5 we also construct graphs for sons below the age of 26 as a robustness check for potential occupational life-cycle changes of the father. We find no significant differences as earlier suggested.

Figure 5 reveals that Kampala was originally a largely immobile society, with two-thirds of all grooms remaining in the same occupational class as their fathers. However, shortly into the colonial era, the probability to inherit one's fathers' occupation gradually declined, and by 1935 only one in three grooms remained in their father's social class. This

trend was counterbalanced by upward as well as downward mobility. The initial increase in downward mobility between 1895 and 1935 was probably caused by the fact that a great deal of sons (23%) came from chiefly families, as shown in Figure A3. Coming from the higher social strata, and hence often born into polygamous families (Hastings 1973: 36), makes downward social mobility a likely outcome.

From the 1940s onwards, a break in the pattern of social mobility occurred after which the chances of downward mobility decreased and upward mobility continued its rising trend until the present-day. Remarkably, at the time of independence, in 1962, already 50% of our sampled grooms were climbing the occupational ladder, by at least one class relative to their fathers. Because 93% of Kampala grooms were able to sign their marriage certificate, it seems that literacy and the comprehension of the metropolitan language on average carried large commercial and social benefits in Kampala where market demand for white-collar work by commercial and transport enterprises, the colonial administration and mission institutions were concentrated. In colonial Kampala, these developments were reflected in lucrative skill premiums: in the building sector a skill premium between 200% and 350% was not uncommon (Frankema and Van Waijenburg 2012).

Figure 5: Intergenerational social mobility in Kampala (% of total grooms), 1895-2011



Note: Coverage: 11,419 father-son pairs from Kampala, only first marriages of sons; age at first marriage < 26 years represents 28.7% of cases.

Turning to the countryside, Table 4 reports the intergenerational social mobility patterns in the three rural parishes. The relatively high levels of upward mobility of sons in the early colonial era (1910-1929) indicates that there were immediate social benefits for the first generation of grooms of mission schools, as 79% were able to sign their marriage certificate. Between 1930 and 1969 the patterns in Fort Portal and Butiti look largely like that of Kampala. It arguably helped upward mobility that the area containing Fort Portal and Butiti was better connected to the Kampala highway, hosted mission and colonial institutions, and in the 1940s became the centre of Uganda’s tea industry. This starkly contrasts with the socially static parish of Bundibugyo, remotely located on the Congo border, where three in four grooms remained in their father’s occupation (farmer). Overall, our sampled grooms from the medium-sized rural towns of Fort Portal and Butiti and the capital city of Kampala experienced upward mobility in an extent to which it exceeded immobility and dwarfed downward mobility. The only exception was that immobility and downward mobility increased significantly between 1970 and 1989 in Fort Portal, coinciding with the presidencies of Idi Amin and Milton Obote bringing war, terror and vast economic decline.

Table 4: Total intergenerational mobility in rural Western Uganda, 1910-2011

	Fort Portal				Butiti				Bundibugyo			
	Up	Down	Imm	N	Up	Down	Imm	N	Up	Down	Imm	N
1910-19	61.4	25.4	13.1	236								
1920-29	63.0	21.0	16.0	181	48.0	24.0	28.0	50				
1930-39	41.7	33.3	25.0	120	38.1	24.9	37.0	273				
1940-49	33.9	43.5	22.6	115	52.0	22.0	26.0	127	23.7	13.2	63.2	76
1950-59	44.3	31.5	24.2	149	47.2	34.7	18.2	176	29.3	5.9	64.9	188
1960-69	57.3	22.5	20.2	89	52.9	23.0	24.1	87	19.5	0.8	79.7	133
1970-79	41.8	13.7	44.4	153					9.5	4.8	85.7	21
1980-89	35.2	13.6	51.3	236								
1990-99	65.7	11.4	22.9	70								
2000-11	55.3	21.3	23.4	94								
Total	710	336	397	1,443	323	189	201	713	101	23	294	418

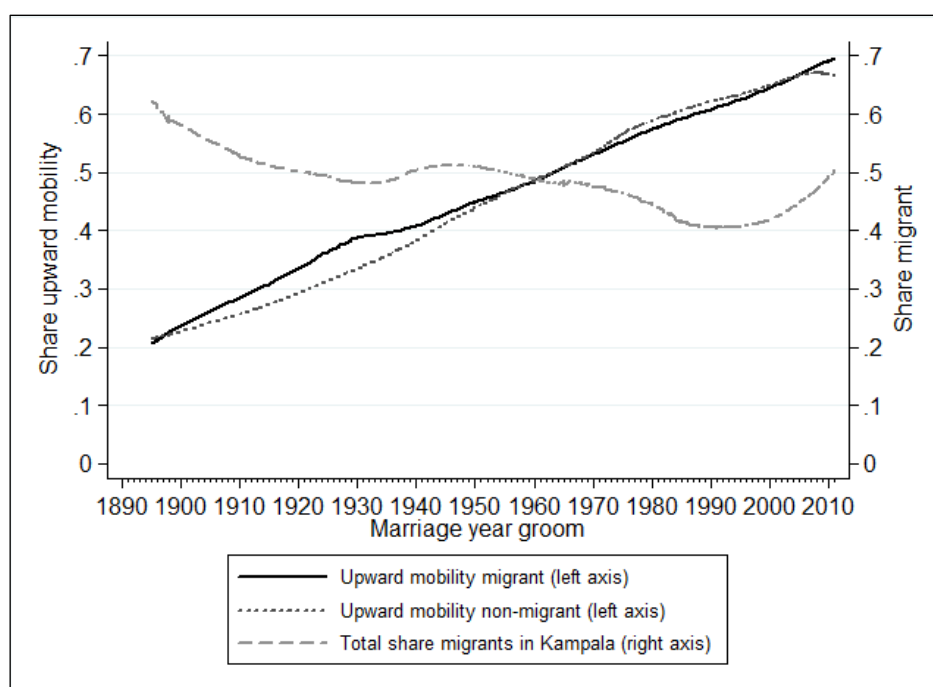
Note: HISCLASS is treated as ordered: Immobility (“Imm”): HISCLASS father = HISCLASS son; Upward mobility (“Up”): HISCLASS father > HISCLASS son; Downward mobility (“Down”): HISCLASS father < HISCLASS son.

Urban migration and social mobility

What happened in terms of social mobility to those thousands of rural workers who migrated to urban Kampala over the course of the 20th century? During the colonial era, the population of Kampala experienced grew from 32,400 inhabitants in 1911 to 76,700 in 1959 (Uganda Protectorate 1912, 1959), mainly fed by young, male, and well-educated African labour migrants from the countryside (Little 1973: 10, Van Zwanenberg and King 1975: 259-271, Elliot 1977). By 2002, Kampala was a metropolis of some 1.2 million inhabitants (UBOS

2002). The literature holds that over the colonial era rural farmers from Buganda seemed discouraged to migrate to Kampala by low unskilled urban real wages compared to incomes possible from export crop cultivations (Elkan 1960, De Haas 2014) and the few skilled positions were largely taken up by Indians and Europeans (Ehrlich 1973, Jamal 1976). During the late colonial era increasingly administrative positions became open to Africans and urban wages increased due the introduction of minimum wages and state policies (Cooper 1996, Lawrance et al. 2006, De Haas 2014).

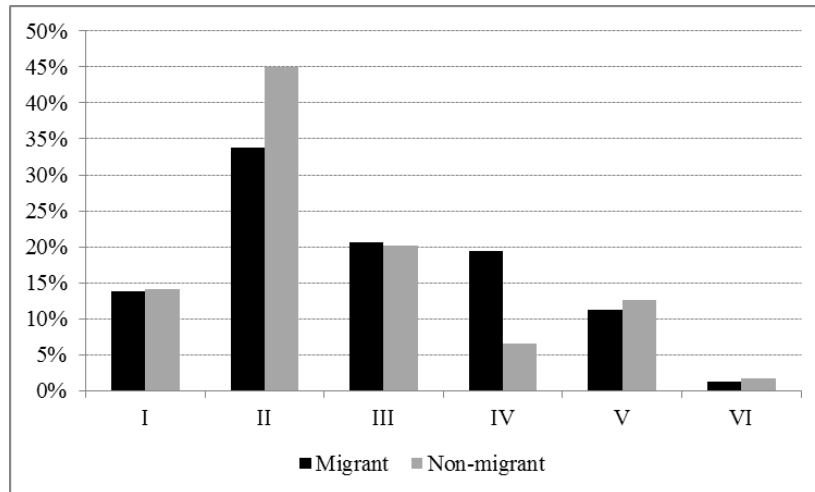
Figure 6: Migration and upward mobility in Kampala (% of total grooms), 1895-2011



Among our Kampala grooms, we can identify some 54% migrants, probably enticed by the large skill premiums and prospects of upward social mobility in Kampala (Figure 6). Kampala did not let them down: upward social mobility among migrants and non-migrants was almost identical (Figure 6), making the move to the urban centre worthwhile for literate and skilled Africans. But, despite their upward mobility, Figure 7 illustrates that urban migrants were significantly less likely to find employment in the lower managerial and professional positions (class II) that occupied their non-migrant counterparts. This suggests that Kampala residents were not only better educated, but also better able to exploit their local social networks compared to urban labour migrants. Nevertheless, the possibility remains that we overstate mobility rates for urban migrant labourers, as we are likely to capture those migrants who married in Kampala, and thus seemed to install themselves more permanently

in the city. Hence, compared to temporary migrants, they were less likely to return to their rural homes and families after having earned enough cash to pay bridewealth or colonial tax obligations (Elkan 1960).

Figure 7: Occupational classes of Kampala migrants and non-migrants, 1895-1962



Outflow occupational mobility

Following the observation that there was considerable intergenerational mobility over the long 20th century, in our urban and rural parishes alike, this section takes a deeper look at the class movements. To this end, we construct a number of outflow mobility tables studying the colonial and post-colonial periods separately to avoid “compressing” one century of Ugandan history into one table. Tables 5 and 6 present the outflow mobility rates for the colonial era, reporting the destination classes of sons dependent on their fathers’ occupational class. Diagonal numbers (shaded) refer to the percentage of sons remaining in the same class as their father. It needs to be kept in mind that sons coming from the highest class can only stay or move down, while sons of the lowest classes, conversely, can only stay high or move up.

In Kampala, about two-thirds of all grooms coming from the upper, non-manual classes (classes I and II) remained within their paternal occupational class. In the rural parishes, it was less: 50% of all grooms from the upper classes remained in their fathers’ class. This indicates that the majority of parents at the upper end of society (i.e. chiefs, clerks, teachers and medical workers) had sons who were able to remain among the higher social ranks. Still, there were marked differences in the likelihood of mobility between grooms from manual and non-manual occupational backgrounds. For both urban and rural sons coming from a semi-skilled, lower-skilled, farming, or unskilled occupational backgrounds, the relative likelihood

of moving up into white-collar occupations (classes I and II) was only half as large as for those whose father was a white-collar worker.

Table 5: Outflow mobility (row percentages), Kampala, 1895-1962

<i>Father's class</i>	<i>Groom's class</i>						Total	N
	I	II	III	IV	V	VI		
I: Higher professionals	20.8	47.1	14.5	6.1	10.3	1.3	100	1,190
II: Lower professionals	11.6	51.6	18.0	5.7	12.0	1.1	100	740
III: Medium-skilled workers	9.9	26.3	42.6	5.8	13.5	1.9	100	312
IV: Farmers	11.8	33.5	18.1	24.8	10.8	1.1	100	1,839
V: Lower-skilled worker	12.4	27.5	33.0	5.0	19.9	2.2	100	418
VI: Unskilled & farm worker	4.3	27.7	40.4	10.6	8.5	8.5	100	47
Total	13.9	38.9	20.4	13.5	11.8	1.4	100	
N	634	1768	928	615	538	63		4,546

Strikingly, while one in four grooms from a farming background (classes IV and VI) remained in their father's position in Kampala, two in three ascended the occupational ladder in the countryside. Indeed, a remarkable 45% made it into the higher and lower professional/managerial classes. Among rural parishioners there was slightly more intergenerational continuity in agriculture: about 40% of grooms remained in their fathers (i.e. farming) position (classes IV and VI), while 35% moved into non-manual jobs (classes I and II). Also, about 40% of sons in Kampala, and 30% of sons in the rural parishes, with a lower-skilled background (class V) rose to reach a lower professional position (class II).

Table 6: Outflow mobility (row percentages), rural parishes, 1911-1962

<i>Father's class</i>	<i>Groom's class</i>						Total	N
	I	II	III	IV	V	VI		
I: Higher professionals	21.9	31.1	16.0	13.5	11.8	5.9	100	119
II: Lower professionals	14.3	31.8	11.7	16.9	19.5	5.8	100	154
III: Medium-skilled workers	6.4	11.5	28.2	32.1	18.0	3.9	100	78
IV: Farmers	16.6	17.6	12.9	33.0	15.3	4.6	100	1,067
V: Lower-skilled worker	12.2	16.7	22.2	11.1	32.2	5.6	100	90
VI: Unskilled & farm worker	9.4	24.9	15.9	13.5	16.7	19.6	100	245
Total	15.1	20.5	14.6	26.4	16.6	6.9	100	
N	264	359	256	462	291	121		1,753

Note: Coverage: Fort Portal 1911- 1962, Butiti 1928-1962, Bundibugyo 1936-1962.

The latter findings provide a challenge to the “buffer zone thesis” holding that the manual/non-manual occupational divide presents a significant barrier to total mobility (Goldthorpe et al. 1980). Rather, well-educated grooms coming from a lower class background were capable of leaping up the occupational ladder, suggesting that social success in the colonial era was not well predictable by lineage. This resonates with the findings

presented by Foster (1963) that admission to highly-selective secondary schools in 1961 Ghana was to a remarkable extent open to the sons of illiterate farmers and fishermen. In a similar vein, more than a third of students of École William Ponty in Senegal in 1940 were sons of farmers, herders, or fishermen, while less than a quarter had clerical or professional fathers (Ilfie 2007: 231).

The row-percentages in Tables 7 and 8 both show that upward mobility increased further over the course of the post-colonial era. In Kampala, two-thirds of grooms came from farming or a lower-skilled background (classes IV, V and VI). But this did not hamper social mobility in the urban economy. Sons of farmers rarely entered agriculture or unskilled urban labour but had a remarkable 65% relative chance to move into the higher classes (I and II), which is close to the 80% chance that sons of higher-class fathers faced. This is not uncommon for an urban setting. Conversely, in the rural parishes, more than 50% of all sons of farming fathers remained in their fathers' class, while two-thirds of sons with a upper class background (I and II) also remained there.¹² Meanwhile, the rate of social reproduction doubled for the top class to about 40% in both locations.

Table 7: Outflow mobility (row percentages), Kampala, 1963-2011

<i>Father's class</i>	<i>Groom's class</i>						Total	N
	I	II	III	IV	V	VI		
I: Higher professionals	39.7	39.4	9.3	3.8	5.4	2.4	100	957
II: Lower professionals	25.2	53.1	9.1	4.7	5.9	2.0	100	1,096
III: Medium-skilled workers	20.4	39.3	24.9	5.3	7.9	2.3	100	265
IV: Farmers	28.7	44.5	9.6	7.7	7.8	1.7	100	4,133
V: Lower-skilled worker	22.7	39.4	15.7	5.1	15.3	1.9	100	216
VI: Unskilled & farm worker	24.2	46.5	11.6	2.5	6.6	8.6	100	198
Total	29.0	44.9	10.3	6.3	7.4	2.0	100	
N	1,994	3,081	710	435	505	140		6,865

Overall, the outflow tables establish an extraordinary degree of mobility in our urban and rural samples during the colonial era. Upward mobility from the lower social strata (classes IV, V, VI) was very common. This occurred even though the upper classes were largely able to conserve the status of *their* offspring (classes I, II, III). Over the post-colonial era, the rural-urban differences became increasingly pronounced: in the countryside, sons of farmers became more likely to remain in their father's career, whereas in Kampala the labour market kept rewarding talent with social mobility.

¹² Based on census data from Uganda, Bossuroy and Cogneau (2013) estimate that the sons of farmers, born in the 1960s, stood a 28% conditional probability of becoming non-farmers for total Uganda. Simultaneously, sons of non-farmers, born in the 1960s, had a 61% chance to work outside agriculture.

Table 8: Outflow mobility (row percentages), rural parishes, 1963-2011

	<i>Grooms's class</i>						Total	N
	I	II	III	IV	V	VI		
<i>Father's class</i>								
I: Higher professionals	39.1	26.4	10.3	12.6	8.1	3.5	100	87
II: Lower professionals	22.6	43.6	8.1	9.7	12.9	3.2	100	62
III: Medium-skilled workers	25.0	41.7	16.7	8.3	8.3	0.0	100	12
IV: Farmers	20.8	19.0	5.3	48.0	2.9	4.0	100	625
V: Lower-skilled worker	23.1	46.2	7.7	15.4	7.7	0.0	100	13
VI: Unskilled & farm worker	21.1	7.9	5.3	15.8	7.9	42.1	100	38
Total	22.9	21.9	6.2	38.9	4.5	5.5	100	
N	192	183	52	326	38	46		837

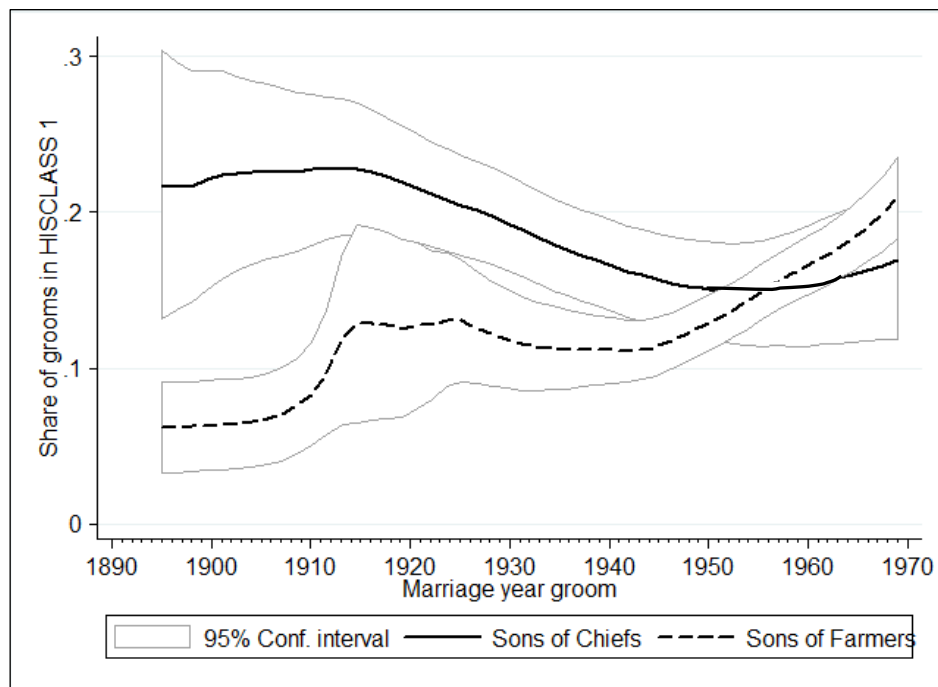
Note: Coverage: Fort Portal 1963-2011, Butiti 1963-1988, Bundibugyo 1963-1974.

Social mobility and traditional power structures

What happened to the traditional power structures during the colonial era? Aside the king, power in the pre-colonial society rested upon the elites, meaning local chiefs who commanded the local peasantry. The arrival of the Christian missionaries and the emergence of a cash and wage economy created new employment possibilities for Africans. In this sub-section we explore whether these job opportunities served to maintain previous power structures or challenged them.

Under indirect colonial rule, Buganda chiefs became fundamentally salaried officials, who operated as agents of the colonial state, collected taxes, administered justice, and allocated land (Twaddle 1969, Reid 2012: 185). These capacities placed chiefs in the highest social and economic position available to Africans during the colonial era. By contrast, peasants, under the terms of the 1900 *Uganda Agreement*, became tenants on chiefs' land (Mamdani 1996: 141-142). At first glance, this construction would serve to maintain pre-existing power structures. However, chieftaincy in Buganda was traditionally not a hereditary position, neither in colonial nor in pre-colonial times (Fallers 1964: 10). Rather, emphasis on formal education by the colonial administration for chiefly sons points to mission education becoming increasingly important (Cartey and Kilson 1977: 77). This implied that each new generation faced a new deal, where aptitude rather than ascription determined the social status of sons. Thus, if the colonial economy offered equal opportunities to Africans regardless of their social background, then the chances of sons of farmers of entering the highest social class would equal those of sons coming from the highest social class.

Figure 8: Son's probability of entering HISCLASS I by chiefly and farming origin, Kampala



Note: Outer grey lines give a 95% confidence interval. Our analysis does not extend to the post-1970s because of the negligible number of observations for chiefly fathers. Coverage: Son HISCLASS I & father chief = 166; Son HISCLASS I & father farmer = 315.

Figure 8 puts this theory to the test, illustrating the likelihood of sons of chiefs and farmers, respectively, of entering into the highest occupational class over the course of the colonial era. The graphs show that sons of chiefs initially had a much greater chance to enter into the highest social ranks than the descendants of farmers. This resonates with the observations discovered in Anglican missionary accounts of Mullins (1908: 107), Hattersley (1908: 160-168), and Taylor (1958: 72, 92-94) that chiefs' offspring often had the privilege to attend elite mission schools, which Hansen (1986) dubbed the "nurseries" of a new generation of the ruling elite. Also, Carthey and Kilson (1977: 77) observed that chiefs derived educational advantages for their offspring resulting into disproportional representation of chiefly sons among the well-educated new elite in British Africa. But towards the end of the colonial era, the advantage of elite sons had disappeared, partly because the likelihood of sons of farmers of entering into the highest social class had increased, and partly because the sons of chiefs lost out in this regard. Indeed, after 1950 the probability of reaching the top of the occupational ladder was higher for offspring of farmers than for offspring of chiefs (although the difference was not significant, as Figure 8 shows). The chiefs' decline in power also concurs with the fragmentation of larger estates by both inheritance and sale after 1930, which eroded part of the economic basis of chiefs (Southall 1966: 335). Table 9 presents the most frequent class I occupations attained by sons of chiefs and farmers. It shows that sons of

chiefs were about five times more likely to turn into chiefs than farming fathers, whereas farmers’ offspring primarily pursued professional careers.

This bears witness that the colonial era in Uganda modernized the traditional power structures. It undermines the role of “chiefs as despots” who used their colonial liaisons to increase family power and influence (Mamdani 1996: 52-61, Acemoglu et al. 2014). Instead, our findings provide a numerical expression to the previous narratives of the rapid expansion of mission education in Uganda as a means to facilitate the emergence of a new educated elite which “would increasingly challenge the old system, feeling itself excluded from social status and political authority.” (Reid 2012: 185). John Iliffe (2007: 230) has argued in a similar vein that “African education did more to foster social mobility than to entrench old privileged classes, largely because tropical Africa has no long-established literate elites.” Hence, while Ugandan chiefs may have continued to exercise political and economic power over the local population, our results show that the ability of chiefs to “empower” their offspring on the labour market gradually vanished. By the time of independence the descendants of farmers had the same relative chance of making it to the top. This demonstrates that colonial influences in Uganda gave rise to a more equal society in terms of occupational mobility.

