

De Haas

Rural livelihoods and agricultural commercialization in colonial Uganda

# RURAL LIVELIHOODS AND AGRICULTURAL COMMERCIALIZATION IN COLONIAL UGANDA: conjunctures of external influences and local realities

Michiel A. de Haas

## **Propositions**

1. The 'cash crop revolution' in colonial Uganda stemmed from rural households' adaptive capacity and favourable resource endowments, while its failure to translate into long-term growth must be attributed largely to inadequate and divisive colonial and post-colonial government policies.
2. Conducive government policies are required to effectuate sustained improvement of rural livelihoods, especially in the most vulnerable parts of Sub-Saharan Africa.
3. While the 'new economic history of Africa' has gained prominence through innovative and interdisciplinary journal articles, its long-term viability hinges on its ability to produce monographs grounded in extensive research of primary sources.
4. Beyond the expansion of economic activity and improvement of the material standards of living, development also hinges on state building, democratization and leadership on the international stage, processes in which the Humanities play an indispensable role.
5. Human beings tend to forget that most of what they think and achieve is not just the outcome of their own brilliance and hard work, but also depends crucially on the cumulative achievements of their forebears and the institutions they built.
6. As noted by G.K. Chesterton, sympathy and understanding for other peoples and cultures does not automatically result from travelling and superficial encounters, but requires a mental effort at moral humility and imagination.
7. Present day academics are expected to maintain a precarious and uncomfortable balance between scholarship and salesmanship.

Propositions belonging to the thesis entitled

*'Rural livelihoods and agricultural commercialization in colonial Uganda: conjunctures of external influences and local realities'*

Michiel de Haas,

Ann Arbor, 30 April 2017

Rural livelihoods and agricultural commercialization in colonial  
Uganda: conjunctures of external influences and local realities

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This research was conducted under the auspices of the Wageningen School of Social Sciences (WASS)

Rural livelihoods and agricultural commercialization in colonial  
Uganda: conjunctures of external influences and local realities

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**Thesis**

submitted in fulfilment of the requirements for the degree of doctor

at Wageningen University

by authority of the Rector Magnificus,

Prof. Dr A.P.J. Mol,

in the presence of the

Thesis Committee appointed by the Academic Board

to be defended in public

on Wednesday 20 September 2017

at 11 a.m. in the Aula.

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Rural livelihoods and agricultural commercialization in colonial Uganda: conjunctures of external influences and local realities,  
250 pages.

PhD thesis, Wageningen University, Wageningen, the Netherlands (2017)

With references, with summary in English

ISBN: 978-94-6343-628-1

DOI: 10.18174/419566

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# General introduction

## I. Main contribution

The view that Sub-Saharan Africa has always been poor is widespread, and the current ‘miraculous’ growth performance is contrasted to a purported historical stagnation, and ‘growth failure.’<sup>1</sup> A related scholarly pursuit has been to find explanations for Sub-Saharan Africa’s persistent poverty, with one prominent strand of literature pointing to geographical constraints, and a competing strand pointing to the detrimental long-term effects of extractive institutions, arising in particular from the slave trades and imposed during colonial rule.<sup>2</sup> Sub-Saharan Africa has a long pre-colonial, colonial and post-colonial history of considerable economic dynamism and ‘episodic growth’.<sup>3</sup> However, when historical determinants are used to explain present-day outcomes, past episodes of expansion and contraction remain obscured. This thesis is concerned with the nature and extent of one such episode, the ‘cash crop revolution’ that took place in Uganda during the colonial era. Five thematically-related papers investigate different aspects of economic change in colonial Uganda, most notably agricultural commercialization, labour mobility and occupational diversification.

This thesis uses a wide range of previously underutilized published and unpublished source materials, collected from archives throughout Europe and Uganda. It has two points of

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<sup>1</sup> This idea is prevalent in mainstream economics. An overview is provided by Battacharyya, ‘Root causes of African underdevelopment’. Seminal contributions include, Acemoglu and Robinson, ‘Why is Africa poor?’; Bloom et al., ‘Geography, demography and economic growth’; Collier and Gunning, ‘Explaining African economic performance’; Easterly and Levine, ‘Africa’s growth tragedy’. Literature highlighting Africa’s recent shift towards growth includes Rodrik, ‘African growth miracle?’; Young, ‘The African growth miracle’, as well as media reports in *The Economist*, ‘The hopeless continent’, <http://www.economist.com/node/33342>; *The Economist*, ‘Africa rising’, <http://www.economist.com/node/21541015>; *Time*, ‘Africa rising’, <http://content.time.com/time/magazine/article/0,9171,2129808,00.html>.