Table 9: Sons’ types of occupations in top class by fathers’ background, 1895-1969

	Father chief		Father farmer	
	N	%	N	%
Teacher	78	47.3	202	64.1
Chief	52	31.5	20	6.3
Dispenser/Chemist	7	4.2	10	3.2
Medical doctor/Veterinary	11	6.7	18	5.7
Interpreter	6	3.6	2	0.6
Clergy	4	2.4	8	2.5
Other higher professional	4	2.4	26	8.3
Accountant	3	1.8	29	9.2
Total	165	100.0	315	100.0

5. Multivariate analysis

In this final section, we exploit our individual-level information in a multivariate regression framework. This allows us to control for various factors and take a deeper look at the role of social background, literacy, time, migration and parish location for grooms’ occupational status attainment. To this end, we translate individual occupational categories based on HISCO into hierarchical HISCAM status scores (Lambert et al. 2013) which can be used in an OLS regression.

Table 10 presents the regression results explaining status attainment of the groom. Model 1 is the base model. The constant (45) is the average HISCAM status of the groom at marriage, with taking only literacy, status of the father and marriage year (time) into account and not any other factors. Grooms in later years have more status than grooms in earlier years, as for each year the status of the groom increases by 0.113. An increase is what one would expect in a modernizing economy which transitions from farming to industries and services, which generally offer more high-status occupations. Our data cover 116 years, so the model predicts that grooms marrying at the very end of the period (2011) have about 13.1 status points ($0.113 * 116$) more than grooms born at the very start of the period (1895). Model 1 shows that the HISCAM status of the father, literacy of the groom and year of marriage all three have a positive, significant effect on HISCAM of the groom. We also show that sons benefitted from having a high-status father: on average, each additional paternal status point results in 0.108 higher status points for the son. This is more than it may seem, as the average status of the father is about 59, this would result into 6.4 additional status points for his son ($59 * 0.108$). Nevertheless, when compared to 19th century Netherlands (Knigge et al. 2014) our 20th century Uganda figure is almost five times smaller¹³ which indicates that comparatively achievement was more important among our sampled grooms from Uganda than family ascription. This finding is reinforced by education, measured through grooms' literacy status, appearing at least equally important for social status attainment, as literate grooms gain 7.4 status points.

When we add further control variables to the model (Model 2), the effect of the variables in Model 1 decreases, but all remain statistically significant. Being a migrant has a significant negative effect on groom's status score, which confirms our earlier graphical analysis that marrying labour migrants were less likely to have entered high-status positions than permanent residents. When we look at the parish dummies in Model 2, we see that in each place the model estimates that the social status of the groom is lower than in Kampala. Rural areas provided fewer opportunities for higher status attainment: grooms from Butiti and Bundibugyo attained on average groom's 4-7 status points less, and in Fort Portal about 1.5 status points less than Kampala grooms. This suggests that the dichotomy between urban (Kampala) and rural (the rest) works well, and that of the three rural places Fort Portal is the most urban. Literacy of the bride and working brides (i.e. non-housewife) have a positive significant effect.

¹³ Note that Knigge et al. (2014) used a different estimation model. Nevertheless, the differences remain striking.

In Model 3, dummies for the main effects, interaction effects as well as time periods are added to the model (thus excluding the variable ‘time’) – the colonial era being the reference category. When we look at the block of interaction dummies of HISCAM father, we see that the colonial era stands out in the sense that in all other periods the coefficients are negative, be it that only the difference between the colonial and Amin period is significant. This indicates that the effect of the social status of the father on that of the groom was weaker in the 1970s crisis years, than in the colonial period. Or to phrase it differently, the effect of father’s status, an ascribed characteristic, was highest in the colonial period, may have become a little weaker afterwards but certainly became weaker in the Idi Amin period. When we look at the block of interaction dummies with literacy, we see that the colonial period stands out, in the sense that the effect of being literate on one’s social status was weakest and to increase in the following decades. One should keep in mind that in the post-colonial period almost all grooms in Kampala were able to sign their marriage certificate, which means that the interaction between literacy and time periods are likely to pick up most period effects, which explains that the general time period dummies remain statistically insignificant.¹⁴ Taken together the results suggest that ascription, in the form of one’s social background, as well as achievement, captured, at least in part, by one’s education (literacy), determined grooms’ social status. We also find that one’s social status was closest related to social background in the colonial period, to decline afterwards, while literacy became more and more important for status attainment in the post-colonial era which is in line with an increasing demand for skilled occupations in particular in urbanizing Kampala.

Finally, in Table 11 we explore the determinants of grooms entering a high-status occupation (HISCLASS I and II). Occupations falling into HISCLASS I and II refer to non-manual labour and thus termed “white-collar” work. Furthermore, in order to explore the role of the socio-economic background of our grooms, we subdivide fathers of groom and bride into five broad social groups based on their occupational titles. These five groups comprise chiefs, missionary workers, non-mission waged workers, farmers and craftsmen. Those have also not been included in the above analysis of grooms’ HISCAM (Table 10) because the HISCAM score of the father and their occupational types are highly correlated.

The regression results in Table 11 largely confirm those in Table 10. Both Model 1 and 2 cover the colonial and post-colonial eras. White collar opportunities remain highest in Kampala although Fort Portal also appears to similar opportunities in this regard. The post-colonial era provided more prospects to enter white-collar labour for men and the Idi Amin

¹⁴ Figure A4 presents grooms’ HISCAM scores in the long-run, which highlights the striking difference in dynamics and levels between Kampala and the rural parishes.

era did not diminish this. Migrants stood a smaller probability to enter non-manual occupations than non-migrants. Model 3 exclusively focuses on the colonial era for which our paternal occupational categories are most suited for. Model 3 shows that sons of chiefs and missionaries had about a 17 percentage point greater chance of obtaining white-collar jobs than sons of farmers. The likelihood of sons of formal workers was only half as large compared to sons from mission and chiefly descent. We also observe that chiefly and missionary origin was more rewarding during the colonial era compared to the probabilities observed for the colonial and post-colonial period together (Model 1). Fathers engaged in craftsmanship were less likely to acquire high-status jobs than sons of farmers. This suggests that fathers who were well-connected to the mission or the colonial state (i.e. chief) generated particularly positive effects for the next generation. Furthermore, grooms who attended mission schools, indicated by their literacy status, stood a significantly better chance of entering the top classes over the colonial era. This estimate remains the largest throughout all three models, pointing to the importance of formal education for higher status attainment.

Table 10: OLS regression HISCAM groom, 1895-2011

	Dependent variable: HISCAM groom								
	(1)			(2)			(3)		
	β	p		β	p		β	p	
HISCAM father	0.108	<0.001	***	0.092	<0.001	***	0.107	<0.001	**
Literacy groom	7.388	<0.001	***	4.211	<0.001	***	3.398	<0.001	***
Time ^a	0.113	<0.001	***	0.100	<0.001	***			
Age groom				-0.024	0.109		0.988	<0.001	***
Literacy wife				2.016	<0.001	***	3.314	<0.001	***
Working wife				1.232	<0.001	***	2.471	<0.001	***
Father dead				0.672	0.003	***	0.988	<0.001	***
Migrant				-0.688	<0.001	***	-0.470	0.011	**
Parishes									
Kampala				ref.			Ref.		
Fort Portal				-1.593	<0.001	***	-0.530	0.167	
Butiti				-4.211	<0.001	***	-3.135	<0.001	***
Bundibugyo				-6.513	<0.001	***	-4.552	<0.001	***
Time period									
Colonial period (1895-1962)							ref.		
Post-colonial period (1963-70)							-0.159	0.941	
Amin period (1971-79)							1.079	0.565	
Post-Amin period (1980-2011)							1.123	0.487	
Interactions period & HISCAM father									
Colonial*HISCAM father							ref.		
Post-colonial*HISCAM father							-0.024	0.379	
Amin*HISCAM father							-0.075	0.002	***
Post-Amin*HISCAM father							-0.029	0.071	
Interactions period & literacy groom									
Colonial*literacy groom							ref.		
Post-colonial*literacy groom							5.468	0.001	***
Amin*literacy groom							9.241	<0.001	***
Post-Amin*literacy groom							6.731	<0.001	***
Constant	44.525	<0.001	***	47.987	<0.001	***	48.581	<0.001	***
R²	0.125			0.140			0.141		
N	17,653			17,653			17,653		

Note: ^a Time is included as a transformation of marriage year, “0” corresponds with earliest observation “1895”. * Significant at a 0.10 level. ** Significant at a 0.05 level. *** Significant at a 0.01 level. In case the father’s occupation is unknown the mean value of father HISCAM has been imputed.

Table 11: Probit regression on HISCLASS I and II groom

Variables	Dependent variable: HISCLASS I & II groom								
	(1)			(2)			(3)		
	1895-2011			1895-2011			1895-1962		
	<i>M.E.</i>	<i>z</i>		<i>M.E.</i>	<i>z</i>		<i>M.E.</i>	<i>z</i>	
Literacy groom	0.242	<0.001 ***		0.727	<0.001 ***		0.213	<0.001 ***	
Time	0.003	<0.001 ***					0.001	0.272	
Age groom	0.110	<0.001 ***		0.326	<0.001 ***		0.109	<0.001 ***	
Literacy wife	0.068	<0.001 ***		0.276	<0.001 ***		0.093	<0.001 ***	
Working wife	0.041	<0.001 ***		0.220	<0.001 ***		0.073	0.027 **	
Father dead	0.011	0.525		0.063	0.209		0.089	0.087 *	
Migrant	-0.045	<0.001 ***		-0.114	<0.001 ***		-0.048	<0.001 ***	
Parishes									
Kampala	ref.			Ref.			Ref.		
Fort Portal	-0.023	0.136		-0.074	0.095 *		-0.008	0.718	
Butiti	-0.105	<0.001 ***		-0.239	<0.001 ***		-0.064	0.006 ***	
Bundibugyo	-0.259	<0.001 ***		-0.674	<0.001 ***		-0.125	<0.001 ***	
Time period									
Colonial period (1895-1962)				ref.					
Post-colonial period (1963-70)				0.378	<0.001 ***				
Amin period (1971-79)				0.481	<0.001 ***				
Post-Amin period (1980-2011)				0.486	<0.001 ***				
Father background									
Farmer	ref.			Ref.			Ref.		
Mission worker	0.102	<0.001 **		0.302	<0.001 ***		0.175	<0.001 ***	
Chief	0.124	<0.001 **		0.359	<0.001 ***		0.161	<0.001 ***	
Craftsman	-0.070	<0.001 **		-0.250	<0.001 ***		-0.057	0.007 ***	
Formal worker	0.046	<0.001 **		0.137	<0.001 ***		0.075	<0.001 ***	
Pseudo R²	0.107			0.109			0.088		
N	13,276			13,276			5,893		

Note: *M.E.* Marginal effects. ^a Time is included as a transformation of marriage year, '0' corresponds with earliest observation '1895'. * Significant at a 0.10 level. ** Significant at a 0.05 level. *** Significant at a 0.01 level.

6. Conclusion

In this paper we have undertaken to what our knowledge is the first systematic and empirical investigation of intergenerational social mobility in colonial Africa, using a large sample of Anglican marriage registers from Uganda. We have applied historical class and stratification measures to African occupations to shed light on the claim that the colonial era facilitated socio-economic mobility for Africans. Clearly our findings are necessarily confined to the nature of our Christian African sample. Nevertheless, we have demonstrated that marriage registers offer a unique and untapped source to study African intergenerational social mobility in the past, which complements a wider research frontier of recent attempts to reconstruct different measures of colonial African living standards.

We find that the colonial era opened numerous windows of opportunity for upward social mobility for our sampled grooms. Following a relatively socially static society that we observe during the first years of colonial rule, we show that upward intergenerational occupational mobility gradually exceeded downward mobility and major leaps between ones social origin and destination were possible. In this highly mobile society achievement gradually challenged ascription in which the *Africanization* of the mission offered substantial opportunities of occupational mobility to Christian Africans. To this end, literacy became a clear pre-condition for status attainment and sons stood to gain from their fathers' occupational ties to the mission and the colonial state. This challenges the view that most skilled positions were taken up primarily by Indians and that Africans were relegated to the unskilled bottom of the market economy in Uganda with little chances of social mobility.

We also demonstrate that colonial influences in Uganda, besides facilitating the emergence of a new educated elite, gave rise to a more equal society in terms of social mobility which broke down pre-colonial power structures rather than preserving them. Finally, we show that urban Kampala consistently offered greater opportunities for occupational mobility than the rural areas. Consequently, labour migration to Kampala became a common strategy to ascend the social ladder, even though migrants faced lower chances of high-status attainment than initial residents. Finally, to our surprise the Idi Amin presidency did not negatively affect social mobility outcomes for our sampled grooms.

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Appendix

Figure A1: HISCLASS distribution of grooms of valid and non-valid samples, Kampala, 1895-2011

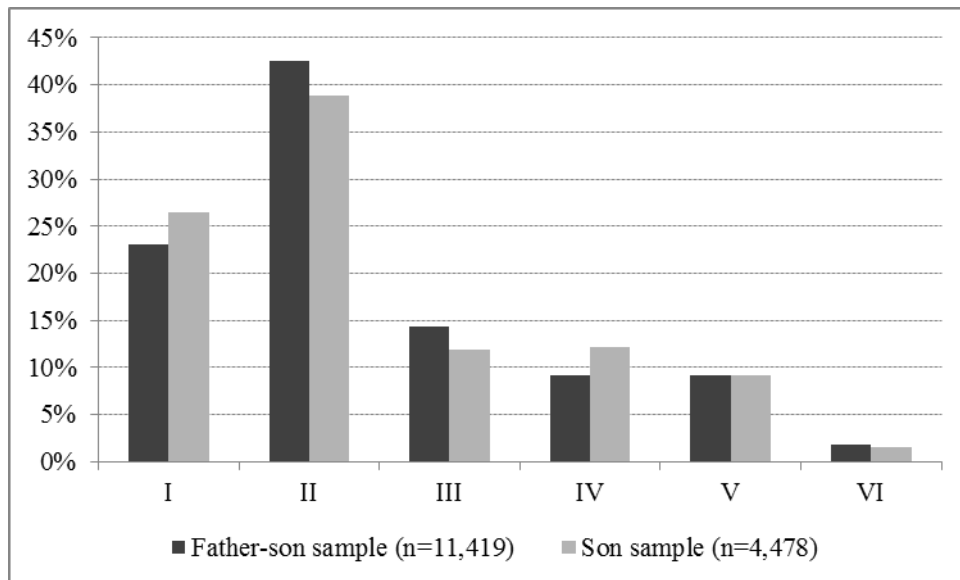


Figure A2: HISCLASS distribution of grooms of valid and non-valid samples, rural parishes, 1911-2011

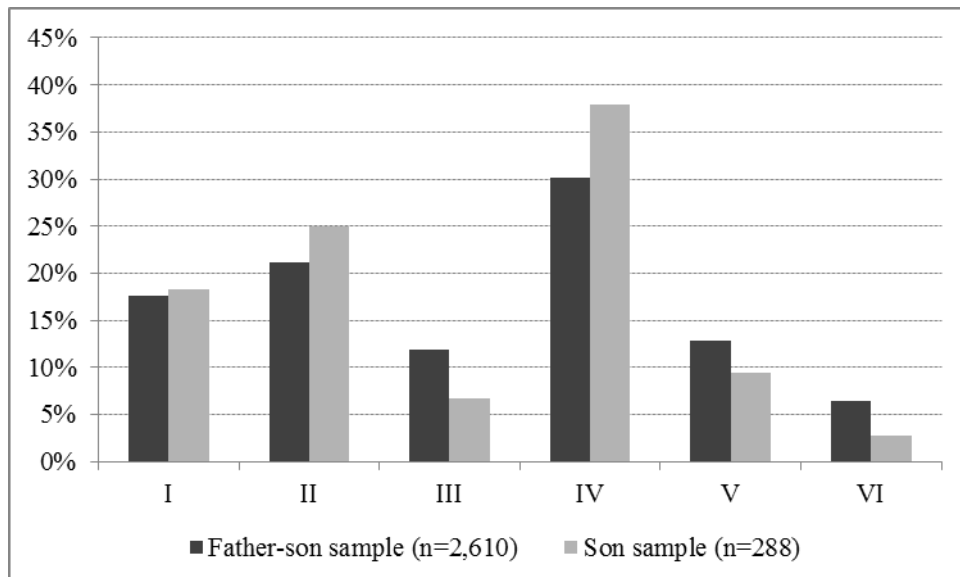


Figure A3: Occupational status father groom, Kampala

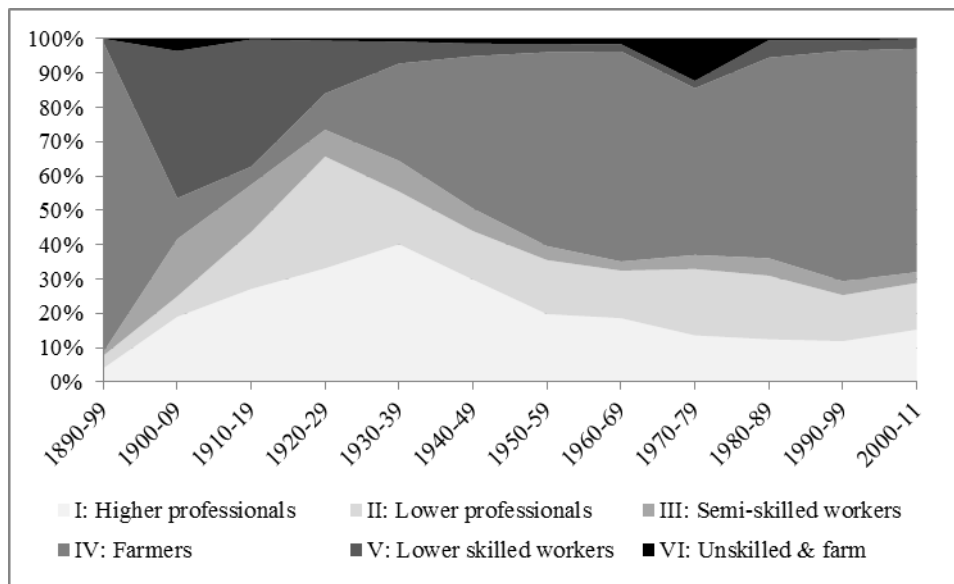


Figure A4: Average HISCAM groom by parish, 1895-2011

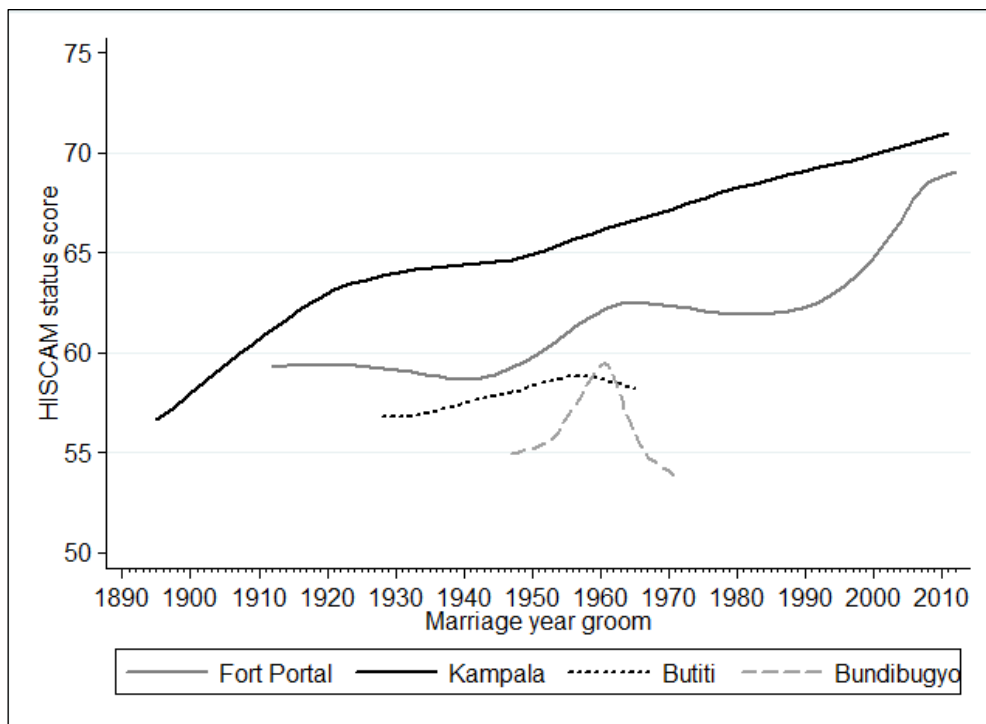


Table A1: Father's social class by son's (first) marriage age, Kampala, 1895-2011

		1895-1962				1963-2011				1895-2011					
		Grooms' age at marriage				Grooms' age at marriage				Grooms' age at marriage					
		15-24	25-34	>34	Total	15-24	25-34	>34	Total	15-24	25-34	>34	Total		
Fathers' social class	I	20.07	25.96	30.57	26.17	I	10.24	15.61	10.97	13.93	I	16.21	18.31	21.25	18.80
	II	17.25	15.21	16.57	16.27	II	22.02	17.03	9.96	15.97	II	19.12	16.55	13.43	16.09
	III	6.88	4.90	8.63	6.86	III	4.99	4.06	2.71	3.86	III	6.14	4.28	5.82	5.05
	IV	47.51	47.33	29.37	40.47	IV	52.75	57.02	72.95	60.21	IV	49.57	54.49	50.09	52.35
	V	7.13	5.53	13.94	9.19	V	5.12	3.17	2.14	3.16	V	6.34	3.79	8.33	5.56
	VI	1.16	1.07	0.91	1.03	VI	4.87	3.11	1.26	2.88	VI	2.62	2.58	1.08	2.15
<i>N</i>						<i>N</i>	781	4,504	1,586	6,871	<i>N</i>	1,987	6,095	3,336	11,418

Table A2: Father's social class by son's (first) marriage age, rural parishes, 1911-2011

		1911-1962				1963-2011				1911-2011					
		Grooms' age at marriage				Grooms' age at marriage				Grooms' age at marriage					
		15-24	25-34	>34	Total	15-24	25-34	>34	Total	15-24	25-34	>34	Total		
Fathers' social class	I	6.98	8.14	5.95	7.02	I	6.15	14.02	9.06	10.39	I	6.88	10.34	7.13	7.95
	II	10.27	9.28	7.65	8.73	II	3.08	12.12	5.51	7.41	II	9.42	10.34	6.83	8.34
	III	3.49	5.43	4.49	4.34	III	1.54	2.27	0.98	1.43	III	3.26	4.25	3.15	3.47
	IV	58.73	54.07	65.78	58.65	IV	72.31	62.50	81.30	74.67	IV	60.33	57.22	71.70	65.33
	V	6.16	6.33	3.88	5.09	V	3.08	3.41	0.39	1.55	V	5.80	5.24	2.55	3.98
	VI	14.37	16.74	12.26	0.21	VI	13.85	5.68	2.76	4.54	VI	14.31	12.61	8.63	10.93
<i>N</i>		490	454	907	1,867	<i>N</i>	65	264	508	837	<i>N</i>	552	706	1,332	2,590

Table A3: Top 5 occupations of fathers and grooms by social class (HISCLASS), Kampala

Father			Groom		
I. Higher managers & professionals	N	%	I. Higher managers & professionals	N	%
Chief	911	42.37	Teacher	988	37.58
Teacher	491	22.84	Accountant	457	17.38
Clergy	167	7.77	Medical doctor	169	6.43
Accountant	72	3.35	Chief	97	3.69
Medical doctor	59	2.74	University lecturer	63	2.40
Others	450	20.93	Others	855	32.52
<i>Total</i>	<i>2,150</i>	<i>100.00</i>	<i>Total</i>	<i>2,629</i>	<i>100.00</i>
II. Lower managers, professionals	N	%	II. Lower managers & professionals	N	%
Businessman	476	25.91	Clerk	1,064	21.94
Trader	369	20.09	Businessman	891	18.37
Sub-chief	224	12.19	Trader	535	11.03
Clerk	143	7.78	Salesman	178	3.67
Medical assistant	82	4.46	Banker	167	3.44
Others	543	29.56	Others	2,015	41.55
<i>Total</i>	<i>1,837</i>	<i>100.00</i>	<i>Total</i>	<i>4,850</i>	<i>100.00</i>
III. Skilled workers & foremen	N	%	III. Skilled workers & foremen	N	%
Carpenter	190	32.93	Carpenter	341	20.81
Tailor	120	20.80	Engineer	279	17.02
Engineer	55	9.53	Tailor	272	16.60
Mechanic	50	8.67	Mechanic	259	15.80
Blacksmith	30	5.20	Electrician	94	5.74
Others	132	22.88	Others	394	24.04
<i>Total</i>	<i>577</i>	<i>100.00</i>	<i>Total</i>	<i>1,639</i>	<i>100.00</i>
IV. Farmers	N	%	IV. Farmers	N	%
Farmer	4,903	82.04	Farmer	741	70.50
Cultivator	753	12.60	Peasant	253	24.07
Peasant	297	4.97	Cultivator	53	5.04
Hunter	21	0.35	Game assistant	2	0.19
Cotton grower	1	0.02	Hunter	1	0.10
Others	1	0.02	Others	1	0.10
<i>Total</i>	<i>5,976</i>	<i>100.00</i>	<i>Total</i>	<i>1,051</i>	<i>100.00</i>
V. Lower skilled workers	N	%	V. Lower skilled workers	N	%
Barkclothmaker	319	50.32	Driver	396	37.93
Driver	107	16.88	Builder	223	21.36
Builder	95	14.98	Domestic servant	168	16.09
Domestic servant	66	10.41	Soldier	55	5.27
Soldier	11	1.74	Barkclothmaker	23	2.20
Others	36	5.68	Others	179	17.15
<i>Total</i>	<i>634</i>	<i>100.00</i>	<i>Total</i>	<i>1,044</i>	<i>100.00</i>
VI. Unskilled workers & lower skilled farm workers	N	%	VI. Unskilled workers & lower skilled farm workers	N	%
Gardener	163	66.53	Gardener	57	28.08
Fisherman	21	8.57	Farm worker	53	26.11
Farm worker	16	6.53	Fisherman	17	8.37
Shepherd	14	5.71	Houseboy	15	7.39
Cowherd	8	3.27	Cowherd	7	3.45
Others	23	9.39	Others	54	26.60
<i>Total</i>	<i>245</i>	<i>100.00</i>	<i>Total</i>	<i>203</i>	<i>100.00</i>

Table A4: Top 5 occupations of fathers and grooms by social class (HISCLASS), rural

Father			Groom		
I. Higher managers & professionals	N	%	I. Higher managers & professionals	N	%
Chief	120	58.25	Teacher	343	74.73
Teacher	59	28.64	Chief	39	8.50
Lay reader	6	2.91	Accountant	23	5.01
Accountant	3	1.46	Doctor	6	1.31
Bishop	3	1.46	Lawyer	4	0.87
Others	15	7.28	Others	44	9.59
<i>Total</i>	<i>206</i>	<i>100.00</i>	<i>Total</i>	<i>459</i>	<i>100.00</i>
II. Lower managers, professionals	N	%	II. Lower managers & professionals	N	%
Sub-chief	85	39.35	Clerk	155	28.03
Trader	70	32.41	Trader	155	28.03
Clerk	15	6.94	Medical assistant	46	8.32
Businessman	9	4.17	Businessman	31	5.61
Medical assistant	5	2.31	Sub-chief	22	3.98
Others	32	14.81	Others	144	26.04
<i>Total</i>	<i>216</i>	<i>100.00</i>	<i>Total</i>	<i>553</i>	<i>100.00</i>
III. Skilled workers & foremen	N	%	III. Skilled workers & foremen	N	%
Blacksmith	27	30.00	Tailor	105	33.98
Carpenter	20	22.22	Cook	56	18.12
Tailor	12	13.33	Carpenter	53	17.15
Bricklayer	8	8.89	Bricklayer	32	10.36
Drum maker	8	8.89	Mechanic	26	8.41
Others	15	16.67	Others	37	11.97
<i>Total</i>	<i>90</i>	<i>100.00</i>	<i>Total</i>	<i>309</i>	<i>100.00</i>
IV. Farmers	N	%	IV. Farmers	N	%
Farmer	1,628	96.22	Farmer	781	98.99
Peasant	58	3.43	Peasant	2	0.25
Hunter	6	0.35	Game ranger	6	0.76
<i>Total</i>	<i>1,692</i>	<i>100.00</i>	<i>Total</i>	<i>789</i>	<i>100.00</i>
V. Lower skilled workers	N	%	V. Lower skilled workers	N	%
Domestic servant	29	28.16	Domestic servant	134	40.24
Matmaker	27	26.21	Matmaker	99	29.73
Barkclothmaker	21	20.39	Soldier	30	9.01
Basketmaker	7	6.80	Driver	22	6.61
Soldier	6	5.83	Builder	19	5.71
Others	13	12.62	Others	29	8.71
<i>Total</i>	<i>103</i>	<i>100.00</i>	<i>Total</i>	<i>333</i>	<i>100.00</i>
VI. Unskilled workers & lower skilled farm workers	N	%	VI. Unskilled workers & lower skilled farm workers	N	%
Cowherd	251	88.69	Cowherd	111	54.68
Shepherd	25	8.83	Househoy	37	18.23
Fisherman	2	0.71	Fisherman	6	2.96
Labourer	2	0.71	Shepherd	2	0.99
Shoeshiner	1	0.35	Shoeshiner	2	0.99
Others	2	0.71	Others	45	22.17
<i>Total</i>	<i>283</i>	<i>100.00</i>	<i>Total</i>	<i>203</i>	<i>100.00</i>

Part II

Chapter 5: What determines female smallholders' participation in collective action? Evidence from a coffee cooperative in Western Uganda

Abstract: Female smallholders face greater constraints than men in accessing capital and commodity markets in Sub-Saharan Africa. Collective action institutions have been promoted to remedy those disadvantages. Using field survey data of 421 female members and 210 non-members of a coffee producer cooperative in the Rwenzori Mountains of Western Uganda this paper investigates the determinants of women's (i) participation in cooperatives (ii) and their member participation intensity. The results highlight the importance of access to and control over land for women to initially join the cooperative. Participation intensity is modelled through women's participation in collective coffee marketing and share capital contributions. It is found that length of membership, previous extension services, more equal intra-household power relations, spousal income pooling, and joint land ownership positively influence women's ability to commit to collective action. Hence, cooperatives that fail to address gender, risk not setting the right conditions for effective female participation. Policy recommendations how to foster female participation in cooperatives are discussed.

Keywords: cooperatives, women, participation, agency, smallholder farmers, coffee, land ownership, Uganda

JEL classification: J54, J16, N57, O13, Q13

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1. Introduction

In many parts of the developing world women's greater representation amongst the poor mirrors the fact that women face persistent constraints that limit their further inclusion in agriculture and entrepreneurship (Meinzen-Dick et al. 2011, World Bank 2011, Duflo 2012, Hallward-Driemeier 2013). In particular, in sub-Saharan Africa women face greater barriers than men in accessing markets to sell their produce (at reasonable prices) and to access capital in order to raise productivity and farm incomes (Jiggins 1989, World Bank 2011: 173-228, Peterman et al. 2014). Furthermore, women are particularly vulnerable to exploitative trading practices and have weak bargaining positions with predominantly male networks in the value-chain (Mayoux et al. 2009, Jones et al. 2012) which limits women's agricultural productivity (Goldstein and Udry 2008) and constrains their ability to move from subsistence agriculture to more profitable higher value chains (World Bank and FAO 2009).

Against this background, participation in cooperatives has been promoted as a promising strategy for female smallholders to overcome market imperfections and increase their productivity and farm incomes (Birchall 2003: 20, Pandolfelli et al. 2008, Markelova et al. 2009, Quisumbing and Pandolfelli 2010, Majurin 2012).¹ Agricultural cooperatives pool smallholder farmers' produce and link them to international and domestic markets. Collective marketing realizes economies of scale and enhances farmers' power to negotiate better prices and tap into high-value markets, otherwise unreachable with intermediary buyers (Bacon 2005, Wollni and Zeller 2007, Markelova and Mwangi 2010, Shiferaw et al. 2011, Poole et al. 2013). Furthermore, cooperatives can raise female members' productivity and social inclusion through the provision of additional services (Barham and Chitemi 2009, Majurin 2012), such as access to credit and thrift, skill/technical assistance, agricultural inputs, and information sharing.

Understanding what drives women's membership is important for cooperatives' survival and growth in the long-run because they depend on members' produce in order to generate economies of scale in processing and marketing (Bruynis et al. 2001, Birchall and Simmons 2004, Jussila et al. 2012). However, nominal participation alone does not explain how intensively female farmers (are able to) participate and commit themselves to their organisation. Often producer groups are not successful because expected benefits do not always materialize, resulting in members' passive participation or exiting, and groups dissolving (Agarwal 2001, Markelova et al. 2009, Shiferaw et al. 2011). Because cooperatives

¹ See Johnson and Shaw (2014) for a review of the cooperative and development literature, in particular on rural cooperatives.

depend on members' delivery of crops, side-selling can cause problems for cooperatives. Furthermore, cooperatives also rely on members' voluntary share capital contributions as a primary source of capital to develop its cooperative business (Von Pischke and Rouse 2004, Cazuffi and Moradi 2012). Hence, cooperatives would benefit from a better understanding of what influences women's degree of participation in the organisation.

Various recent studies have explored African smallholders' determinants of membership in cooperatives (Bernard and Spielman 2009, Fischer and Qaim 2012) as well as their intensity of participation (e.g. Fulton and Adamowicz 1993, Mensah et al. 2012, Mujawamariya et al. 2013, Fischer and Qaim 2014, Wollni and Fischer 2014). However, although gender is held as a key determinant of people's ability to participate in collective action, there has been little empirical research on women's participation in cooperative membership.² Moreover, whereas previous works have emphasized the institutional conditions, hitherto little attention has been paid to intra-household power dynamics as drivers of participation in collective action.

This article aims to fill this research gap using a newly collected dataset of female smallholders from rural Uganda, comprising 421 members of a coffee and microfinance cooperative as well as 210 randomly selected non-members from the same treatment area. The two main goals of the paper are to better understand what factors influence (i) women's membership in cooperatives and (ii) their intensity of participation within cooperatives. Women's degree of participation *within* cooperatives is measured through (a) collective marketing of coffee through the cooperative vs. side-selling, and (b) members' share capital contributions.

The article proceeds as follows. Section 2 reviews the literature. Section 3 presents background information. Section 4 describes the data. Section 5 analyses the determinants of female cooperative membership, while Section 6 explores the factors behind women's intensity of participation. Section 7 concludes.

2. Conceptual framework

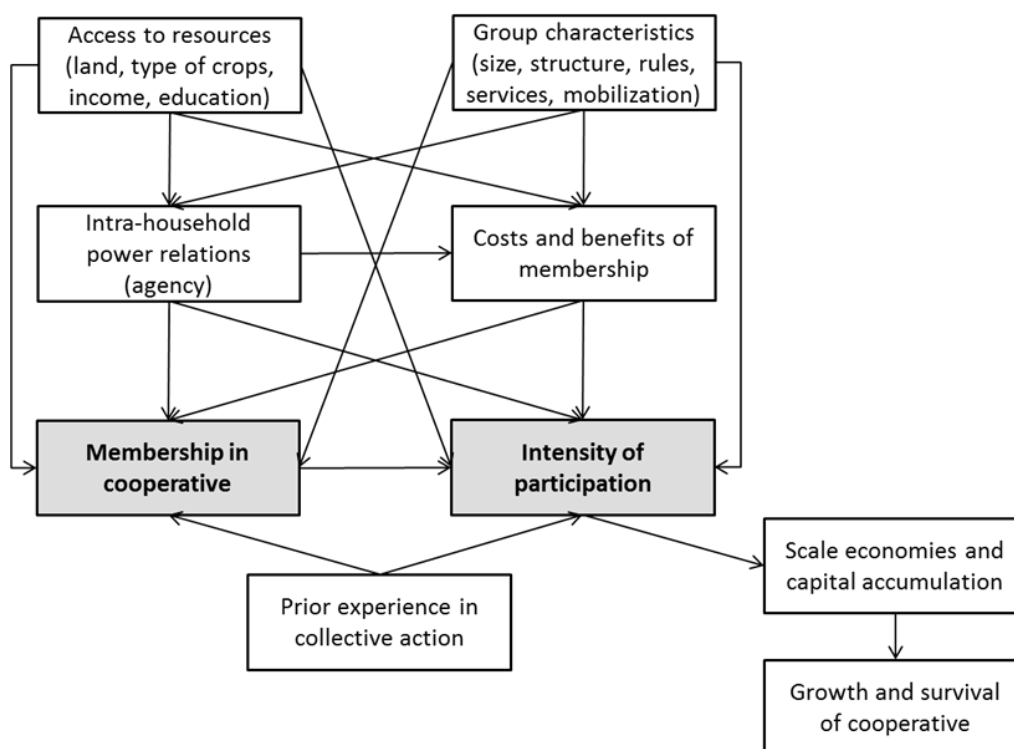
2.1 What determines women's participation in cooperatives?

Figure 1 presents a conceptual framework comprising factors that have been hypothesized to influence female farmers' membership and participation intensity in cooperatives. While marginal costs and benefits and group characteristics have been previously emphasized in the literature on collective action (Ostrom 2000, Birchall and Simmons 2004, Markelova et al.

² Notable exceptions include: Mayoux (1995a), Meinzen-Dick and Zwartveen (1998), Pandolfelli et al. (2008).

2009), socio-economic characteristics and intra-household power relations play an equally important role in women’s participation within the context of patriarchy and poverty. In her oft-cited article, Naila Kabeer (1999) highlights women’s ability to exercise strategic life choices within three measurable and interrelated dimensions: *resources*, *agency* and *achievements*. Participation in collective action clearly presents a (strategic) life choice for women. Hence, building on Kabeer’s concept might be useful for the analysis of female participation in cooperatives.

Figure 1: Factors influencing female members’ participation in cooperatives



Access to resources

Women’s unequal access to productive resources often limits their opportunities to participate in collective action, leading to male dominated cooperatives (Meinzen-Dick and Zwarteveen 1998, Weinberger and Jütting 2001, Abebaw and Haile 2013). One important determinant of access to cooperatives among smallholder farmers is land ownership. Because land usually belongs to husbands, women are not eligible to join many cooperatives or receive credit and are not targeted in technical trainings. Moreover, land tenure insecurity lowers women’s agricultural productivity in the medium-run (Goldstein and Udry 2008).

Women’s ability to own productive resources within the household are likely to strengthen their bargaining position, as access to productive resources within the household is

typically considered a function of women's bargaining power (Agarwal 1997). Numerous studies have found land size positively influencing female smallholders' decisions to join agricultural marketing cooperatives in Ethiopia (Bernard and Spielman 2009), Kenya (Fischer and Qaim 2012) and Costa Rica (Wollni and Zeller 2007), while land security perceptions were lower among coffee cooperative members in Rwanda, (Mujawamriya et al. 2012) and not significantly different between female members and non-members in Chad (Weinberger and Jütting 2001). Furthermore, women with more productive resources and entrepreneurial experience in crop cultivation may expect greater benefits from participation in cooperatives.

Beyond land, women's access to education may also affect their participation in collective action. On the one hand, the level of education and the attainment of literacy skills may pre-determine women's ability to work outside the agricultural sector in wage labour markets, and thus their necessity of joining cooperatives. On the other hand, skilled smallholders may be able to process the benefits and costs regarding cooperative membership more effectively, possess a greater long-term horizon, and have a better relative social position within the household. Bernard and Spielman (2009) and Wollni and Zeller (2007) found that the level of education and entrepreneurial experience positively influenced participation in cooperatives in Nigeria, Ethiopia, and Costa Rica respectively. Contrary, Weinberger and Jütting (2001) and Fischer and Qaim (2012) could not find a statistically significant relationship.

Agency

Access to resources per se does not automatically lead to social change (Calás et al. 2009) but also depends on women's ability to take autonomous choices in life and to control resources, commonly referred to as *agency* (Kabeer 1999). In particular, culturally embedded patriarchal conditions may restrict women's agency, creating barriers to exploit their economic opportunities and personal capabilities (Sen 1999). Women's participation in cooperatives already reflects agency in itself, as it mirrors women's physical mobility and possibly husband's authorization. Hence, one needs to look for indicators that pre-conditioned this achievement.

One of the earliest and most important turning-points in girls' lives is marriage. Whether the timing of marriage and the choice of husband was freely taken by the bride or whether this was arranged is a reasonable indicator for women's agency early in life (Jensen and Thornton 2003, Carmichael 2011). Generally, young girls who are married off to much older men are likely to have little say in deciding the terms of the union, drop out of school

earlier, and start having children at an earlier age. This lack of free choice at an early stage of women's lives is likely to translate into large age and educational gaps between spouses. This can further prevent women from gaining a better bargaining position within the household, hypothetically reducing their freedom of engaging in collective action. The practice of bridewealth and polygamy may introduce additional obstacles to women's agency. Moreover, the notion that women may participate in collective action as a response to constraints within the household is not straightforward as, within contexts of patriarchy, women require a certain level of agency, such as freely moving outside the household and the husbands' permission of becoming a member in a cooperative.

2.2 What determines women's intensity of member participation?

So far, most studies on farmers' participation in cooperatives have treated participation as a binary choice variable - equating membership with participation. However, within collective action institutions the commitment of members is voluntary and can thus vary. Commitment generally captures the extent to which a member is likely to choose to maintain the membership (Jussila et al. 2012). Farmers' participation intensity has been measured in multiple ways in the cooperative literature.

For example, Fischer and Qaim (2014) analyzed smallholders' intensity of participation in a Kenyan banana cooperative using frequency of participation in group meetings and both the quantity and share of marketable bananas sold through the cooperative. While they document that women's intensity of participation within banana groups is not significantly different from males, they did not study the factors that affected male and female participation separately. They find that more specialized and medium-sized banana farmers, and past beneficiaries of group services, were more likely to participate in collective marketing and meetings. In another recent work, Wollni and Fischer (2014) found an inverse relationship between farm size and collective marketing among cooperatively organized coffee farmers in Costa Rica. Also, Mujawamariya et al. (2013) used the proportion of collectively marketed coffee versus side-selling to traders as an indicator of member commitment in four Rwandan coffee cooperatives. They explain farmers' preferences for side-selling through the existence of long-standing and trustful relationships between traders and farmers, the attractiveness of immediate cash payment from traders, and the additional transaction costs involved in producing high-quality coffee. Likewise, Mensah et al. (2012) look at the share of marketable cashew nuts delivered to a cooperative in Benin. They find that the price offered by the cooperative compared to traders and additional transaction costs along the value-chain

negatively affected collective marketing. Finally, Cazuffi and Moradi (2012) chose members' share capital contributions of cocoa cooperatives in colonial Ghana as a proxy for member commitment, concluding that capital accumulation was positively related to members' wealth and negatively to membership size.

Those studies have largely paid attention to marginal costs and benefits influencing members' level of commitment to their cooperative. However, socio-economic factors within the household and at the group level may also be important predictors within the context of poverty and patriarchy, in particular when studying female participation (Kabeer 1999, Fischer and Qaim 2014). Although most of the studies above control for gender, usually as a binary variable in regression analysis, a separate and deeper analysis of the gender-based determinants of participation in and within cooperatives is still missing.

As for nominal membership, women's access to and control over household resources is expected to influence women's intensity of participation. Within households, preferences over resource allocation are typically not identical, and largely depend on spouse's decision-making power (Deere and Doss 1996). In this regard, the mutual sharing (or pooling) of income, women's participation in various types of household decisions, and joint ownership of land by spouses would signal cooperation between spouses with potential gains for women's participation within cooperatives. Also, family size and particularly the number of dependent children may increase women's opportunity costs of time to participate in group meetings (Meinzen-Dick and Zwartveen 2003).

In addition, it is hypothesized that group characteristics, including group size and the gender composition of groups, influence women's decisions on their degree of participation. Smaller groups are typically presumed to allow for greater interaction and social cohesion which ensures cooperation and avoids free-riding (Olson 1965). According to Poteete and Ostrom (2004) no consensus exists over the role of heterogeneity in collective action. In relation to the context of patriarchy, it is hypothesized that women may feel more open to speak out and participate within groups with greater female conformity. Length of membership (in particular being a founding member) and the magnitude of past group benefits (e.g. credit, extension services) also influence women's attitudes towards participation. Physical distance to the cooperative may influence the decision of collective marketing, taking into account opportunity costs.

Also, husband's co-membership in his wife's group is presumed to matter (Hambly Odame 2002), although the direction of the effect is debated. Husbands' co-membership entails a tradeoff between reducing household frictions (Goetz and SenGupta 1996) on the

one hand and a loss of autonomy over marketing and borrowing decisions on the other. Further, male inclusion might impede women speaking out at meetings (Meier zu Selhausen and Stam 2014). Also, the distribution of tasks along the value chain may also affect women's intensity of participation in their cooperative, as it reflects their workload and control over crop production.

3. Background and setting

3.1 Coffee production and cooperative development in Uganda

In 2012, 84% of the Ugandan population lived in rural areas. Agriculture is the most important sector of Uganda's economy, employing around 65% of the labour force (World Bank 2014). Coffee accounted for 31 percent of Uganda's export earnings in 2012 (AfDB and OECD 2014). Next to Ethiopia, Uganda is Africa's largest coffee exporter, producing 22% of African coffee in 2013 (ICO 2014). The coffee sector in Uganda almost entirely depends on approximately 500,000 smallholder households – 90% of whose average farm size ranges between less than 0.5 and 2.5 hectares (UCDA 2012). About 85 percent of cultivated Ugandan coffee is Robusta while the rest is Arabica which is grown above 1,200 metres in the highland areas of Mount Elgon (east), the Rwenzori Mountains (west), and Mount Muhabura (south-west). Since 2002 world market coffee prices have been on the rise. However, due to information asymmetries between coffee farmers and traders, prices rarely fully trickle-down to coffee growers (Fafchamps and Hill 2008).

Prior to the colonial era, Ugandan farmers were not connected to world markets and had no indigenous experience in cooperative organisation. In the early colonial era, the British administration and Christian missionaries introduced commercial cotton growing, followed by coffee which had been rapidly adopted by African smallholders by the 1920s (Ofcansky 1996: 29-33). Colonial land alienation from Africans did not occur, instead freehold land was introduced which encouraged the growing of cash crops by African peasants within the new capitalist context (Zwanenberg and King 1975). The cooperative movement in Uganda was born in 1913 in response to British and Indian interests that sought to monopolize marketing, processing, and export of cotton and coffee. Yet, African cooperatives remained unsupported by the colonial state until 1946 when cooperatives were legalized (Develtere et al. 2008). In 1961, there were 1,662 cooperatives with a membership subscription of over 250,000 (UCA 2012).

During the post-colonial period farmers sold their produce at fixed prices, largely detached from international prices, to primary societies which delivered it to unions. Unions

sent the produce to government marketing boards which sold it into export markets. When Idi Amin came to power in 1971, there were 2,500 primary cooperatives, mainly engaged in cotton and coffee with about 750,000 family members (UCA 2012). Yet, Amin's military governance and warfare combined with low international prices for cash crops led to the collapse of most primary cooperatives in Uganda. When agricultural markets were liberalized and decentralized from state-controlled marketing boards in the early 1990s, cooperatives were largely unprepared to compete in international markets. This led to a further decline in the Ugandan cooperative movement, with cooperatives' export market share dropping to approximately 1% in 2006, while multinational coffee firms were expanding (Wanyama et al. 2009, Kyazze 2010). Yet, over recent years the cooperative movement has been experiencing a renaissance in both Uganda and other African economies (Develtere et al. 2008). In 2012, there were 9,967 permanently registered cooperatives in Uganda with a membership subscription of over 1.23 million³ (MoTCC 2012) – 47% being agricultural marketing cooperatives and 28% savings and credit cooperatives (SACCOs). Female representation was estimated at 42%. Recently, Kaganzi et al. (2009) and Kyazze (2010) highlighted the new market opportunities for agricultural cooperatives in Uganda to supply higher value chains, such as supermarket chains and fast-food restaurants in rapidly expanding East African urban markets. While women participated mainly in groups that focused on traditional handicrafts in the 1970s, more recently this has broadened to include agricultural production (Pickering et al. 1996).

3.2 The cooperative under study

Bukonzo Joint Cooperative Microfinance Society (henceforth referred to as BJC) is a joint microfinance-coffee cooperative, located in Bukonzo County along the northern slopes of the Rwenzori Mountains in Western Uganda, near the Congolese border (see Figure A1 for a map of the region). Bukonzo County comprises a population of 280,500 and is an exclusively agricultural area with poor infrastructure (e.g. no electricity connection at time of survey) and large distances to producer markets. The area was further marginalized in the 1990s due to civil strife and abduction by rebel groups (ADF). Most settlements lie between 1,300 and 2,300 metres of altitude, all suitable for the growing of Arabica coffee. Annually, the area experiences two rainy seasons, concentrated in March to May and August to November, and two dry-seasons resulting in two coffee harvesting seasons. Coffee is the most important income earner in the region. Socio-economically this means that farmers are almost all year

³ Figure is based on 2009 estimates. No member distribution by gender available.

round involved in the cycle of coffee cultivation: planting, tending, harvesting, processing, and selling the crop.

The cooperative was founded in 1999 and initially started-off as a microfinance cooperative that organized its members into jointly liable self-help groups (henceforth SHGs) in order to provide access to credit and thrift facilities and establish a network of mutual support within a context of poverty. In the beginning, almost all group members were female and came together because of prior social ties and their common experience of deprivation. There are no official selection-criteria for membership in farmer groups related to gender, age, education, or land ownership, except that existing group members need to accept a new member who then pays the membership fee and subscribes to at least one cooperative share worth 10,000 Ush (\$4).

Table 1: Average group characteristics

	Obs.	Mean	SD	Min	Max
Year group was formed	74 ^a	2004 ^c		2000	2010
Year group was formed (sample)	26 ^b	2004 ^c		2000	2010
No. of group members	66 ^a	31.03	15.13	15	114
No. of group members (sample)	26 ^b	35.39	18.06	22	108
Share of female members	66 ^a	0.76	0.12	0.46	1.00
Share of female members (sample)	26 ^b	0.79	0.10	0.50	1.00
Average savings per group member (in Ush) ^d	66 ^a	96,753	74,390	1,790	302,273
Average share capital per member (in Ush) ^d	64 ^a	135,213	83,262	19,063	344,642
Distance to cooperative (in walking min.)	26 ^b	33.27	30.56	0	120
Frequency of meetings per month	26 ^b	3.8	0.54	2	4

Note: ^a based on cooperative statistics from March 2012. ^b based on July/August 2012 survey of 26 groups. ^c Median. ^d The U.S. dollar amount is calculated at the July 2012 exchange rate of 1\$ = 2,450 Ush.

Initially, the cooperative comprised 11 women-only groups. In 13 years, BJC has grown to serve 2,220 local small-scale farmers, distributed over 74 groups by March 2012. On average, each farmer group comprises 31 members (see Table 1) and ranges from 15 to 114 members. On average, 76% of the members are female. The share of female members is negatively correlated with group size, which may suggest that women prefer smaller groups with closer social ties. Group meeting locations are situated 33 minutes average walking distance from the nearest main road (which is not a tarmac road) and ranges from 0 to 120 minutes. On average, group members had saved \$39, while the average share capital per member amounted to \$55. As a collateral substitute, loans (with a monthly interest rate of 2%) are tied to member savings at a ratio of 1:2, and require the guarantee of three to five members within each producer group. The share capital combined with external aid funding

has been used in the past to build stores and purchase scales, bags, a hulling machine, and a generator (due to the lack of electricity supply).

Figure 2: Value chain and marketing activities of BJC

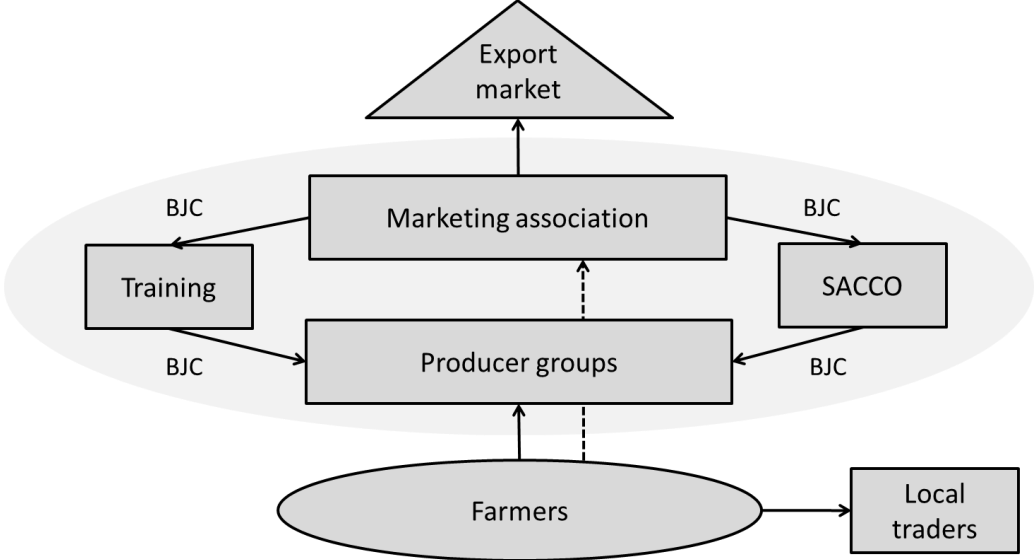


Figure 2 shows that over the years, the group model offered the opportunity for BJC to integrate complementary services for its members.⁴ Since 2005, an internal marketing association pools and markets internationally smallholder farmers’ coffee in order to provide easier market access. As a result, members can expect higher and more stable prices for their Arabica coffee. In 2010, BJC bulked about 300 tons of coffee. The cooperative buys coffee from non-members as well, in order to maximize the use of washing stations and increase the quantity of coffee. Thus, non-members indirectly benefit from the organisation although they do not have access to financial or agricultural services, or rebate distribution at the end of the sales season. Also, the cooperative follows rigorous quality requirements associated with exportation – coffee cherries of poor quality are rejected. BJC buys both wet-processed and sun-dried coffee as not all members possess a micro-washing station for wet-processing (i.e. floating and de-pulping). Wet-processing ensures higher quality and is preferred by the cooperative. The cooperative provides the final stage in the green coffee value chain by hulling members’ dried coffee (i.e. removing the parchment) before export to retailers in Europe, Japan, and the United States for roasting. In order to increase the quality of members’ coffee, since 2007 Bukonzo Joint has provided a comprehensive training scheme for its members in best practices and post-harvest management of organically grown coffee, as well

⁴ The expansion of BJC’s services was partly achieved through the external support of development organisations, such as USAID, Oxfam, Novib, Rabobank, and Solidaridad.

as participatory trainings on how to improve gender relations along the coffee value-chain and within the household.⁵

4. Data and descriptive statistics

4.1 Household survey

Using a carefully designed and pre-tested questionnaire, a survey of female cooperative members and non-members was carried out between June and August 2012 in seven sub-counties of Bukonzo County in Western Uganda. All sub-counties are major coffee producing regions located in the highlands of the Rwenzori Mountains and are located within the same agro-ecological zone, situated above 1,200m altitude, ideal for the growing of Arabica coffee.

BJC members were selected using stratified random sampling. Using a list of 74 producer groups of BJC, they were clustered into four groups according to their year of creation (1999-2001, 2002-2004, 2005-2007, 2008-2010) in order to capture time variation. From each stratum six producer groups were randomly selected. Additionally, two extra groups were sampled anticipating the possibility of non-response. In total, 26 groups were randomly selected. Next, within each group 16 female members who had a husband at the time⁶ were randomly drawn using a lottery game, resulting in a total of 421 group member observations (24% of total female cooperative members). Moreover, within the treatment area of each sampled producer group eight married women were randomly sampled, totaling 210 observations. Interviews were conducted in private without husbands' presence to avoid response bias. Thus, the total survey sample size comes to 631 observations.

In addition, Table 1 provides confidence that the 26 randomly sampled groups make a fairly representative match in relation to average group characteristics: size, composition, and length of existence. The sample only contains BJC members that were active at the time of the survey. Information on those members who exited their group in the past was not possible to survey. This may improve the standing of the surviving members relative to non-members. Furthermore, the survey data was supplemented with interviews with the leadership of BJC.

4.2 Descriptive statistics

Table 2 presents the different ways the sampled cooperative members participated within their organisation in the year 2011/2012. Almost all members saved money in their individual

⁵ Gender Action Learning System (GALS) based on inclusive and participatory principles and simple mapping and diagram tools has been introduced at BJC in 2007.

⁶ We are particularly interested in intra-household power relationships affecting participation in collective action and therefore only sample married women.

saving accounts, three-quarters sold coffee through the cooperative, two-fifth received credit, and about one in five attended participatory gender and technical coffee trainings.

Table 2: Types of member participation at BJC in 2011/12

	Total	%
Saving deposits	375	89.1
Coffee sales to cooperative*	317	75.3
Microcredit	168	39.9
Participatory gender training	82	19.5
Technical coffee training	70	16.6
Observations	421	100.0

Note: * This value increases to 305 out of 387 (78.8%) when only those members who earned an income from coffee in the last year are considered.

Seventy percent of the sampled BJC members stated that coffee constitutes their most important lump-sum income source, followed by the sale of field crops (17%), and small trading and farming activities (9%). This is supported by the fact that on average income from coffee constitutes about a quarter of total household income. The majority of members stated that access to financial means (62%) and coffee market access (21%⁷) were primary motivations for their membership. Interestingly, 88% of non-members reported that they would like to become a member of BJC but that their current lack of money, time or coffee (42%), lack of understanding of and trust into cooperatives (25%), and their husbands’ disapproval (4%) has impeded them thus far. The majority of cooperative members already grew and sold coffee before membership (72%), which had been sold to private buyers (87%), other cooperatives (6%), or friends and relatives (6%). On average, membership seems to have yielded important gains for coffee cultivating households, as it increased their control over coffee sales from 22% before cooperative participation to 35% today. This parallels an increase in joint-selling and an overall reduction of husband’s exclusive control over sales from 38% to 21%.

We find evidence for competition and non-cooperation between spouses over coffee sales, as 24% of wives sold unprocessed coffee at a lower price (to private buyers) to avoid their husband taking the coffee. In turn, 17% of husbands took coffee in the last year and sold it at a lower price so that they could get the money before the wife. Lack of cooperation in home coffee production potentially reduces households’ quality and quantity of coffee to be sold to the cooperative. This problem is exacerbated by the fact that 21% of coffee-growing

⁷ This figure comes to 32% for households that cultivate coffee.

cooperative members⁸ decided not to sell any of their coffee through the cooperative but preferred to sell to local buyers who offered immediate cash. Thus, a relevant question is why individual marketing continues to represent an important strategy for almost one quarter of female members. In all coffee producing households women are significantly involved in the coffee cultivation and processing tasks (see Table A1). Men are particularly involved in the initial heavy-duty tasks of clearing the land, digging terraces, and planting coffee trees. The bi-annual harvesting of coffee is largely organised jointly. Processing, generally the more time-intensive task, is largely done together. Still, at least a third is exclusively done by the wife. Despite the fact that transport of coffee to the cooperative is either performed by the wife or jointly, 40% of husbands received the payment for it. Overall, it appears that members are more likely to join forces with their husband than non-members.

Variables

As explained in the literature overview, several individual, household, and group characteristics are expected to influence women's intensity of participation in collective action. Therefore, a wide set of farm, household, and group characteristics are used as explanatory variables which are explained in Table 3.

Farm size of both wife and husband is used as gendered wealth indicators over productive resources. Furthermore, we include households' annual income from coffee to account for the quantity of coffee produced and the degree of coffee specialization. Larger coffee producers are likely to profit more from collective marketing and related inputs and extension services. On the other hand, larger producers may find it easier to market their crop individually. In addition, we control for years of entrepreneurial experience in coffee cultivation. Veteran coffee growers may be more resistant to change in their traditional marketing channels. On the other hand, members who received a loan from the cooperative in the last year may attach greater value to the services of the cooperative, and thus show reciprocity in their behaviour.

⁸ Includes only those farmers that earned an income from coffee in the last year.

Table 3: Summary statistics of variables used in regressions by respondent groups

Variable	Description	Members (n = 421)		Non-members (n = 210)		Dif.
		Mean	S.E.	Mean	S.E.	
<i>Member coop</i> [†]	Member of BJC or any other SACCO (1 = yes)	1.00	0.00	0.34	0.48	***
<i>Age wife</i>	Age of female member (in years)	36.92	11.57	30.24	10.28	***
<i>Spousal age gap</i>	Age difference husband & wife (in years)	6.10	5.63	5.64	5.56	
<i>Literacy wife</i>	Wife is able to write her name (1 = yes)	0.59	0.49	0.80	0.77	***
<i>Literacy husband</i>	Husband is able to write his name (1 = yes)	0.86	0.34	0.92	0.32	**
<i>Skill training</i>	Agriculture skill training > 2 months (1 = yes)	0.15	0.36	0.07	0.25	***
<i>Marriage age</i>	Age at first marriage (in years)	18.25	3.23	18.24	2.89	
<i>Catholic</i>	Catholic faith (1 = yes)	0.52	0.50	0.55	0.49	
<i>Arranged mar</i>	Husband not chosen by wife (1 = yes)	0.17	0.38	0.16	0.37	
<i>Co-wives</i>	Number of co-wives	0.43	0.65	0.33	0.60	
<i>Land wife before</i>	Ln land owned by wife before BJC (in acres)	0.50	0.57	0.17	0.333	***
<i>Husband sale</i>	Husband control over coffee before BJC membership (1 = yes)	0.36	0.55	0.30	0.46	
<i>Mobility</i>	Born in Bukonzo county (1 = yes)	0.86	0.34	0.90	0.29	
Additional variables used in members' intensity of participation regression						
<i>Collective sale</i> ^{a†}	Member sells coffee to BJC in last year (1 = yes)	0.75	0.02			
<i>Ln share</i> [†]	Number of capital shares purchased (ln)	1.64	0.06			
<i>Ln land wife</i>	Land owned by wife in acres (ln)	0.19	0.41			
<i>Ln land husband</i>	Land owned by husband in acres (ln)	0.79	0.54			
<i>Ln income cof</i> ^a	Annual coffee income in Ush (ln)	13.16	0.94			
<i>Household size</i>	Number of individuals eating from same pot	7.53	4.93			
<i>Coffee grower</i>	Cultivates coffee on own land (1 = yes)	0.97	0.16			
<i>Ln years coffee</i> ^a	Years of coffee cultivation (ln)	2.61	0.70			
<i>Coffee process</i> ^a	Member responsible processing coffee (index)	0.61	0.25			
<i>Wet process</i> ^a	Member wet processes coffee (1 = yes)	0.36	0.48			
<i>Wife controls sale</i> ^a	Member is in control of delivery of coffee to market and receives payment (1 = yes)	0.57	0.37			
<i>Prior coop</i>	Member of cooperative before BJC (1 = yes)	0.22	0.43			
<i>Motivation BJC</i>	Motivation for membership: coffee sales (1 = yes)	0.20	0.40			
<i>Credit BJC</i>	Member received BJC loan last year (1 = yes)	0.46	0.50			
<i>Decision-making power wife</i>	Index of 4 household decision-making areas of wife's, joint or husband decision-making	0.18	0.28			
<i>Pooling</i>	Spouses share at least half of their income (1 = yes)	0.26	0.43			
<i>Joint land owner</i>	Spouses have a joint land agreement (1 = yes)	0.29	0.45			
<i>Husband member</i>	Husband is co-member at BJC (1 = yes)	0.35	0.47			
<i>Gender enumerator</i>	Enumerator is male (1 = yes)	0.62	0.48			
Observations		421		210		

Note: Statistical significance of differences between the mean values of non-cooperative members and cooperative members at * 10% level, ** 5% level, *** 1% level. Group characteristics are provided in Table 1. [†]Dependent variables; ^a Refers only to coffee growers with reproducible coffee plants (i.e. with any income from coffee in the last year) (n = 387).

Furthermore, intra-household power dynamics may explain women's participation in collective action. Women's decision-making agency at the household level is measured through an index of four areas of decision making concerning household expenditures (i.e.

health, education, food, and general). The variable is constructed to take into account women's autonomous decision-making, joint decision-making, and no decision-making. The household income pooling variable measures the mutual sharing of financial resources between spouses and is constructed as a dummy variable of each of the spouses sharing at least half of their income. Further, we are also interested in the level of sharing of productive resources and include the binary variable of joint land ownership.⁹ More than a third of husbands of female members were also members of BJC. We expect spouses' joint membership to enhance women's participation, as it potentially reflects spouses' mutual sharing of preferences and trust towards the cooperative. On the other hand, men might dominate group participation and thus hamper their wives' ability to actively take part in group meetings.

Because present-day agency indicators would cause endogeneity issues in the regression analysis of the determinants of initial cooperative membership we use age at first marriage, spousal age gap, and women's level of own choice concerning her marriage, explained in the conceptual framework. We also include a dummy for husband's control over coffee sales before membership and also control for polygamy by including the number of co-wives. For the analysis of female members' level of participation within the organisation, group characteristics are considered, such as group size, gender homogeneity, and distance to the cooperative. All producer groups receive the same treatment by BJC. Group fixed effects were not included to avoid multi-collinearity between these group characteristics. We find that the significance of the variables is robust when substituting group characteristics with group-level dummies. Finally, we also control for enumerators' gender to account for systematic response differences in the private interview between male and female enumerators.

5. Determinants of women's cooperative membership

Method

The first objective is to identify what determines women's cooperative membership. For that purpose a probit model is estimated. The sample is confined to cooperative members and non-members from treatment regions. Because current income, decision-making power, asset endowments, women's socio-economic position, fertility, and land size may be endogenously

⁹ The correlation matrix in Table A4 and Table A5 shows that the three explanatory variables capturing household gender dynamics barely correlate with each other. Doss et al. (2014) have shown for rural Uganda that commonly households report husbands and wives as joint owners of land, although women are typically less likely to be listed on ownership documents.

affected by participation, such indicators have not been included. To avoid endogeneity we only include variables that can be measured before membership. In addition, because 34% of non-BJC members claimed to be members of local savings and credit cooperatives (SACCOs), another binary dependent variable was constructed which includes both BJC and non-BJC SACCO membership to investigate the determinants of women's access to capital through cooperatives in the region.

Results

Estimation results of the probit model are presented in Table 4. It shows that the size of land owned before membership, has a positive and highly significant effect on women's probability of cooperative membership. One additional acre of land owned increases women's probability of becoming a member of BJC by 28.3 percentage points (column 1) compared to 19.5 percentage points for any other cooperative member (column 2). The larger coefficient for BJC members is plausible as smallholders with larger farms are expected to be particularly attracted to agricultural cooperatives. The positive effect of smallholders' resource endowment on participation in cooperatives also aligns with the findings of Wollni and Zeller (2007), Bernard and Spielman (2009), and Fischer and Qaim (2012). This is plausible, as women with larger farms may be more inclined to participate in collective marketing because of the larger perceived gains from improved access to markets, risk diversification, and related inputs and extension services. Another reason might be that women with greater possession over arable land have more power to choose whether to participate in cooperatives (Agarwal 1997). The importance of land for women's access to cooperatives also resonates with a recent literature that highlights the importance of women's acquisition of formal land titles of their customary tenure systems in order to ensure that their future resource claims are not threatened by the rapid growth of demand for African agricultural land (Doss et al. 2014). Also, women's years of experience in coffee production increases their probability of joining cooperatives. Potentially, women that have been growing coffee for longer are more likely to value the benefits that come with cooperative membership.

Against our expectations, female non-members are more likely to be able to read and write than cooperative members. Possibly, better educated women depend less on cooperatives for gaining access to financial and agricultural markets, but can rely on formal labour opportunities which improve their chances of receiving bank loans. Yet, female members of either BJC or nearby SACCOs are not significantly different in terms of literacy than non-members (see column 2). However, women highly committed to advance their

agricultural production skills through training (exceeding one month and independent from BJC) are more likely to be more aware of and attracted to the perceived gains of cooperative membership. This holds for both specifications and controlling for educational difference with the husband. Related to that, one additional year in smallholders' experience of coffee cultivation increases the probability of membership by 7 percentage points. Likewise, women with longer experience in the coffee business may be more aware of the benefits from collective action efforts.

Table 4: Determinants of women's membership in farmers groups (Probit Model)

	(1)			(2)		
	BJC participation			Any Coop participation		
	Coef.	S.E. ^a	M.E.	Coef.	S.E. ^a	M.E.
Age wife	0.014	0.007	0.004	0.005	0.00	0.001
Literacy wife	-0.209**	0.099	-0.072**	-0.086	0.093	-0.023
Literacy husband	-0.052	-0.048	-0.016	-0.158	0.201	-0.042
Skill training before	0.600***	0.182	0.177***	0.662***	0.215	0.137***
Land at membership wife (ln)	0.821***	0.126	0.283***	0.732***	0.131	0.195***
Years coffee cultivated (ln)	0.201***	0.073	0.067***	0.184**	0.076	0.049**
Arranged marriage	-0.078	0.157	-0.027	-0.059	0.163	-0.016
Age at first marriage	0.002	0.018	0.000	0.012	0.019	0.003
Spousal age gap	0.003	0.011	0.001	0.002	0.012	0.000
No. of co-wives	-0.046	0.093	-0.015	-0.050	0.100	-0.013
Husband controls coffee sales	0.094	0.104	0.032	0.032	0.107	0.008
Catholic	-0.056	0.111	-0.019	0.094	0.117	0.025
Born Bukonzo	-0.282	0.181	-0.091	-0.190	0.188	-0.047
Constant	-0.400	0.458		0.053	0.022	
Observations		631			631	
Pseudo R²		0.158			0.109	

* Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level, ^a Robust standard errors

Note: The level of significance is unchanged when using respondents' age at cooperative entry or age at the time of the survey. Despite "Years coffee experience (ln)" and "Age wife" correlation of 0.62, the size and significance of the coefficients remain unchanged when excluding any of the two.

Surprisingly, female members and non-members were not statistically different regarding our three measures of women's agency, indicating that initial conditions under which women's marriage took place seem to matter less for participation in collective action while power over productive resources were more important. Further, an additional co-wife did not affect women's membership decision. Finally, husband's control over coffee sales before membership was not statistically different for members and non-members.

6. Determinants of female participation within the cooperative

6.1 Participation in collective coffee marketing

Method

In this section we focus on cooperative members only and explore the factors that determine their level of participation within the organisation. After farmers have decided to join the cooperative, they choose on their degree of participation within the organisation. Active participation in the cooperative's operations is critical to the organisation's performance: it depends on members selling their produce exclusively through the cooperative in order to achieve economies of scale and fetch higher market prices for members' bulk produce. We use the information on member coffee sales through BJC versus side-selling from those 387 female cooperative members (92%) who cultivated coffee and earned an income from it during the last year. Among those coffee-selling cooperative members, 79% sold their produce through the cooperative in the last year, while 21% side-sold to buyers at the farm gate or nearby markets.¹⁰ This indicates that the cooperative competes with local buyers for members' coffee. Members may opt to sell to private middle buyers because they had to wait a couple of weeks until a bulk buyer is identified. Conversely, local buyers usually pay promptly in cash (Fafchamps and Hill 2005). Immediate cash requirements for school fee payment or hospital bills are commonplace.

The quantity and marketable share of members' produce delivered to the cooperative has been commonly applied in recent works as a measure of member's commitment to their cooperative (Wollni and Fischer 2014, Fischer and Qaim 2014, Mujawamariya et al. 2013, Mensah et al. 2012). Because information about the quantity and share of coffee side-sold is unavailable, we study the more extreme cases in this paper: coffee-growing cooperative members who sold their coffee to BJC versus members who decided not to participate in collective marketing at all.

Results

Table 5 presents the regression results, reporting probit coefficients and marginal effects on women's sale of coffee to their cooperative. The empirical results confirm the importance of intra-household dynamics for women's commitment to collective marketing. When spouses pool their incomes, i.e. each sharing at least half of their income, women are more likely to sell the family's coffee to the cooperative, signalling that spouses' mutual sharing of resources increases the likelihood of trading with their cooperative. In a similar vein, joint

¹⁰ Note that members do not face expulsion or financial penalty for coffee sold "illicitly".

land ownership also positively predicts the likelihood of selling to the cooperative. This mechanism is reinforced by the fact that husband's relative land size adversely affected his wife's ability to sell coffee to the cooperative. This indicates that greater relative male land ownership over productive resources (i.e. coffee plants) is likely to increase men's control over marketing.¹¹ This seems in line with Wollni and Fischer (2014) who found that with larger farm size members were increasingly attracted to marketing at least a share of their coffee through private buyers. Yet, we do not observe any significant effect of women's intra-household decision-making power on collective coffee marketing. The empirical results also show that husband's co-membership in the cooperative significantly increased the probability of collective marketing. This is plausible, as spousal co-membership indicates that spouses have a shared interest in collective coffee marketing.

Overall, the results emphasize the importance of intra-household power relationships for women's participation in collective action. Encouraging spousal co-membership and joint-land ownership may be promising strategies for agricultural cooperatives to enhance collective marketing versus side-selling at the farm gate.¹² This resonates with the claims of earlier studies finding that the management of natural resources is more effective when both sexes are actively involved in community groups (Sultana and Thompson 2008, Were et al. 2008).

Length of membership positively affects the likelihood of selling to the cooperative at the 10% significance level: each additional year of membership increases the probability of members' selling through the cooperative by 6 percentage points. However, an additional year of experience in coffee cultivation does not significantly influence marketing through the cooperative. However, income from coffee in the last year positively predicts trading with BJC. Treating income from coffee as a measure of the quantity of coffee produced or as the number of reproducible trees (from which coffee can be harvested) tells us that larger farms had an increased likelihood of trading with BJC. As expected, women who indicated that coffee marketing was the main determinant in their choice of joining the cooperative were more committed to collective marketing.

Group characteristics, such as group size and distance to markets, did not influence trading with the cooperative. However, female group homogeneity positively affected

¹¹ The relationship between men's land ownership and control of the coffee crop and marketing was already emphasized by Mayoux et al. (2009). This seems to remain true despite women investing much more time in production and processing than men.

¹² Meier zu Selhausen and Stam (2014) have shown that spousal co-membership on the self-help group level can have negative effects on women's household decision-making power, while husbands' co-membership in the cooperative per se does not significantly affect women's decision-making power.

members' coffee sales to the cooperative, indicating that a greater share of women within producer groups can be particularly effective for ensuring (other) female members' loyalty. Moreover, wet-processing coffee has a positive effect, which reflects women's higher ability and incentive to invest in upgrading their coffee crop through inputs and equipment. Because the cooperative supports the acquisition of mini washing stations and drying racks through credit and extension services this result may also indicate that reciprocity motives play a role here. Surprisingly, women who received credit from BJC in the last year were not more committed to deliver their crop to BJC. Moreover, women's relative labour input (versus husband's) within coffee production (both processing and sales) did not affect trading with their cooperative.

Table 5: Determinants of collective marketing of coffee (Probit Model)

Dependent variable: Coffee sales through BJC	Coef	S.E. ^a	M.E.
Age wife	-0.008	0.010	-0.002
Literacy wife	0.039	0.179	0.009
Literacy husband	0.072	0.228	0.017
No. of co-wives	0.081	0.118	0.019
Household size	-0.014	0.013	-0.003
Land wife (ln)	-0.030	0.212	-0.007
Land husband (ln)	-0.299*	0.177	-0.072*
Decision-making power wife	0.140	0.313	0.033
Income pooling	0.700***	0.210	0.142***
Joint land owner	0.431**	0.201	0.095**
Credit BJC	-0.127	0.167	-0.030
Motivation: coffee sales	0.647**	0.256	0.127***
Husband co-member	0.519***	0.182	0.115***
Length membership (ln)	0.247*	0.146	0.059*
Income from coffee (ln)	0.167*	0.095	0.040*
Years coffee cultivated (ln)	0.026	0.160	0.006
Processing coffee	0.517	0.325	0.124
Wet processing coffee	0.380**	0.184	0.086**
Wife controls coffee sales	0.117	0.225	0.123
Group size	0.010	0.006	0.002
Group distance	0.002	0.003	0.000
Group share female	3.139***	1.124	0.753***
Gender enumerator FE	Yes		
Constant	-5.683***	1.615	
Observations		387	
Pseudo R²		0.203	

* Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level,

^a Robust standard errors. M.E.: marginal effects. *Note:* Due to multicollinearity between group characteristics (size, distance and female share) with group dummies the probit regression excludes group fixed effects. The significance level of the coefficients does not change when substituting the group characteristics with group FE.

6.2 Committing to cooperative share capital

Method

We use members' share capital as a measure of participants' long-term commitment to the cooperative's business model.¹³ Mobilising members to voluntarily invest in share capital is critical for the growth of cooperatives, typically representing the most important source of capital to fund investments which enhance efficiency and can be used to expand the value-chain frontier (Von Pischke and Rouse 2004). However, why would members contribute their capital to the cooperative beyond the minimum subscription if coffee rebates are distributed according to the quantity of coffee marketed through the cooperative – not proportionally to shares?

After becoming a member at BJC and having subscribed to the minimum of one capital share, each member obtains the full benefits from membership irrespective of their equity invested. Also, the size of loans is not conditioned by share ownership and there is no limit to the amount and timing of share purchases. Moreover, member shares can be redeemed. The cooperative permits withdrawal of shares, once a new buyer has been identified by the cooperative.¹⁴ It is important to note that members' investment in cooperative shares represents a careful decision within the context of poverty and large families, with children's school fees and health costs to be paid regularly.¹⁵

Motivations for the investment of shares comprise commercial interests, as cooperative annual surplus earnings from microfinance services are distributed in proportion to each member's level of financial patronage. In contrast, coffee rebates are distributed according to members' marketable share of coffee sales to the cooperative. Furthermore, because each producer group is entitled to send one member per ten group shares to the annual general assembly, members' likelihood of being able to attend and vote on behalf of their group increases with more shares purchased.¹⁶ Although non-members can also sell their coffee to BJC, share capital investment and coffee rebates are restricted to members only.

There are no restrictions to the number of member shares that can be purchased. Also, capital shares can be purchased at any time of the year. However, out of the 421 sampled female cooperative members, 101 members did not disclose their number of capital shares owned (for reasons unknown). The number of shares varies from 1 to 90 shares. Figure 3 shows the distribution of the natural logarithm of shares in a log-scale.

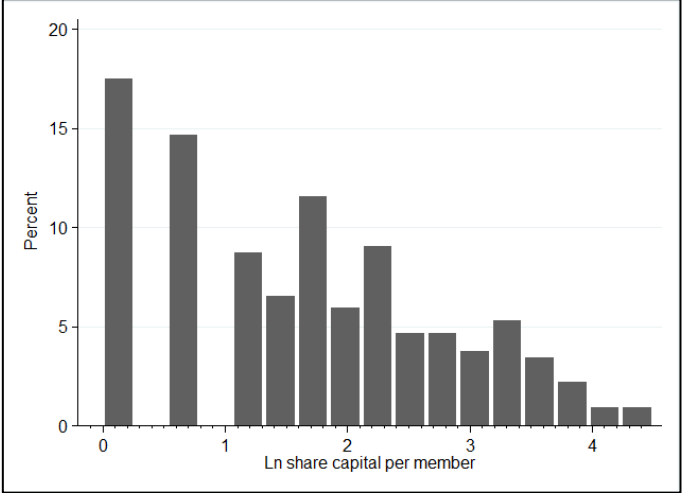
¹³ Members' collective coffee marketing and logged share capital are positively correlated ($R^2 = 0.166$).

¹⁴ However, the money is only returned when a buyer is found – usually a new member.

¹⁵ Approximately households earn 243,000 Ush (\$100) per month of which 23% are spent on health bills.

¹⁶ In other words, a SHG with a total of 100 member shares is entitled to send 10 members to the annual general assembly. Thus, groups with a higher number of per capital shares are able to increase their attendance.

Figure 3: Distribution of natural log of member capital shares ($n = 320$)



Clearly, using the truncated sample of 320 non-censored observations may lead to biased OLS estimates. To further investigate a potential selection bias between the two member groups Table A2 reports the probit estimates testing for the equality of means between members who disclosed share ownership versus those that failed to do so. It shows that there are no systematic significant differences between any of the independent variables of the censored and non-censored samples, except for length of membership, indicating that veteran members were more likely to report share ownership. Yet, the marginal effect is relatively small.

Next, the “shares model” without length of membership (column 3) is specified which shows that the exclusion has no impact on the other variables of interest. As an additional robustness check, the same regression equation with collective marketing of coffee as a dependent variable is estimated including only those members who disclosed share ownership. Table A3 reveals that all variables of interest from Table 5 remain significant, at least at the 10% level in the model without shares, except for length of membership and logged coffee income. Overall, both robustness tests raise confidence that the censored shares sub-sample is not systematically different from those non-censored sub-sample. However, an appropriate instrument predicting women’s disclosure of shares was not found among survey variables, which inhibits the application of a Heckman selection model (Heckman 1977). In order to account for the time dynamics involved in past share purchases it has been controlled for length of membership in the cooperative.

Results

Estimation results of the OLS regression are reported in Table 6. Column 1 presents the specification including personal characteristics. Column 2 extends the model by including group characteristics and coffee production controls.

Unlike recent studies that point to group characteristics, such as membership size, homogeneity and market distance, we do not find group characteristics predicting women's capital commitment within BJC. However, the results rather seem to point to intra-household power dynamics again. Women from households in which spouses pool at least half of their incomes tend to own a greater financial stake of the cooperative. This suggests that increased household cooperation is likely to enhance women's financial patronage within cooperatives. This argument is strengthened by the finding that wives' increased decision-making power concerning household expenditures has a positive and highly significant influence on wives' commitment to the cooperative. This finding persists after we control for various group characteristics (column 2) and length of membership (column 3).

Both results suggest that women's ability to intensify their participation within cooperatives would benefit from more gender-equal household relations. Thus, one way for cooperatives to strengthen female members' capacity and willingness to increase commitment, and contribute to the expansion of the cooperative's capital base, may lie in raising women's social position within the household. Because cooperatives are community-based and build on members' trust they may present a good entry-point for additional activities that aim at challenging and changing gender inequalities in resources, time availability, and intra-household power relationships which, in turn, can increase women's participation in collective action (Mayoux 1995a, Mayoux 1995b).

Literate women were more inclined to purchase cooperative shares. This may be because relatively better educated women have a stronger relative intra-household bargaining position with regards to investment decisions, are more likely to have acquired numeracy skills, and possess a greater long-term investment horizon than less educated women. Moreover, the ability of female farmers to contribute capital is likely to depend on their individual and family wealth. Members with larger farms may have had sufficient income to purchase shares, and arguably be less risk averse than smaller farmers who might be more reluctant towards costly investments. Hence, it is somewhat surprising that the size of wives' and husbands' land holdings, as well as income from coffee, did not influence share capital contributions. We find that members who were committed to invest in new production techniques and improving the quality of their coffee were not only more likely to sell their

coffee through the cooperative as found above (see 6.1), but also increasingly contributed capital. Hence, technical and financial support (via loans and extension services), encouraging members to switch to more efficient and viable processing methods, appear to be an important strategy for cooperatives to retain members and intensify their participation.

Table 6: Determinants of member share capital accumulation (OLS)

Dependent variable: No. share capital (ln)	(1)		(2)		(3)	
	Coef	S.E. ^a	Coef	S.E. ^a	Coef	S.E.
Age wife	0.003	0.006	0.009	0.010	0.019	0.009
Literacy wife	0.422***	0.137	0.355**	0.147	0.307**	0.155
Literacy husband	0.106	0.166	0.088	0.180	0.191	0.188
No. of co-wives	-0.030	0.080	-0.056	0.086	-0.105	0.094
Household size	-0.000	0.006	-0.002	0.006	-0.005	0.007
Land wife (ln)	0.128	0.136	0.068	0.142	0.076	0.157
Land husband (ln)	-0.045	0.117	-0.087	0.124	-0.073	0.141
Decision-making power wife	0.739***	0.192	0.778***	0.197	0.946***	0.228
Income pooling	0.388***		0.358**	0.153	0.386*	0.156
Joint land owner	-0.078	0.136	-0.178	0.139	-0.096	0.155
Length of membership (ln)	0.139***	0.018	0.124***	0.018		
Prior coop member	-0.289**	0.142	-0.236	0.158	-0.182	0.159
Motivation: coffee sales			-0.019	0.154	-0.089	0.157
Husband co-member			0.015	0.122	0.002	0.130
Income from coffee (ln)			0.029	0.031	0.043	0.036
Years coffee cultivated (ln)			-0.128	0.122	-0.057	0.136
Processing coffee			0.191	0.249	0.225	0.280
Wet processing			0.365***	0.135	0.510**	0.141
Wife controls coffee sales			0.031	0.161	0.122	0.181
Group size			-0.001	0.004	0.000	0.005
Group distance			0.000	0.002	-0.000	0.002
Group share female			0.455	0.852	0.638	0.922
Gender enumerator FE	Yes		Yes		Yes	
Constant	-0.202	0.294	-0.860	1.003	-1.227	1.083
Observations		320		306		306
R²		0.291		0.307		0.192

* Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level, ^a Robust standard errors. *Note:* The dependent variable is the natural logarithm of share capital (in Ush) per member. Due to multicollinearity between groups size, distance, and female share with group FE the regression excludes group FE. Yet, the significance level of the coefficients do not change when substituting the group characteristics with group FE. Because length of membership is the main driver of differences between members that disclosed shares versus those who did not we also run the specification in Column 2 without length of membership. The exclusion has no impact on the significance of the main variables, except for prior cooperative membership and income from coffee.

As one would expect, duration of membership is highly significant and positively affects members' share capital investment. This indicates that members over time extend their share capital beyond their required capital subscription, reflecting trust in the future functioning of the organisation. Column 3 shows that the significant variables from the first specification remain robust when excluding length of membership – the main driver of differences between members that disclosed their shares and those who did not. Contrary to the positive effect of husband's co-membership on collective marketing, men's co-

membership has no statistically significant effect on women's capital commitment, suggesting that spouses do not compete for capital shares when they are both members.

7. Conclusion

Using survey data of female cooperative coffee farmers and non-cooperative farmers from Western Uganda, this paper set out to offer a first pass at explaining the determinants of women's participation in and within cooperatives.

Firstly, the factors for women's membership in the cooperative were explained. It was shown that women's participation in the cooperative is strongly influenced by the size of land holding owned prior to membership. It points to the importance of women's control over productive resources to participate in collective action. Contrary to expectations, less educated women were more likely to seek out membership, while prior attendance of agricultural trainings positively affected women's participation in the cooperative.

Secondly, because members' participation within cooperatives can vary, the factors of women's intensity of participation in the cooperative were explored, measured through members' collective marketing of coffee and share capital contributions. While the regression results concerning women's intensity of participation somewhat differ, there are a number of interesting parallels. Unlike recent studies that point to group characteristics, such as size, homogeneity, and market distance, these did not play a significant role for women's commitment within BJC. Also, the distribution of labour between spouses along the coffee value chain did not affect women's degree of participation. However, the results rather point to the importance of intra-household power relations. In each of the two regression models estimating women's commitment, two out of three gender-equity proxies stand out as statistically significant: spousal income pooling and joint land ownership positively affected coffee sales through the cooperative, while women's household decision-making authority and income pooling increased women's capital contribution to the cooperative. Furthermore, greater husbands' relative land size adversely affected the wife's collective marketing, implying that men's relative control over productive resources is likely to impede wives' collective sales. In line with this, husbands' co-membership in their wives' cooperative increased the probability of collective marketing, which suggests that cooperatives which integrate both spouses can organize collective marketing more effectively. In addition, women with greater investment in the quality of their marketable coffee crop, through wet processing methods, were more likely to participate in collective marketing and invest in capital shares.

Overall, this implies that cooperatives which fail to address gender, or that target women without a clear understanding of gender relations, risk not to set the right conditions for female participation. Because cooperatives are closely entrenched in their community they in fact represent a good entry-point for strategic programs to strengthen female members' capacities for more active participation, targeting both men and women. The promotion and facilitation of spouses' formal joint land titles as well as participatory gender trainings and learning approaches have the potential to contribute to a more balanced workload and power relationship within the household and along the coffee value chain.

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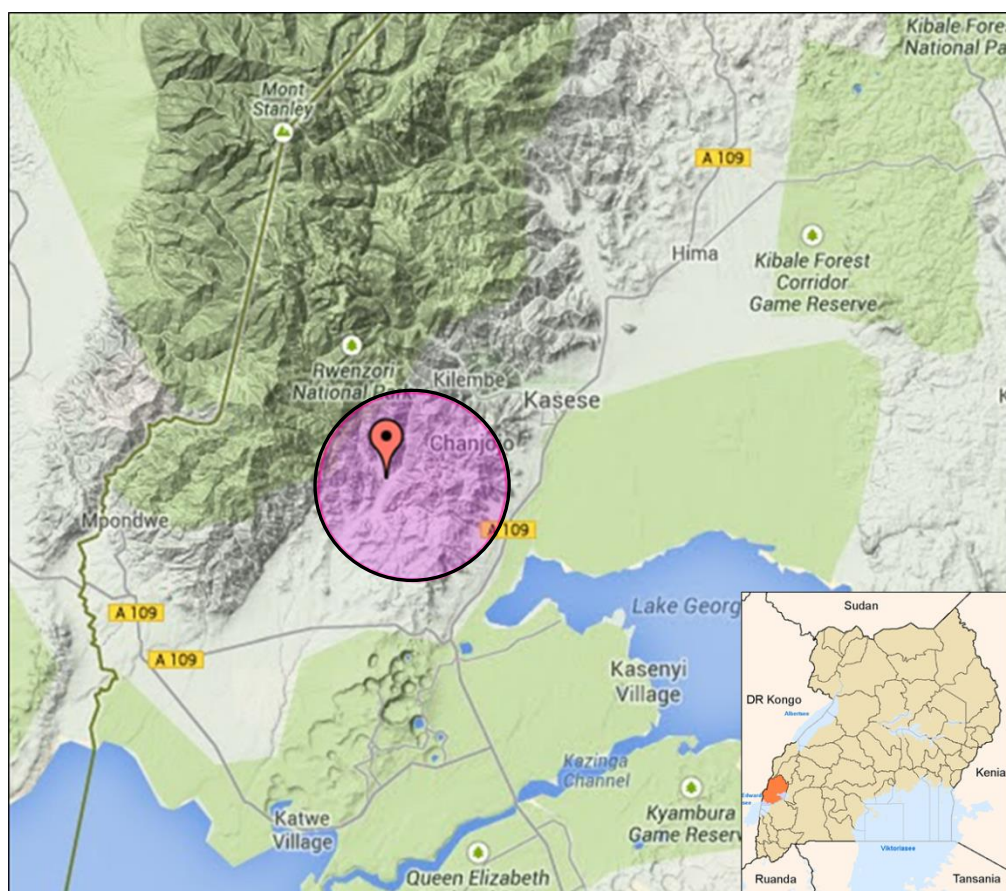
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Appendix

Figure A1: Map of Uganda and location of cooperative



Note: The circled region represents the capture region of sampled self-help groups.

Table A1: Gendered distribution of tasks in coffee cultivation of sampled coffee growers (%)

Task	Members			Non-members		
	Women	Men	Jointly	Women	Men	Jointly
1. Cultivation						
- Planting trees	5.2	57.6	37.2	5.5	61.7	32.8
- Mulching, weeding & fertilising	17.4	10.6	72.0	20.8	19.7	59.6
- Digging terraces	10.5	39.5	50.0	7.7	56.3	36.1
- Pruning branches	12.0	36.0	52.0	11.5	44.8	43.7
- Harvesting coffee cherries	15.5	2.5	82.0	12.6	7.7	79.8
2. Processing						
(a) Wet processing (35.6%)						
- Floating and pulping	32.2	15.1	52.7	25.6	23.3	51.2
- Washing and soaking	32.2	9.6	58.2	25.6	16.3	58.1
- Drying	27.7	8.8	63.5	23.3	20.9	55.8
(b) Dry processing (64.4%)			76.5%			
- Drying	49.2	8.3	42.4	42.1	15.0	42.9
- Hulling (to extract beans)	22.1	18.3	59.7	21.4	28.6	50.0
3. Coffee marketing						
- Carrying coffee to market & coop	44.8	8.7	46.5	38.3	25.1	36.6
- Receive payment	41.6	40.8	17.6	29.5	58.5	12.0
Observations		409			183	

Table A2: Determinants of member's share disclosure (Probit Model)

Dependent variable: Capital share disclosed (1/0)	Coef	S.E.	M.E.
Age wife	-0.003	0.009	-0.001
Land wife (ln)	0.040	0.177	-0.012
Land husband (ln)	0.200	0.140	0.060
Prior cooperative	-0.204	0.167	-0.061
Literacy wife	0.024	0.159	0.007
Literacy husband	0.268	0.201	0.087
No. of co-wives	0.057	0.108	0.017
Household size	0.034	0.025	0.010
Income pooling	0.058	0.172	-0.017
Decision agency	0.241	0.249	0.073
Joint land contract	0.060	0.166	0.018
Motivation BJC	0.121	0.183	0.035
Husband BJC	0.207	0.148	0.061
Distance	0.002	0.003	0.000
Length BJC (ln)	0.066***	0.024	0.020***
Share female	-1.480	0.962	-0.449
Group size	-0.004	0.006	-0.001
Income coffee (ln)	0.018	0.022	0.005
Years coffee (ln)	-0.064	0.117	-0.019
Gender enumerator FE	Yes		
Constant	0.852	0.996	
Observations		421	
Pseudo-R²		0.066	

Table A3: Determinants of collective coffee marketing of members who disclosed share capital information (Probit Model)

Dependent variable: Collective marketing of coffee	Coef	S.E.	M.E.
Age wife	-0.012	0.013	-0.002
Ln land wife	-0.186	0.226	-0.044
Ln land husband	-0.323	0.200	-0.077
Literacy wife	0.039	0.210	0.009
Literacy husband	0.095	0.258	0.023
No. of co-wives	0.116	0.140	0.027
Household size	-0.020	0.013	-0.005
Income pooling	0.527**	0.237	0.110**
Decision agency	0.308	0.353	0.073
Joint land contract	0.474**	0.221	0.103**
Motivation BJC	0.543*	0.282	0.110*
Husband BJC	0.725***	0.209	0.156***
Distance	0.003	0.003	0.000
Length BJC (ln)	0.258	0.172	0.258
Wife loand BJC	-0.223	0.197	-0.053
Share female	2.527*	1.314	0.602*
Group size	0.007	0.007	0.002
Ln income coffee	0.071	0.105	0.017
Ln years coffee	0.140	0.190	0.033
Wet processing	0.510**	0.206	0.115**
Processing	0.209	0.398	0.049
Wife control sales	0.194	0.215	0.046
Gender enumerator FE	Yes		
Constant	-3.998	1.841***	
Observations		294	
Pseudo-R²		0.206	

Table A4: Correlation matrix (full sample)

	Age wife	Age husb	Literacy wife	Literacy husb	Skill train	Marriage age	Age difference	Arranged mar	No. of wives	Ln land before	Ln cof years	Catholic
Age husb	-0.0562											
Literacy wife	-0.3424	-0.0106										
Literacy husb	-0.2567	-0.0071	0.2282									
Skill train	-0.0155	0.1476	0.0588	0.075								
Marriage age	0.0834	0.0316	0.0517	0.0661	0.0536							
Age difference	0.0805	0.0093	-0.0566	-0.145	-0.0412	-0.0748						
Arranged mar	0.1602	-0.0064	-0.0131	-0.0292	-0.0193	0.0237	0.0661					
No. of wives	0.2193	0.0214	-0.1188	-0.0975	0.0472	-0.0001	0.2037	-0.0127				
Ln land before	0.2617	0.0249	-0.0322	-0.0324	0.0262	-0.0421	0.0211	0.0522	0.0736			
Ln cof years	0.6247	0.0447	-0.2817	-0.1375	0.0012	-0.083	0.0946	0.0559	0.1363	0.2524		
Catholic	-0.0312	0.0416	-0.0314	0.1006	0.0258	-0.016	-0.0068	-0.0662	-0.0111	-0.0593	-0.0424	
Born Bukonzo	0.0151	-0.0191	0.0442	-0.0607	-0.0595	0.0215	-0.1116	0.0193	-0.0397	0.0186	-0.0046	-0.0258

Table A5: Correlation matrix (cooperative sample)

	Age wife	Literacy wife	No. of wives	Literacy husb	HH size	Ln land wife	Ln land husb	Decision power	Pooling	Joint land	Wife credit	BJC husb
Literacy wife	-0.3541											
No. of wives	0.1975	-0.1569										
Literacy husb	-0.2131	0.2940	-0.0976									
HH size	0.1523	-0.0016	0.089	-0.0415								
Ln land wife	0.1948	0.0248	0.0936	0.0334	0.0623							
Ln land husb	0.2254	0.0550	0.0479	0.0306	-0.0332	0.1957						
Decision p	-0.2057	0.0116	0.0084	0.0423	-0.1090	-0.0459	-0.1171					
Pooling	0.0773	-0.0061	0.0054	-0.0188	-0.0038	0.0608	-0.0714	0.0127				
Joint land	0.1817	-0.0681	0.0002	-0.0578	0.1305	0.1308	-0.1411	-0.1201	0.0600			
Wife credit	0.0358	0.0722	0.0198	-0.0002	-0.0054	0.0434	0.0431	-0.0343	0.0222	0.0961		
BJC husb	0.0096	0.0845	-0.106	0.1028	0.0140	-0.0076	0.0887	-0.0390	0.1187	-0.0096	-0.0108	
Ln length BJC	0.3924	-0.1063	0.0122	0.0408	0.1027	0.0531	0.1257	-0.1477	0.0633	0.1819	0.1822	-0.0044
Size	0.0410	0.0170	-0.0323	0.0273	-0.0102	0.0377	0.0597	-0.1051	0.0263	0.0678	0.1185	-0.0080
Share fem	-0.0854	-0.0013	0.0935	-0.0251	-0.0425	-0.005	-0.039	0.0635	-0.1280	-0.0723	-0.0833	-0.0654
Motive	0.0719	-0.0050	-0.0378	-0.0156	0.0136	0.0274	0.0733	-0.0231	-0.0963	0.0259	-0.0408	0.0109
Distance	0.0107	-0.0803	0.0504	-0.0093	0.0923	0.0192	-0.0041	0.0012	-0.0634	-0.0432	-0.0236	0.0105
Ln coffee years	0.7053	-0.3075	0.1622	-0.1473	0.1878	0.1078	0.1775	-0.1985	0.0937	0.182	0.0318	-0.0058
Ln cof income	0.1167	-0.0419	0.0059	-0.0517	0.0406	0.0682	0.0853	-0.0275	0.0423	0.0629	0.0415	-0.0724
Wet process	0.0722	0.0335	0.0255	0.0935	0.1310	0.1656	0.0269	-0.0769	0.0036	0.1505	0.1614	0.0765
Process wife	0.0883	-0.0314	0.0793	-0.0268	-0.0315	0.0548	0.0516	-0.0708	0.0407	0.1979	0.0390	-0.1744
Sale wife	0.0952	0.0477	0.1079	-0.0181	0.0146	0.0682	0.0100	-0.0344	-0.0003	0.0556	-0.0444	-0.1528
Sex enum.	-0.0844	0.1251	-0.0334	0.057	-0.0440	0.0541	0.1797	-0.1706	-0.3423	-0.0711	-0.0264	-0.0657

Table A5 cont'd

	Ln length	Group size	Group share fem	Motive BJC	Distance	Ln coffee years	Ln cof income	Wet process	Process wife	Sale wife
Group size	0.0532									
Group share fem	-0.0625	-0.6595								
Motive BJC	-0.0048	0.0237	-0.0537							
Distance	-0.0030	0.4456	-0.1562	0.0253						
Ln coffee years	0.3744	0.0912	-0.0924	0.1182	0.0536					
Ln cof income	0.1762	0.0403	0.0317	0.1403	0.0297	0.1578				
Wet process	0.1772	0.1757	-0.1438	0.0159	0.2145	0.1135	0.0266			
Process wife	0.1341	0.0212	0.0249	0.0791	-0.033	0.1766	0.1627	-0.0336		
Sale wife	0.1315	0.1125	-0.0639	0.0628	0.1215	0.0988	0.0989	0.0833	0.1996	
Sex enum	-0.0993	-0.0026	0.0011	0.2164	-0.0079	-0.0897	-0.0732	0.0218	-0.0668	0.0428

Chapter 6: Husbands and Wives: The powers and perils of participation in a microfinance cooperative for female entrepreneurs

with Erik Stam (Utrecht University)

Abstract: Participation in microfinance cooperatives has been identified as a means to improve income and empower female entrepreneurs in developing economies. This study on female entrepreneurs in Western Uganda tests how participation of the husband in the same microfinance coffee cooperative affects gender empowerment. Female entrepreneurs' participation in a microfinance cooperative is shown to be a conditional blessing: even though it does deliver higher household incomes, it also diminishes the wife's household decision-making power when her husband participates in the same self-help group of the microfinance cooperative. This offers new insights on the bright and dark sides of microfinance for development policy and complements the new wave of scholarship that conceptualizes entrepreneurship as emancipation and social change.

Keywords: Microfinance, gender, cooperatives, empowerment, female entrepreneurship, Uganda

JEL code: C31, G21, J16, J54, N57, Q13

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1. Introduction

Microfinance for female entrepreneurs, as a means to alleviate poverty in developing countries, has been high on the agenda of both development policy and academic research. Providing microfinance to credit constrained female entrepreneurs is regarded as one of the most effective development policy tools not only to alleviate poverty of households in developing countries, but also to increase women's empowerment in situations where women have substantially less freedom than men. Gender empowerment refers to the degree to which women are able to participate actively in economic and political life and take part in decision-making (UNDP 1995). There is now considerable empirical evidence on the nuanced effects of microfinance on the economic performance of households and businesses (Armendáriz and Morduch 2010, Banerjee and Duflo 2011). However, evidence on the effects of microfinance on development more broadly defined as *freedom* (Sen 1999) is much scarcer. Cooperatively organized microfinance allows women to access capital markets and seek support through collective action which in turn can empower female entrepreneurs by enhancing their bargaining power over household decisions and control over resources (Kabeer 2005).

These cooperatives are also gendered institutions. However, there has been little empirical research on the effects of husbands' co-membership in the microfinance cooperative on the empowerment of female entrepreneurs. This is rather surprising, given that microfinance cooperatives are often seen as a means to empower women within the household, in a context in which women's voice is often not heard and decision-making power considerably constrained.

This study draws upon and seeks to contribute to the gender empowerment theory of microfinance (Goetz and Gupta 1996, Mayoux 1999, Kabeer 2000, Leach and Sitaram 2002, Holvoet 2005, Swain and Wallentin 2009), by analyzing the effects on gender empowerment, and in particular how this is affected by the position of the husband in his wife's microfinance organisation. This resonates with the recent conceptualization of entrepreneurship as emancipation (Rindova et al. 2009, Goss et al. 2011, Jennings et al. 2014) and social change (Calás et al. 2009) that broaden our view of female entrepreneurship, recognizing that female entrepreneurs pursue important strategic goals besides the act of wealth creation. Furthermore this article complements the growing wave of scholarship which aims at advancing a new framework of women's entrepreneurship by exploring new territories for research (Ahl 2006, De Bruin et al. 2007, Ahl and Marlow 2012, Hughes et al. 2012).

The main research question is: To what extent and how does participation of female entrepreneurs in a microfinance cooperative affect their empowerment. In order to answer this

question, a large-scale quantitative study in Western Uganda was executed. This field study included 412 participants of a joint microfinance-coffee cooperative and a control group of 196 similar self-employed women outside this cooperative. Such a large scale quantitative study complements previous qualitative studies on the effect of cooperatives on the empowerment of female entrepreneurs in developing country settings (e.g. Ferguson and Kepe 2011, Datta and Gailey 2012, Jones et al. 2012). The field study also provides specific knowledge on how the governance of such a microfinance cooperative affects the empowerment of female entrepreneurs, with particular attention paid to uncovering the role of the husband's co-membership in the cooperative and the household as a key context for understanding the effects of microfinance

The article proceeds as follows. Section 2 discusses the relevant literature on microfinance and female entrepreneurship in developing countries, and formulates hypotheses. Section 3 provides background information about the empirical database, the region studied, and the methodology used. Section 4 outlines the research findings. Section 5 spells out some limitations of this study and implications for researchers, policy makers and practitioners. Section 6 concludes.

2. Microfinance and female entrepreneurship in developing countries

In this section we review the literature on microfinance and female entrepreneurship in developing countries, drawing upon the gender empowerment theory of microfinance (Goetz and Gupta 1996, Mayoux 1999, Kabeer 2000, Leach and Sitaram 2002, Holvoet 2005, Armendáriz and Roome 2008, Ashraf et al. 2008, Swain and Wallentin 2009) and cooperatives (Datta and Gailey 2012, Jones et al. 2012). Gender empowerment theory explains the potential gender empowerment effect of participation in microfinance cooperatives via a financial capital mechanism (intra-household resource theory of power) and via a social capital mechanism.

Microfinance cooperatives enable access to credit and increased savings, which raises the level of investment in the business. In addition, participation in microfinance cooperatives enables learning about production techniques and joint marketing that increase the productivity and sales of the business. These investment, production, and marketing effects of participating in microfinance cooperatives are likely to increase the financial resources female entrepreneurs can provide to their household. According to the resource theory of power (Blood and Wolfe 1960) this increase in financial resources delivered to the household will lead to more power of the wife in intra-household decision-making.

Household decision-making is at the heart of some of the best known attempts to conceptualize power (Kabeer 1999). Participation of female entrepreneurs in a microfinance cooperative is likely to provide them with social capital that allows them to have a stronger voice in intra-household decision-making. Especially in patriarchal societies, in which prevailing social norms subordinate women, group-based credit programs organized in microfinance cooperatives can improve the relative social and economic position of wives vis-à-vis husbands by making their lives more public and by creating solidarity with other wives in the microfinance cooperative (cf. Schuler et al. 1996).

Microfinance and financial performance

Lack of access to credit is one of the principal reasons why citizens of developing countries remain poor (Hermes and Lensink 2007, Banerjee and Duflo 2011). In particular, female entrepreneurs experience barriers within the household and the market when seeking finance (Marlow and Patton 2005). In sub-Saharan Africa only about a quarter of the adult population has an account at a formal financial institution (Demirguc-Kunt and Klapper 2012), with women having even lower access than males. In Uganda, lack of access is particularly acute, since only 15% of adult females versus 26% of adult males hold an account at a formal financial institution (Chaia et al. 2009, Demirguc-Kunt and Klapper 2012). As a result, women are more likely to be credit and savings constrained than men, and therefore face greater risks and restrictions for any form of investment in income-generating activities and security arrangements (World Bank 2011). Consequently, valuable entrepreneurial projects go unfunded, even more so for women than for men, thereby hindering economic development. Microfinance schemes offer a possible solution to this problem. Individuals form (self-help) groups who pledge joint liability for each other's loans. According to Parker (2009: 252), the advantage of joint liability contracts is "that they give entrepreneurs incentives to exploit local information and exert pressure to discipline co-members in a manner consistent with the interests of the lenders (and by releasing funds from lenders, therefore also the entrepreneurs)." Access to finance through microfinance schemes is likely to increase the productive investments by the participating entrepreneur, and will lead to higher household incomes (McKernan 2002). Some studies even found a significantly larger positive effect on households in which women, rather than men, were participants of a microfinance scheme (Pitt and Khandker 1998). This might be indicative of how access to credit in developing countries unleashes women's productive skills which, unlike men's, are otherwise held in check by cultural and religious restrictions. In line with previous studies (Calkins and Ngo

2010, Fischer and Qaim 2012, Ito et al. 2012) we expect additional positive effects of membership of the cooperative on household income, due to the development and diffusion of improved production processes, scale economies and improvements in marketing. Thus we hypothesize that:

Hypothesis 1: Participation in a microfinance cooperative by female entrepreneurs positively affects the financial performance of their household.

Microfinance and gender empowerment

We broaden the focus of entrepreneurship research by drawing attention to the emancipatory aspects of entrepreneurship (cf. Calás et al. 2009, Rindova et al. 2009), and more in particular how participation of female entrepreneurs in microfinance cooperatives empowers them (Kabeer, 2005). This relates to a broader interpretation of development than just expanding income, also including the freedom to determine choices in life (Sen 1999) - “breaking free from authority and breaking up perceived constraints.” (Rindova et al. 2009: 479. Jones et al. (2012: 13) find that in three East African countries “participating in collective forms of enterprise and linking to Fair Trade markets can enable female producers to access resources and markets, develop relationships, and overcome gender constraints”. Moreover, they report increased self-esteem and status for female participants in cooperatives and producer groups within their households and community. In addition, Sanyal (2009) showed that group-based microfinance may empower women and promote their social capital by facilitating their ability to take collective action. Moreover, Holvoet (2005), Pitt et al. (2006), Swain and Wallentin (2009) report that microfinance empowered women in India and Bangladesh by increasing their decision-making power at home. Further, using a randomized control trial, Ashraf et al. (2010) find that Philippine women who access commitment savings also increased in their decision-making power within their households.

Nonetheless, this does not mean that there is consensus on the positive effect of participation in microfinance schemes on women’s empowerment (Banerjee et al. 2014), however, the conventional wisdom is that women are increasingly empowered by microfinance that enables them to expand their businesses (see hypothesis 1), earn a higher return so that their spouses would value them better, which translates into higher health and education provision for the household and in turn the wider community. In line with gender empowerment theory of microfinance cooperatives, we formulate hypothesis 2 as:

Hypothesis 2: Participation in a microfinance cooperative by female entrepreneurs positively affects gender empowerment.

Husband co-membership

What is the effect on female decision-making when the husband is part of his wife's cooperative or even self-help group (henceforth SHG)? When husbands join their wife's group they might gain a more accurate understanding of loan amounts and internalize the terms of lending which might lead to less frictions and more cooperation within the household and joint loan repayment (Gibbons 1999, Goetz and Sengupta 1996, Armendáriz and Morduch 2010: 228). Moreover, husband's inclusion into women groups can lower information asymmetries and improve communication between spouses and shared financial decision-making. This has been shown for both Southern Mexico using anecdotal evidence (Armendáriz and Roome 2008), and through experimental research in the Philippines (Ashraf 2009). Leach and Sitaram's (2002) analysis of silk-reeling self-employed women in South India has shown that the exclusion of men from participating in their wives' silk-reeling microfinance SHGs can lead to husbands' denying support of their wife's business and exacerbate frictions among spouses. As a result, no redistribution of power within the household was observed. The same conclusion is reached by Rahman (1999) who finds that men's (feeling of) exclusion from microfinance increased intra-household tensions between husbands and wives, as husbands often felt threatened in their role as breadwinners. This tended to erode any benefits of an independent source of capital for wives. In South Asian patriarchal cultures husband-wife partnering becomes a necessity for many female entrepreneurs to gain the ability to start their own business (Kabeer 2000) or work outside the homestead Carr et al. (1996). Armendáriz and Roome (2008) summarize this in what they call the women-disempowering effect: the exclusion of men from membership to the female's microfinance cooperative might create frictions, and rebound effects that diminish the household decision-making power of female entrepreneurs.

So, in addition to gender empowerment theory, we can formulate a more particular gender disempowering theory of microfinance cooperatives, which predicts that the exclusion of the husband from the wife's microfinance cooperative will create frictions between the husband and wife that will have negative repercussions on the wife's decision-making power within the household. This leads us to formulate hypothesis 3:

Hypothesis 3: Participation in a microfinance cooperative by female entrepreneurs without husband co-membership negatively affects gender empowerment.

3. Setting, data and method

Uganda context

Uganda is a landlocked country bordered by South Sudan in the north, Kenya in the east, Tanzania and Rwanda in the south, and the Democratic Republic of the Congo (DRC) in the west. From 2008 to 2012 GDP growth rates were 2.9%, Uganda's estimated per capita income in 2012 was US\$ 405, with a per capita purchasing power parity of US\$ 1,165 (World Bank, 2013). About 84% of the population of 36.3 million lives in rural areas. Seven of ten Ugandans depend on agricultural production, contributing to a quarter of the country's GDP. Coffee is Uganda's major export crop, contributing about a third of all export earnings in 2012 (AfDB and OECD 2014), followed by tea and tobacco. Uganda has one of the highest entrepreneurship rates in the world, according to the Global Entrepreneurship monitor 2012 (Xavier et al. 2013): a total entrepreneurial activity rate of 36% and an established business owners rate of 31%, indicating that a large majority of the labor population is active as entrepreneur. However, Uganda is the only economy in Sub-Saharan Africa with a greater rate of necessity than improvement driven opportunity entrepreneurs (Xavier et al. 2013). The male rate of entrepreneurship is similar to the female rate of entrepreneurship, which is common within Africa, but exceptional in other continents.

In Uganda, marriage is nearly universal and women marry on average at age of 20, while their husbands are about 5 years older (United Nations 2009). Bride price payment and polygamy is widely practiced, particularly in rural areas (Anderson 2007, Fenske 2012). Girls typically leave their natal family home to enter the husband's family and village. Fertility is high, as women give birth to 6 children on average. Nowadays, primary school enrollment is relatively high and girls have equal opportunities to attend school than boys, which is mirrored in literacy rates among female and male youth (aged 15-24) of 85.5% and 89.6% respectively (World Bank 2014). Nevertheless, Uganda performs rather low in the 2013 United Nations Gender Inequality Index, scoring 115 out of 152 countries ranked.

Microfinance cooperative

The cooperative under study, Bukonzo Joint Cooperative Microfinance Society (BJC), operates in a remote area of Western Uganda, in the mountainous area of Bukonzo County in Kasese District on the northern slopes of the Rwenzori Mountains bordering the DRC.

Bukonzo County is an exclusively agricultural area with poor infrastructure and market access. The great majority of households depend on subsistence crop and coffee production.

BJC operates on an adapted version of the village banking model, lending money to and accepting savings from low income clients organized in SHGs. By 2012, BJC has grown to service 2,220 local small-scale farmers, of which women account for 76% of its members, distributed across 74 mixed-sex SHGs. SHGs have on average 31 members: 24 female and 7 male members. SHGs are further divided into solidarity groups, comprising of 3 to 5 members, who are jointly liable for the repayment of loans of their members. SHGs meet weekly to receive technical trainings, make savings, and take-out individual loans for which they are jointly responsible. More than 60% of female respondents of the cooperative stated that their main motivation for joining BJC in the first place was to access microfinance services, and one in five stated that access to joint coffee marketing acted as primary motivator.

Between 2011 and 2012, 47% of the respondents took an individual loan from the cooperative with an average amount of 160,000 Ush (\$ 65). About half of them invested their loans into their (coffee) businesses and about a third into paying their children's school fees. Moreover, BJC provides innovative trainings for SHG member to transform gender relations on the household and community level, and best practices of pre and post-harvest management of organically grown coffee. Additionally, since 2005 BJC pools and markets smallholder members' and even non-members' coffee internationally. Since 2012, the marketing component is fair trade licensed. As the survey is meant to uncover the effect of cooperative membership on female entrepreneurs' household decision-making power, the population is limited only to female members. This limits the population of which the sample is drawn from to 1,691 women. In order to explore intra-household decision-making power the study population was limited furthermore to those female members of BJC and female non-members that had a husband at the time of the survey.¹

Data

For our empirical study, we conducted a survey in July/August 2012, just prior to the coffee harvesting season. We started by calculating the statistically required sample size using power calculations. The statistical power is the probability of detecting an impact if there is one (Gertler et al. 2010). We applied the standard power of 0.8, indicating that one finds an

¹ BJC has no policy that requires husband's to co-sign their wives loan agreement, a practice very common elsewhere (see e.g. Doss 2013).

impact within 80% of cases where one occurred. Table 1 illustrates the associated power calculations required for different minimum detectable effects.

Table 1: Sample size required for various minimum detectable effects, Power = 0.8, Maximum of 74 clusters

Minimum detectable effect	Number of clusters	Units per cluster	Treatment sample with clusters	Comparison sample without clusters
Small ($\delta = 0.2$)	Not feasible	Not feasible	Not feasible	787
Medium ($\delta = 0.4$)	24	16	384	198
Large ($\delta = 0.5$)	16	16	256	128

From Table 1 we conclude that for a small effect size the number of SHGs required exceeds the total number of operational SHGs and therefore is not feasible, while both medium and large effect sizes can be calculated. There is no indication to presume a large effect; consequently we stick to the more conservative medium effect. For a power of 0.8 to detect a medium effect of 0.4, an increase of women’s household decision-making power due to BJC program, a total sample of at least 24 SHGs with a total of 384 respondents would be sufficient for the treatment group. Since, the comparison group is not clustered into SHGs, 198 respondents were enough.

Random selection of BJC’s SHGs followed a two-step process: Firstly, stratified random sampling for which 6 groups were randomly selected from each of the 4 strata indicating the year of groups’ start of operation: 1999-2001, 2002-2004, 2005-2007, and 2008-2010. Two extra groups were included, anticipating non-response. Secondly, from each SHG, 16 female members that had a husband at the time were randomly drawn using a lottery game. Interviews were held in private, without any family or cooperative members present to avoid response bias. In total, we sampled 421 female cooperative members. Next, 210 respondents in the comparison group were randomly visited from the same treatment area to reflect a comparable socio-economic group. In total, our sample comes to 631 married female respondents. The sampled SHGs widely spread across the mountainous and rural geography and were all located 1,300 metres above sea-level, only to reach by hiking, which is considered ideal for the growing of Arabica coffee. Interviews were conducted in the local language of Lukonzo, using a structured and pre-tested questionnaire specifically designed for this research.²

² Enumerators were both female and male. We include enumerator’s sex in the regression controlling for systematic response differences in the interview situation between male and female enumerators.

Table 2 presents the two most important sources of income of the female respondents. The primary source of income comes from coffee sales followed by sales of field crops, small shop activity, other self-employed activities and sale of livestock. Other sources of income include petty trade, sales of fish, meat or food products. In other words, the majority of respondents are self-employed, as only fourteen respondents are either wage earners, receivers of money from husbands or third persons (grey shaded). We also report respondents' secondary source of income. For those fourteen respondents who don't qualify for being self-employed in the first place, we check whether their secondary source of income comes through a self-employment activity and leave those in the dataset. This is the case for seven respondents. Moreover, sixteen respondents are jobless. We remain with a total sample of 608 self-employed female respondents – 412 cooperative and 196 non-members.

Table 2: Main sources of income of female respondents

	1 st source of income		2 nd source of income	
	N	%	N	%
Coffee sales	417	68.0	68	11.3
Sales of field crops	106	17.3	226	37.2
Small business	48	7.8	108	17.8
Other self-employment	30	4.8	98	14.0
Sale of livestock	8	1.3	30	4.9
Wage labour	6	1.0	23	3.8
Husband's income	5	0.8	10	1.6
Remittances	3	0.5	0	0.0
No occupation	16	2.5	104	17.1
Total	631	100.0	607	100.0

Table 3 presents some summary statistics on those selected households. Religious and tribal values are identical for both respondent groups. The average non-BJC household had just above six members compared to seven to eight in households that joined BJC. Respondent households who joined BJC (husband and wife accumulated) owned 1.9 acres of land, whereas non-BJC households owned 1.5 acres. However, husbands of both BJC members and non-members own on average about four times as much land as their wives. Moreover, Table 3 states that respondents who joined BJC are on average 6 years older than non-members that explains why they also have on average two more surviving children, and larger household sizes. Early and universal marriage is common and both female cohorts married on average at age of 18. Average schooling levels are low for both female BJC members and non-members. Still the mean year of schooling is significantly lower for BJC members - 4 versus 5.2 years. BJC members had close to twice as much savings at the time of

the survey, attributed to the fact that BJC members have a safe place to save up lump sums from coffee sales and other income activities.

BJC-member households (wife and husband) earn about 277,000 Ush (equivalent to \$113) per month including revenues from coffee sales. Non-members earn 30,000 (\$12) more. Virtually every household in the community engages in coffee cultivation, as 93% of BJC-members and 82% of non-members grow coffee which represents on average the most important income generating activity for wives (and households), followed by sales of field crops (e.g yams, cassava, plantain) and small shop sales. Those households that participate in BJC generated on average 752,000 Ush (\$307) in comparison to 550,000 Ush (\$224) for non-participants from coffee per year.³ This difference has possibly to do with larger land holdings and higher coffee prices for cooperative members. Also, wives' weekly incomes are smaller for non-cooperative participants but husband's incomes are substantially larger for non-members. As a result, total household income, including coffee sales, are slightly higher for non-members. Both households spent on average large sums on health – 64,800 Ush (\$27) for SHG members and 43,200 Ush (\$18) for non-members. The tropical climate favors malaria and other febrile diseases: 44% of respondents reported to have had malaria in the last month, and more than one clinic visit on average over the last month. Both households share almost identical living conditions and both groups live in mountainous and remote areas, on average 34 minutes foot walk from the next main road (which is not an all-weather road).

³ The returns from coffee sales are hardly ever separated into wife and husband shares which make it impossible for us to use the female entrepreneur's coffee sales as a distinct dependent variable.

Table 3: Summary statistic by respondent groups

Variables	Full sample (N = 608)	Non-cooperative members (N = 196)	Cooperative members (N = 412)	
Age wife	34.70	30.25	36.81	***
Age husband	40.69	35.94	40.69	***
Age at first marriage wife	18.23	18.20	18.24	
Years of education wife	4.41	5.22	4.02	***
Years of education husband	6.39	6.84	6.17	**
Number of children born	5.52	4.39	6.06	***
Household size	7.10	6.20	7.51	***
Polygamous households (%)	32	28	34	
No. of wives per husband	1.40	1.34	1.42	
Years of membership in BJC wife	3.90	0	5.76	***
Husband member in BJC (%)	29	17	35	***
Husband co-member in SHG (%)	15	0	22	***
Land holding wife (acres)	0.34	0.28	0.37	
Land holding husband (acres)	1.46	1.20	1.58	*
Annual income coffee (Ush)	686,800 (\$280) ^a	550,000 (\$224) ^a	752,000 (\$307) ^a	***
Wife income per month (Ush)	77,200 (\$31) ^a	70,000 (\$29) ^a	81,000 (\$33) ^a	
Husband income per month (Ush)	151,200 (\$62) ^a	188,000 (\$77) ^a	134,000 (\$55) ^a	*
Total household income per month including income from coffee (Ush)	285,700 (\$117) ^a	303,000 (\$124) ^a	277,000 (\$113) ^a	
Children's and wife's health expenditures per month	57,600 (\$24) ^a	43,200 (\$18) ^a	64,500 (\$26) ^a	**
Total savings (Ush)	136,000 (\$56) ^a	91,000 (\$37) ^a	157,000 (\$64) ^a	***
No. of clinic visits last month	1.44	1.34	1.48	
Malaria wife last month (%)	44	39	47	*
Home has an iron roof (%)	91	91	91	
Home has a cement floor (%)	11	9	12	
Coffee growers (%)	89	82	93	
Bakonjo tribe (%)	100	100	100	
Christian faith (%)	100	99	100	
Distance to main road (in walking minutes)	34	34	34	

Note: Mean values are shown. For continuous variables, standard deviations are reported in parentheses. Statistical significance of differences between the mean values of non-cooperative members and cooperative members at * 10% level, ** 5% level, *** 1% level. ^a The U.S. dollar amount is calculated at the July 2012 exchange rate of \$1 = Ush 2,450

Variables

We operationalized the financial performance of the female entrepreneurs with the dependent variable coffee sales (per household; see Table 3). The construction and characteristics of the gender empowerment variables are shown in Table 4. Women's empowerment is measured through four dimensions that reflect the female entrepreneur's influence on decision-making in the household concerning health expenditures, education expenditures, food expenditures and general household expenditures. The variable is so constructed to take into account both joint decision-making (wife and husband: value 1), fully autonomous decision-making by the wife (value 2), and also no influence (value 0). It appears that men hold significant decision-making power with respect to health and education expenses, whereas women appear to be

participating on an equal footing in decisions pertaining to food and general household expenditures. Large-scale investments, such as health (about 20% of monthly household incomes, see Table 3) and offspring’s school fee payments, represent costly life-cycle expenditures for parents (Rutherford 2000, Collins et al. 2009). It seems that more costly investment decisions are taken by the husband while expenditures more related to food and home expenditures are taken jointly (Table 4). Household decisions of cooperative members more often involve joint decision-making than those decisions of respondents that are not a member of BJC. The share of “wife only” decision-making does not differ substantially between the two groups of respondents. This might suggest that the cooperative enables a shift from “husband only” decisions to “joint decision-making”, but not to “wife only” decisions. The cross correlations of all variables are shown in Table A1.

Table 4: Distribution of types of decision-making for total sample and cooperative members

Household decisions on:	Health		Education		Food		Household	
	Total	Coop	Total	Coop	Total	Coop	Total	Coop
Husband only (%)	40.79	34.95	39.47	33.25	31.25	27.18	24.34	19.66
Joint (%)	49.67	55.58	49.34	54.85	53.95	58.98	58.06	63.35
Wife only (%)	9.54	9.47	11.18	11.89	14.80	13.83	17.60	16.99
Total Mean [†]	0.69	0.75	0.72	0.79	0.84	0.87	0.93	0.97

[†] these household decision-making variables have the following output values: husband only = 0; joint = 1; wife only = 2.

4. Results

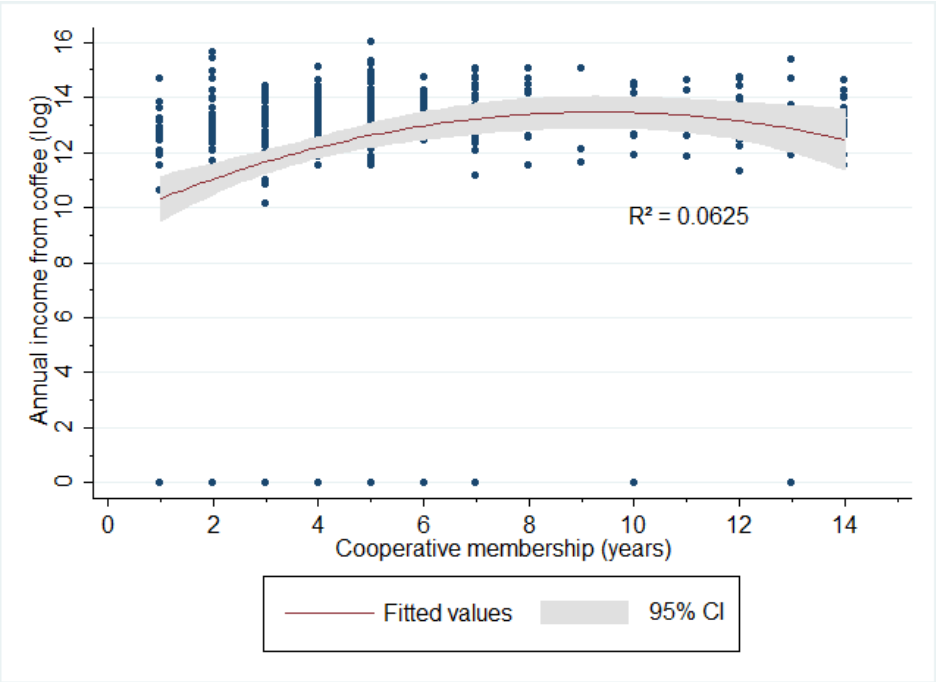
We expected a positive effect of participation in the cooperative on household income, and more in particular a positive effect of duration of participation on household income. We not only expected a positive effect of cooperative membership on the financial performance of female entrepreneurs, but also positive effects on gender empowerment, as indicated by having a say in household decisions regarding children’s education, health expenditures, food purchases and household purchases. The results of the regression analyses are presented in Table 5. In addition, Table 6 reports regression results on the sample of BJC members only, where we explore the effect of husband’s co-membership in BJC in general and in the wife’s SHG in particular, on gender empowerment.

Household income

Cooperative membership per se has no direct effect on household income from coffee; however duration of membership seems to matter, as there is only a statistically significant positive relation with duration of participation with income. This might indicate that it takes

time to reap the (financial) benefits from improved access to finance and marketing resources of the cooperative. Figure 1 illustrates that within the first eight years of membership there seems to be a learning effect, since members' coffee production (measured as income from coffee) increases slightly but continuously, however after eight years this relationship diminishes, indicating no sustained investment effect from cooperative membership. Wife's income outside coffee production has a positive effect on income from coffee, giving households more resources to invest into the expansion of their business from coffee. Increased land held by the husband increases income from coffee. The same effect is not observed when landholdings of the wife increase, suggesting that the majority of cash-crops are grown on husbands' land, while women grow mostly food crops. Increased schooling affects income from coffee negatively. Respondents suggested that women with increased human capital tend to work more outside agriculture.

Figure 1: Annual income from coffee and years of cooperative membership



Intra-household decision-making power

Neither cooperative membership, nor increased duration of participation seems to have a statistically significant effect on decision-making power over household expenditures. In contrast, the regression analyses show that two decision-making variables are significantly and negatively correlated with husband's co-membership. It seems that husbands enter into competition for the decision-making over the allocation of income when they participate in the same cooperative as their wife. Moreover, men seem to restore or may even expand on

their ability to make decisions on the household level when gaining more access to loans and income from coffee, which materializes into less spousal cooperation.

Table 5: OLS and Probit regression results (marginal effects) – full sample (N= 608)

	Coffee (log) OLS	Health exp PROBIT	Educ exp PROBIT	Food exp PROBIT	House exp PROBIT
Coop	0.473 (0.509)	0.072 (0.061)	0.031 (0.060)	0.070 (0.055)	0.061 (0.051)
Coop length	0.106** (0.046)	0.011 (0.008)	0.017** (0.008)	0.001 (0.007)	0.005 (0.007)
Coop husband	0.293 (0.412)	-0.051 (0.054)	-0.104* (0.055)	-0.113** (0.051)	-0.071 (0.046)
Age wife	0.012 (0.030)	0.010** (0.005)	0.009* (0.005)	0.005 (0.005)	0.010** (0.004)
Age husband	-0.001 (0.025)	0.000 (0.004)	-0.001 (0.004)	0.004 (0.004)	0.004 (0.003)
No. wives	-0.124 (0.256)	-0.057* (0.034)	0.001 (0.034)	-0.044 (0.031)	-0.017 (0.029)
No. children	0.059 (0.068)	0.011 (0.011)	0.039*** (0.011)	0.003 (0.096)	-0.018** (0.009)
Education wife	-0.137** (0.069)	0.005 (0.009)	0.022*** (0.009)	0.005 (0.008)	0.003 (0.007)
Education husband	-0.041 (0.050)	-0.005 (0.007)	-0.001 (0.008)	-0.003 (0.007)	-0.005 (0.006)
Income wife	0.212* (0.112)	0.033*** (0.013)	0.017 (0.013)	0.013 (0.011)	0.012 (0.010)
Income husband	0.142 (0.100)	-0.326*** (0.012)	-0.025** (0.012)	-0.021* (0.011)	-0.010 (0.010)
Coffee (log)		-0.011** (0.005)	0.004 (0.005)	0.002 (0.005)	0.001 (0.004)
Land wife	0.159 (0.140)	0.007 (0.026)	0.035 (0.031)	0.012 (0.027)	-0.029 (0.023)
Land husband	0.329*** (0.105)	-0.021 (0.017)	-0.015 (0.015)	-0.014 (0.014)	0.006 (0.013)
Enumerator	Yes	Yes	Yes	Yes	Yes
Constant	9.735*** (1.038)	-0.724** (0.357)	-1.715*** (0.372)	-0.649* (0.367)	-0.814** (0.385)
Log pseudo-likelihood		-363.18	-345.18	-345.13	-305.41
Observations	608	608	608	608	608
(Pseudo) R²	0.107	0.117	0.154	0.086	0.095

Note: Robust standard errors in parentheses. Asterisks indicate statistical significance: *** p<0.01, ** p<0.05, * p<0.1. Because the equations of the four decision-making dependent variables are related, they should be jointly estimated, allowing for correlation between the error terms. The error terms between them are likely to be correlated (Greene and Hensher 2010). Female household decision-making power is a categorical variable with three values. Multivariate ordered probit models can control for correlating error terms. Nonetheless, the bivariate probit is more or less the dimensional limit of the applications of the multivariate ordered probit model. Collapsing the variables into one index would have reduced the richness of the information, and therefore was not applied in the paper. However, in order to demonstrate that the ordered OLS parameters can be trusted, despite the fact that the equations are related, we compared the parameters of the probit model with those of the multivariate probit model (jointly estimating all four equations). The same estimates from the two models tell a consistent story. The signs of the coefficients are the same across the two models, and the same variables are statistically significant in each model. Also, the predicted values of the parameters are very similar. The additional analyses are available from the authors at request.

This mechanism is reinforced by the fact that when husbands own more land, this has adverse effects on women's ability to make own decisions on the household level, because

more male land ownership translates into increased income from coffee which is controlled by the husband. In addition, husband's bargaining power increases as his income increases and thus erodes women's power to negotiate in all four indicators of family expenditures. On the other hand, women's bargaining power increases as her level of education and non-coffee income increases and potentially improves her perception of her monetary contribution to the household (in addition to her housework and child-care).

In Table 6 we explore the effect of husband's co-membership a bit further. We differentiate between husbands' co-membership in BJC and in their wives' SHG. Therefore, the sample only includes female entrepreneurs from BJC. The regression results in Table 6 regarding the variable of male co-membership in BJC differ considerably from the regression results presented in Table 5. All four variables capturing gender empowerment are not significantly (negatively) correlated with husband's co-membership in BJC anymore. However, husband's co-membership in his wife's SHG has a negative effect on all four measures of women's household decision-making. In other words, male co-membership does not have a negative effect on gender empowerment per se: this negative effect is only present when the husband enters the domain of the SHG. This is not a marginal phenomenon since 22% of the husbands are co-members of the same SHG (see Table 3). The question is whether the husband or wife entered the SHG first. We expect that when the wife entered the SHG first, this is an indication of gender empowerment in itself and will positively affect the benefits derived from being a member of a SHG (or in the contrasting situation that wives follow their husbands submissively, and do not benefit from membership). This mechanism seems to be confirmed by the positive effect of the wife joining the SHG first on all the gender empowerment variables.

Table 6: OLS and Probit regression results (marginal effects) – only cooperative members (N=412)

	Coffee (log) OLS	Health exp PROBIT	Educ exp PROBIT	Food exp PROBIT	House exp PROBIT
Coop length	0.134*** (0.044)	0.009* (0.008)	0.013 (0.008)	-0.002 (0.007)	0.006 (0.006)
Coop husband	0.360 (0.436)	0.175 (0.071)	0.140 (0.070)	0.034 (0.066)	0.062 (0.057)
SHG husband	0.125 (0.629)	-0.256** (0.109)	-0.360*** (0.107)	-0.213** (0.099)	-0.130 (0.096)
SHG wife first	-0.858 (0.788)	0.129 (0.091)	0.236*** (0.063)	0.134** (0.066)	-0.019 (0.082)
Coop family	0.138 (0.354)	-0.177** (0.051)	-0.087* (0.052)	-0.082* (0.048)	-0.079** (0.040)
Age wife	0.016 (0.033)	0.007 (0.005)	0.007 (0.006)	0.003 (0.005)	0.006 (0.004)
Age husband	-0.006 (0.027)	0.001 (0.005)	-0.000 (0.005)	0.005 (0.004)	0.006 (0.003)
No. wives	-0.030 (0.246)	-0.067* (0.039)	0.041 (0.037)	-0.047 (0.034)	-0.016 (0.030)
No. children	0.067 (0.068)	0.014 (0.013)	0.038*** (0.012)	0.008 (0.011)	-0.019** (0.009)
Education wife	-0.053 (0.075)	-0.001 (0.010)	0.015 (0.010)	0.001 (0.009)	0.004 (0.007)
Education husband	-0.078 (0.075)	0.001 (0.008)	-0.004 (0.008)	0.004 (0.007)	0.001 (0.006)
Income wife	0.110 (0.082)	0.042 (0.015)	0.034** (0.015)	0.022 (0.013)	0.009 (0.011)
Income husband	0.181* (0.106)	-0.031** (0.014)	-0.017 (0.014)	-0.024* (0.013)	-0.003 (0.011)
Coffee (log)		0.001 (0.007)	0.010 (0.007)	0.004 (0.006)	0.004 (0.005)
Land wife	0.189 (0.135)	0.017 (0.028)	0.055 (0.035)	0.023 (0.028)	-0.032 (0.023)
Land husband	0.331*** (0.120)	-0.033* (0.018)	-0.037** (0.018)	-0.021 (0.017)	0.013 (0.015)
SHG size	0.000 (0.009)	0.001 (0.002)	0.003 (0.002)	0.003** (0.002)	0.001 (0.001)
Distance	0.011** (0.005)	0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	-0.000 (0.001)
SHG nr.	0.041 (0.025)	0.003 (0.004)	0.002 (0.004)	0.005* (0.003)	-0.001 (0.003)
Enumerator	Yes	Yes	Yes	Yes	Yes
Constant	9.047*** (1.231)	-0.974 (0.494)	-1.949 (0.528)	-1.215 (0.568)	-1.137 (0.545)
Log pseudo-likelihood		-228.82	-211.92	-209.74	-178.39
Observations	412	412	412	412	412
(Pseudo) R²	0.121	0.142	0.191	0.130	0.126

Note: Robust standard errors are in parentheses.

Stars indicate statistical significance: *** p<0.01, ** p<0.05, * p<0.1

5. Discussion

In this paper we have drawn upon and contributed to gender empowerment theory of microfinance and cooperatives, and provided a more nuanced and empirically informed view on the gender empowerment effects of microfinance in developing economies than the

literature to date. We have traced the effects of cooperative membership and duration of participation on the financial performance as well as on the empowerment of female entrepreneurs. The latter aspect reveals the way in which cooperatives affect female entrepreneurs beyond financial effects.

We found evidence for a positive cooperative effect on the financial performance of the household, confirming hypothesis 1. For household income from coffee it is not membership per se that matters, but the length of membership, suggesting learning and long term investment effects. However, we should be careful in claiming causality here, as our research design is cross-sectional, and the duration effect might also be caused by female entrepreneurs with relatively low financial performance having exited the cooperative at an earlier stage.

We did not find any evidence of a positive cooperative effect on household decision-making power of female entrepreneurs. Hypothesis 2 thus had to be rejected. Participation in microfinance programs does not necessarily act as “magic bullet” or stimulate “virtuous spirals” for gender empowerment as already questioned by Kabeer (2005) and Mayoux, (1999). This resonates with previous evaluations by Banerjee et al. (2014) which find that microfinance did not empower women, nor did business grants or business trainings led to business growth and increased revenues when given to female small-scale entrepreneurs in Peru (Karlan and Valdivia 2011), Sri Lanka (De Mel et al. 2008), Ethiopia (Belwal et al. 2012) or Tanzania (Berge et al. 2012).

We even found a negative effect of cooperative co-membership of the husband on gender empowerment. However, this negative effect of husband co-membership only materializes when the husband is a member of the same SHG as his wife – not when he is a member of another SHG of the cooperative. This rejects hypothesis 3, and challenges the perception that women gain greater decision-making rights in husband-inclusive microfinance schemes. Husband’s co-membership may reduce his wife’s relative advantage in making financial decisions independently because co-membership may give husbands a direct way of monitoring and controlling their wives’ borrowing and business activities. Moreover, the husband’s presence in the SHG may contribute to competition for receiving coffee payment and loans from the microfinance component (as they are usually paid back by the household together) which reduces the wife’s ability to take decisions by herself, in contrast to sole membership. This is echoed in Hambly Odame’s (2002) and Harrison’s (1997) studies which observe that often husbands dominate the governance (as chairmen or coordinator) of women groups in Kenya and Zambia respectively.

In a recent experiment from Southern Mexico, Allen et al. (2011) show that when female participants of microfinance borrowing groups were given the choice to invite their husband the vast majority was reluctant to do so. More than 95% preferred to keep their husband out of their group, despite lucrative cash incentives in some cases. This signals that the vast majority of women valued their independent income generation and autonomy over borrowing decisions. Their findings were reinforced by higher take-up rates of female friends over their husbands. In a similar fashion, Greig and Bohnet (2009) found that female Nairobi slum dwellers were more likely to cooperate (successfully) with other women than with men within traditional Kenyan institutions of community fundraising for public goods ('harambee').

Also, with the husband being present in the same SHG, wives may feel intimidated to voice their interests or discuss their problems from home in group meetings (Pandolfelli et al. 2008). As a result, the SHG ceases to represent a place of intimacy and openness. As a result, women do not experience mutual and peer support from each other (Al-Dajani and Marlow 2010) which could take away the social capital mechanism of gender empowerment. In our regression analysis, once husband SHG co-membership is controlled for, a weak significant positive effect of cooperative membership length on household decision-making regarding health expenses emerges. Even though cooperative membership seems to have positive effects on the financial performance of female entrepreneurs, the effects on empowerment of female entrepreneurs are more ambiguous.

This suggests that in contexts of deep-seated gender inequality, women-only groups may be more effective for bringing women out of isolation, fostering their self-confidence and capacity to bargain within the household. Yet, this varies between cultures. In other instances, mixed-sex groups may be more effective. Furthermore, our study suggests that entrepreneurship research should take into account non-financial effects more often. More in particular, microfinance research should take into account the social embeddedness and power relations involved in the household of the recipient. Even though microfinance can potentially have positive socio-economic effects, these are contingent on the (non-)involvement of the husband in the same SHG.

In obtaining more systematic knowledge whether microfinance delivers on its promises, randomized control trials (RCTs) have been used as a research method (see for example Roodman and Morduch 2009 and Banerjee et al. 2014). However, its experimental design is not free of ethical concerns, high costs and its results not be generalized across places or cultural contexts (Ravallion 2009, Barrett and Carter 2010, Deaton 2013: 289-294). This

study shows that also non-randomized control trial (RCT) studies can deliver insights into the socio-economic effects of microfinance and cash-crop marketing cooperatives. However, in the future more explicit longitudinal research designs, and especially the design of RCTs before the inception of a microfinance cooperative would provide further insights into the effects of participation in microfinance cooperatives on the financial performance and gender empowerment of female entrepreneurs.

We should be careful with inferring a direct negative causal effect of husband co-membership on gender empowerment. We cannot control for other underlying causal effects that might be driving this outcome. For example, we cannot rule out the possibility that husbands with particular characteristics are more oppressive than other husbands without these characteristics, and that these particular characteristics are decisive in husbands choosing to become co-members of the same SHG and thereby suppressing the intra-household decision-making power of their wives.⁴ Future research should test for these particular husband characteristics.

In addition, this study focused on the participation in one particular cooperative, with no variation in the quality of cooperatives. Future studies should also take into account the moderating effect of the quality of (management of) cooperatives, and perhaps even successful versus failed cooperatives. Finally, to prevent success bias, future research might trace the individual exits out of cooperatives: its causes, and effects on the performance and position female entrepreneurs that have exited the cooperative. The arguments presented are necessarily limited by the lack of previous work exploring the role and effect of husband's co-membership. Future work might explore this relationship more in-depth, in particular how cooperatives can be designed and adapted to ensure that male involvement is constructive rather than destructive for gender empowerment.

6. Conclusion

Microfinance has been said to stimulate entrepreneurial activity in developing countries, not only the quantity, but also the quality. According to gender empowerment theory of microfinance cooperatives, female entrepreneurs will benefit even more from microfinance schemes than male entrepreneurs, both in financial terms and in empowerment terms, especially when they participate in microfinance cooperatives.

⁴ We tried to test for this by including a variable in the regressions measuring whether the female joined the SHG first, which might be interpreted as an indicator of a lack of suppression by the husband, based on the assumption that a husband with suppressive characteristics would not allow his wife to enter a SHG without him.

This study on the effects of a microfinance cooperative on the financial performance of the household and gender empowerment of female entrepreneurs in Western Uganda has provided new, nuanced empirical evidence on the effects of participation in microfinance cooperatives of both the female entrepreneur and her husband. Participation by female entrepreneurs in microfinance cooperatives is not an unconditional blessing: even though it does deliver higher household incomes, it might also deteriorate the female's household decision-making power when her husband participates in the same SHG. This offers new insights for development policy and for entrepreneurship scholars to study the bright and dark sides of microfinance, and to design or change microfinance cooperatives in such a way that they increase financial performance and empower female entrepreneurs.

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Appendix

Table A1: Correlation matrix

	Mean	SD	Min	Max	HH exp	Health exp	Educ exp	Food exp	Coop	Length coop	Coop husb	Age wife	Age husb	Nr. child	Educ	Educ husb	Nr. wives	Income wife	Income husb	Coffee (log)	Land	Land h	
Household exp	0.688	0.637	0	2																			
Health exp	0.717	0.654	0	2	0.497 ***																		
Educ exp	0.836	0.659	0	2	0.443 ***	0.606 ***																	
Food exp	0.933	0.645	0	2	0.590 ***	0.595 ***	0.446 ***																
Coop member	0.677	0.467	0	1	0.091 *	0.131 ***	0.153 ***	0.068 *															
Coop length	3.806	3.978	0	14	0.140 ***	0.180 ***	0.213 ***	0.097 ***	0.661 ***														
Coop husband	0.202	0.402	0	1	-0.056	-0.015	-0.038	-0.125 ***	0.186 ***	0.132 ***													
Age	34.692	11.490	16	71	0.287 ***	0.295 ***	0.332 ***	0.2453 ***	0.267 ***	0.423 ***	0.044												
Age husband	4.407	3.284	0	14	0.280 ***	0.279 ***	0.312 ***	0.253 ***	0.247 ***	0.391 ***	0.039	0.905 ***											
Fertility	5.519	3.178	5.51 9	3.178	0.178 ***	0.251 ***	0.327 ***	0.189 ***	0.244 ***	0.337 ***	-0.005	0.723 ***	0.667 ***										
Education	4.407	3.284	0	14	-0.176 ***	-0.186 ***	-0.165 ***	-0.172 ***	-0.170 ***	-0.210 ***	0.047	-0.489 ***	-0.475 ***	-0.544 ***									
Education husband	6.388	3.525	0	14	-0.155 ***	-0.154 ***	-0.163 ***	-0.137 ***	-0.087 **	-0.062	0.040	-0.320 ***	-0.315 ***	-0.384 ***	0.563 ***								
No. of wives	1.396	0.643	1	5	0.124 ***	0.073 *	0.137 ***	0.099 **	0.058	0.053	-0.074 *	0.215 ***	0.269 ***	0.143 ***	-0.181 ***	-0.154 ***							
Income wife	3.189	1.772	0	5.447	0.031	0.057	0.032	0.019	0.052	0.077 *	0.047	-0.038	-0.039	-0.069 *	0.119 ***	0.107 ***	-0.080 **						
Income husband	3.428	1.879	0	5.903	-0.116 ***	-0.157 ***	-0.116 ***	-0.151 ***	-0.053	-0.063	0.029	-0.140 ***	-0.172 ***	-0.203 ***	0.243 ***	0.231 ***	-0.064	0.298 ***					
Coffee (log)	11.735	4.158	0	16.013	0.031	-0.054	0.064	0.024	0.178 ***	0.215 ***	0.078 *	0.210 ***	0.191 ***	0.196 ***	-0.169 ***	-0.101 **	0.021	0.112 ***	0.038				
Land wife	0.340	0.827	0	6	0.016	0.081 **	0.101 **	0.052	0.048	0.087 **	-0.013	0.222 ***	0.218 ***	0.134 ***	-0.065	-0.031	0.079 *	0.084 **	0.023	0.092 **			
Land husband	1.459	1.557	0	20	0.030	-0.008	0.032	-0.029	0.113 **	0.139 ***	0.090 **	0.261 ***	0.234 ***	0.220 ***	0.005	0.053	0.033	0.093 **	0.040	0.173 ***	0.174 ***		
Enumerator	0.638	0.481	0	1	-0.047	0.120 ***	0.100 **	0.090 **	-0.007	-0.060	-0.082 **	-0.088 **	-0.100 **	-0.042	-0.037 **	0.081	0.042	0.119 ***	0.129 ***	-0.012	0.054	0.107 ***	

Note: Correlations significant at * 10% level, ** 5% level, *** 1% level.

Samenvatting

Op basis van empirisch onderzoek geeft deze dissertatie nieuwe inzichten in de positie van vrouwen in koloniaal en hedendaags Oeganda. De dissertatie bestaat uit twee delen. Het eerste deel richt zich op de ‘lange 20^{ste} eeuw’ en presenteert een nieuw perspectief op de lange termijn ontwikkeling van *human capital formation*, beroepsvaardigheden, arbeidsmarktparticipatie, intergenerationele sociale mobiliteit en huwelijkspatronen van zowel mannen als vrouwen. Het maakt daarbij gebruik van unieke microdata die zijn verkregen uit, tot dusverre onderbelichte, Anglicaanse trouwregisters. Het tweede deel van de dissertatie is gebaseerd op een grootschalige enquête in West-Oeganda, en laat zien met welke uitdagingen vrouwen op kleine boerenbedrijven op het hedendaagse Oegandese platteland geconfronteerd worden. Ook onderzoekt dit deel van de dissertatie in meer algemene zin de determinanten van de deelname van vrouwen in coöperaties in Afrika en de mogelijkheden van collectieve actie om de relatieve sociale en economische positie van deze vrouwen te verbeteren, uitgaande van de Oegandese casus.

Op deze wijze biedt de dissertatie nieuwe inzichten in vier belangrijke vragen: 1) Hoe ontwikkelde gendergelijkheid zich over de lange termijn, met name sinds het begin van de koloniale tijd tot op de dag van vandaag? 2) Hoe vormden historische schokken, zoals de opkomst van christelijke missiescholing en de gelijktijdige opkomst van de koloniale exportgewasseneconomie, intergenerationele sociale mobiliteit en genderongelijkheden op huishoudniveau gedurende de *longue durée*? 3) Welke rol kunnen producenten- en microfinanciering-coöperaties spelen in het verbeteren van de positie van vrouwelijke boeren in hun huishoudens in hedendaags ruraal Oeganda? 4) Wat bepaalt de mogelijkheden van vrouwen om betrokken te raken bij, en actief te participeren in, collectieve actie?

Het proefschrift begint met het onderzoeken van lange termijn ontwikkelingen op het gebied van genderongelijkheid in Oeganda’s hoofdstad Kampala en gaat daarbij in op de these van Ester Boserup dat de hedendaagse genderongelijkheid en marginalisatie van vrouwen geworteld is in het koloniale verleden. Wij presenteren de lange termijn ontwikkeling van verschillende maatstaven voor *human capital*, arbeidsmarktparticipatie en huwelijkspatronen voor zowel Afrikaanse mannen als vrouwen in christelijk Kampala. Wij laten daarbij zien dat de komst van christelijke missionarissen en de gelijktijdige ontwikkeling van de formele koloniale economie door toedoen van Britse koloniale bestuurders, in Kampala een moderniseringsproces in gang zette, waarbij gedurende de daarop volgende eeuw een *gender Kuznets curve* waar te nemen is. Hoewel grote

ongelijkheid tussen de seksen al bestond in pre-koloniaal Oeganda, werden de genderverschillen wat betreft onderwijsresultaten en arbeidsmarktmobiliteit in de koloniale tijd sterk vergroot. Alhoewel genderverschillen in geletterdheid, rekenvaardigheid en andere beroepsvaardigheden gedurende de tweede helft van de koloniale tijd langzaam kleiner werden, bleven significante ongelijkheden tussen mannen en vrouwen op de arbeidsmarkt tot lang na de onafhankelijkheid bestaan. Echter, alles in ogenschouw nemende, nam de genderongelijkheid binnen huwelijken gestaag af gedurende de tweede helft van de koloniale periode, en na de onafhankelijkheid was het niveau niet significant anders dan in de pre-koloniale periode. Hiermee bestrijden wij de visie dat genderongelijkheid een nalatenschap is van de koloniale overheersing.

Hoofdstuk 3 gaat verder in op de sociaaleconomische positie van vrouwen gedurende de koloniale tijd. Alhoewel vrouwen werden gemarginaliseerd op de arbeidsmarkt gedurende de koloniale periode, speelde de *Protestant Church Mission Society* een belangrijke rol bij de emancipatie van vrouwen. Missiescholen boden nieuwe mogelijkheden aan Afrikaanse vrouwen door hun formele scholingsniveau en de ontwikkeling van hun beroepsvaardigheden te bevorderen waarbij nieuwe arbeidsmarktniches voor vrouwen ontstonden als docent op missiescholen en als verpleegster of vroedvrouw in ziekenhuizen. Alhoewel geletterdheid *an sich* huwelijkspatronen niet veranderde, zien we dat vrouwen die voor de missionarissen werkten significant later trouwden, en dat het leeftijdsverschil van de huwelijkspartners kleiner was. Dit wijst op een belangrijke verandering in de machtsbalans tussen ouders en dochters, en tussen man en vrouw; een duidelijke breuk ten opzichte van de positie van vrouwen in pre-koloniaal Oeganda. Gemiddeld gezien hadden dochters van vaders die nauw betrokken waren bij de missiebeweging en de formele koloniale economie de grootste kansen op toegang tot loonarbeid, wat benadrukt hoe belangrijk het missienetwerk van vaders was voor vrouwen om buiten het huishouden te werken gedurende de koloniale periode.

Hoofdstuk 4 onderzoekt de trends en de determinanten van intergenerationele beroepsmobiliteit van protestantse Oegandese mannen gedurende de 20^{ste} eeuw. Het laat zien dat ten opzichte van de relatief statische pre-koloniale sociale orde, de koloniale periode nieuwe mogelijkheden bood voor opwaartse sociale mobiliteit, waarbij het mogelijk werd voor mannen om grote stappen te maken op de sociale ladder. Prestaties werden langzamerhand steeds belangrijker in verhouding tot maatschappelijke status, waarin de *Afrikanisering* van de missies aan christelijke Afrikanen grote mogelijkheden bood voor beroepsmobiliteit. Geletterdheid werd een belangrijke voorwaarde om status te kunnen verwerven en zonen profiteerden van hun vaders' connecties met de missie en de koloniale

staat. We laten ook zien dat de koloniale invloeden in Oeganda, naast dat zij de opkomst van een nieuwe geschoolde elite mogelijk maakten, tevens aanleiding gaven tot een meer gelijke samenleving in termen van sociale mobiliteit, waarbij pre-koloniale machtsstructuren niet werden gepreserveerd maar eerder afgezwakt. In het bijzonder nam de relatieve macht van stamhoofden om hun nakomelingen in de hogere beroepsklassen te plaatsen af. Ten tijde van de onafhankelijkheid boeren gelijke kansen hadden om toegang te verkrijgen tot beroepen in de hoge klassen. Migratie van het platteland naar de stad werd een gangbare strategie om de sociale ladder te bestijgen, alhoewel migranten minder mogelijkheden hadden om een hoge status te bereiken dan mensen die reeds in de stad woonden.

Deel II onderzoekt de rol van collectieve actie voor de hedendaagse emancipatie van vrouwen, waarbij gebruik wordt gemaakt van een diepgravende *case study* van een koffie- en microfinanciering-coöperatie in de hooglanden van West-Oeganda. In hedendaags Afrika worden vrouwen geconfronteerd met grotere barrières dan mannen om toegang te verkrijgen tot grondstoffen en kapitaal om hun productiviteit en inkomens te vergroten. De participatie van vrouwen in coöperaties wordt gestimuleerd als een manier om om te gaan met deze uitdagingen die vrouwen doorgaans tegenkomen in de kapitaal- en grondstoffenmarkten. Alhoewel gender vaak wordt gezien als een belangrijke determinant van iemands mogelijkheden om te participeren in collectieve actie, is ons fundamentele begrip van de determinanten en impact van de participatie van vrouwen in producenten-coöperaties relatief beperkt. Als gevolg hiervan ontbreken de diepere inzichten over hoe de participatie van vrouwen in instituties van collectieve actie het beste kan worden vormgegeven.

Gebruikmakend van een veldonderzoek onder 421 vrouwelijke leden en 210 niet-leden van een koffie producten-coöperatie in het Rwenzori-gebergte in West-Oeganda, onderzoekt hoofdstuk 5 de determinanten van (i) de participatie, en (ii) de intensiteit van de participatie van vrouwelijke boeren in coöperaties. De resultaten benadrukken dat toegang tot, en controle over, land een belangrijke reden is voor vrouwen om in eerste instantie lid te worden van een coöperatie. Echter, lidmaatschap alleen verklaart niet hoe actief vrouwelijke boeren participeren en zichzelf committeren aan de organisatie. De intensiteit van participatie is gemodelleerd aan de hand van de participatie in collectieve koffieverkoop en het kapitaaldeel in de coöperatie. We tonen aan dat de duur van het lidmaatschap, eerdere ervaring met voorlichting, gelijkere machtsrelaties binnen het huishouden, het bundelen van het huishoudinkomen, en gezamenlijk landeigendom een positieve invloed hebben op de mogelijkheden van vrouwen om zich te committeren aan collectieve actie. Dit impliceert dat

coöperaties die er niet in slagen om aandacht te besteden aan genderaspecten, het risico lopen om niet de juiste condities te scheppen voor effectieve en actieve vrouwelijke participatie.

Ten slotte evalueert hoofdstuk 6 de effecten van vrouwelijke participatie in collectieve actie. In termen van het emancipatiepotentieel van coöperaties wordt aangetoond dat de participatie van boerinnen in de koffie- en microfinanciering-coöperaties onder bepaalde voorwaarden een positief effect heeft: alhoewel het huishoudinkomen uit koffie stijgt met de lengte van het lidmaatschap, vergroot deelname op zichzelf niet de *agency* van vrouwen binnen het huishouden. Als de echtgenoot lid is van dezelfde zelfhulpgroep van de coöperatie, dan is de beslissingsmacht van de vrouw aanzienlijk minder. Dit geldt onafhankelijk van de volgorde waarin de echtgenoot en echtgenote lid werden van de coöperatie, wat het causale mechanisme benadrukt. Dit geeft nieuwe inzichten voor ontwikkelingsbeleid en wetenschappers om coöperaties op zo'n manier vorm te geven dat zij vrouwen de mogelijkheid geven om zowel hun financiële prestaties als ook hun sociaaleconomische status en positie binnen het huishouden te verbeteren.

Summary

This thesis offers new empirical insights on women's empowerment in colonial and present-day in Uganda. This thesis is organised into two parts. The first part, offers a novel perspective on the long-term development of African male and female human capital formation, skills, labour market participation, intergenerational social mobility, and marriage patterns over the long 20th century, using unique individual-level data from hitherto unexplored Anglican marriage registers. In the second part, a large-scale field survey in Western Uganda highlights the challenges smallholder women face in present-day rural Uganda and investigates the determinants for women's participation in co-operatives and the potential of collective action to improve female smallholders' relative social and economic position. To achieve this, the thesis focuses on an in-depth case-study of a single African country, Uganda.

As such, this thesis sheds new light on four important questions: 1) How did gender equality develop in the long-run, notably since the beginning of the colonial era to the present-day? 2) How did historical shocks, such as the advent of Christian mission education and the parallel emergence of a colonial cash economy shape intergenerational social mobility and gender inequalities on the household-level over the *longue durée*? 3) What role can producer and microfinance co-operatives play in empowering female smallholders within their households in present-day rural Uganda? and 4) What determines women's ability to join and actively participate in collective action?

The thesis sets-off by investigating the long-term trends of gender inequality in Uganda's capital city Kampala and engaged with the hypothesis by Ester Boserup that present-day African gender inequality and marginalization of women is rooted in colonial times. We present long-term trends of various measures of human capital, labour market participation and marriage patterns for both African women and men in Christian Kampala. In Uganda, the arrival of Christian missionaries and the parallel development of the formal colonial economy by the British colonial administrators ignited a century-long modernization-process in Kampala involving a gender Kuznets curve. Although, large inequalities between the sexes already existed in pre-colonial Uganda, the colonial era strongly augmented gender gaps in educational attainment and occupational mobility. While gender gaps in literacy, numeracy and working skills gradually started to decline during the latter half of the colonial era, significant gender inequalities in the labour market persisted long after independence. However, overall marital gender inequality gradually declined

during the latter half of the colonial era, and after Uganda's independence its level was not significantly different from that of pre-colonial times, contesting the view that gender inequality is a legacy of the era of colonial rule.

Chapter 3 further investigates women's socio-economic standing during colonial times. While women were marginalised in colonial labour markets over the course of the colonial era, the Protestant Church Mission Society played a key role in women's initial self-emancipation. Mission schools opened new windows of opportunity for African women by furthering their formal education and building their occupational skills which created employment niches for women as mission school teachers and hospital nurses/midwives. While literacy alone did not affect marriage patterns, women who worked for the missionaries married significantly later and married men closer to their own age. This indicates an important shift in the power balance between parents and daughters and between husband and wife, marking a clear break from women's role in pre-colonial Uganda. On average, daughters of fathers deeply entrenched in the missionary movement and colonial formal economy had the highest chances to access wage employment, emphasizing the importance of paternal mission networks for Protestant women's work outside the household during colonial times.

Chapter 4 examines the trends and determinants of inter-generational occupational mobility of Protestant male Ugandans in the long 20th century. It is shown that following a relatively socially static pre-colonial society, the colonial era opened new windows of opportunity for upward social mobility which enabled men to take leaps between one's social origin and destination. Achievement gradually challenged ascription in which the Africanization of the mission offered significant opportunities of occupational mobility to Christian Africans. To this end, literacy became a clear pre-condition for status attainment and sons benefitted from their fathers' occupational ties to the mission and the colonial state. We also demonstrate that colonial influences in Uganda, besides facilitating the emergence of a new educated elite, gave rise to a more equal society in terms of social mobility which withered pre-colonial power structures rather than preserving them. Notably, chiefs' relative "power" to place their offspring into the higher occupational classes gradually declined and by independence descendants of farmers had equal opportunity of accessing occupations in the upper classes. Rural-to-urban labour migration became a common strategy to ascend the social ladder, although migrants faced lower chances of high-status attainment than initial residents.

Part II investigates the role of collective action for women's present-day empowerment is explored, using an in-depth case study of a coffee and microfinance co-operative from highland Western Uganda. In present-day Africa, women face greater barriers than men in accessing commodity and capital markets to raise their productivity and incomes. Against this background, women's participation in co-operatives has been promoted as a way of coping with those common challenges women meet in capital and commodity markets. However, although gender often is a key determinant of people's ability to participate in collective action, a deeper understanding of the determinants and impacts of women's participation in producer co-operatives is relatively thin. As a result, we lack a deeper understanding of how to organise women's participation more effectively in collective action institutions.

Using field survey data of 421 female members and 210 non-members of a coffee producer co-operative in the Rwenzori Mountains of Western Uganda Chapter 5 investigates both determinants of female smallholders' (i) participation in co-operatives (ii) and female members' intensity of participation. The results highlight that access to and control over land for women is key to initially join the co-operative. However, membership alone does not explain how intensively female smallholders participate and commit themselves to their organisation. Participation intensity is modelled through women's participation in collective coffee marketing and share capital contributions. It is found that length of membership, previous experience of extension services, more equal intra-household power relations, spousal income pooling, and joint land ownership positively influence women's ability to commit to collective action. This implies that co-operatives that fail to address gender, risk not setting the right conditions for effective and active female participation.

Finally, Chapter 6 evaluates the effect of women's participation in collective action. In terms of the co-operative's empowerment potential, it is shown that female smallholders' participation in the coffee and microfinance co-operative is a conditional blessing: even though it does deliver higher household incomes from coffee with length of membership, participation per se does not increase women's household decision-making agency. When the husband is a member of the same self-help group of the co-operative the wife's household decision-making power is significantly diminished. This holds regardless of the order of husbands' and wives' individual entry into the co-operative, which highlights the causal mechanism. This offers new insights for development policy and scholars to design co-operatives in such a way that enable women to improve both their financial performance and socio-economic status and position within the household.

Cover photo: Author. Picture taken in March 2012 at Mpanga Tea Growers, Fort Portal (Uganda).