<sup>2</sup> For example, Acemoglu, Johnson and Robinson, ‘The colonial origins of comparative development’; Acemoglu, Johnson and Robinson, ‘Reversal of fortune’; Alsan, ‘The effect of the tsetse fly’; Bloom and Sachs, ‘Geography, demography and slow growth’; Frankema, ‘Biogeographical roots’; Nunn, ‘Long-term effects’; Nunn and Wantchekon, ‘The slave trade and the origins of mistrust’; Michalopoulos and Papaioannou, ‘Pre-colonial ethnic institutions’.

<sup>3</sup> The term ‘episodic growth’ has been used in this context by Jerven, ‘African growth recurring’. Key contributions on episodes of growth in pre-colonial, colonial and post-colonial Africa include Austen, *African economic history*; Austin, ‘Explaining and evaluating’; Bassett, *Peasant cotton revolution*; Bates, *Beyond the miracle of the market*; Berry, *No condition is permanent*; Cooper, *Plantation slavery on the East Coast*; Frankema and Van Waijenburg, ‘Structural impediments to African growth?’; Hopkins, *An economic history*; Jerven, ‘A West African experiment’; Lynn, *Commerce and economic change in West Africa*; Prados de la Escosura, ‘Human development in Africa’; Manning, *Slavery, colonialism and economic growth*; Sheriff, *Slaves, spices and ivory in Zanzibar*; Swindell and Jeng, *Migrants, credit and climate*; Szereszewski, *Structural changes in the economy of Ghana*.

departure. Firstly, it aims to offer a historical reconstruction of the role of ordinary African households in Uganda's export boom, and evaluates the role of market access, local institutions, colonial policies and resource endowments in shaping rural livelihoods and agrarian change. Secondly, it places the case of Uganda in a broader African comparative perspective. Through engagement with concepts and theories in economics and African history, the thesis not only aims to shed light on Uganda's individual experience but also to use Uganda as a case study to improve our wider understanding of Africa's long-term development. As such, this thesis constitutes an effort in 'doubly engaged social science'.<sup>4</sup>

## **II. Societal and scholarly relevance**

A reconstruction of historical phases of agrarian change is pertinent for a number of reasons. Firstly, scholars have noted that Africa's recent growth has sprung principally from the primary sector, and has yet to effectuate the structural transformation upon which sustained economic growth in other world regions has been grafted.<sup>5</sup> Moreover, rural poverty has continued to be prevalent, despite GDP growth.<sup>6</sup> 'Old' questions continue to arise: are the ecological and institutional 'growth fundamentals' in place for sustained growth?<sup>7</sup> Will foreign investment and commodity trade generate inclusive growth, or does it signify a new wave of 'neo-colonial' exploitation?<sup>8</sup> At the same time, however, unprecedented conditions, such as accelerating climate change, population pressure, human capital accumulation, and the adoption of digital and other technologies may cause a definitive break away from historical patterns of growth and decline, and open up a way to sustained growth and structural change or, as feared by some, environmental disaster.<sup>9</sup> Only by studying Africa's past economic performance can we develop an empirically grounded understanding of the extent to which current development patterns differ from previous economic booms.

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<sup>4</sup> Skocpol, 'Doubly engaged social science'.

<sup>5</sup> McMillan and Headey, 'Introduction – Understanding structural transformation in Africa'; McMillan, Rodrik and Verduzco-Gallo, 'Globalization, structural change and productivity growth'.

<sup>6</sup> Collier, 'Poverty reduction in Africa'; Collier and Dercon, 'African agriculture in 50 years'. On Uganda, Deininger and Okidi, 'Growth and poverty reduction in Uganda'; Ellis and Bahiigwa, 'Livelihoods and rural poverty reduction'.

<sup>7</sup> Rodrik, 'African growth miracle?'; Harrison, Lin and Xu, 'Explaining Africa's (dis)advantage'.

<sup>8</sup> Schoneveld, 'Geographic and sectoral patterns'.

<sup>9</sup> Barrios et al., 'The impact of climate change'; Jayne, Chamberlin, and Heady, 'Land pressures'; Wiggins, 'African agricultural development'.

Relatedly, Africa's past offers a testing ground for explanations of long-term and persistent poverty and growth failure. Explanations of weak economic development should not only focus on present day outcomes, but also speak to the historical empirical record, including its booms and busts.<sup>10</sup> If local constraints or external influences have constrained African growth in the long run, in what ways did such forces enable or limit the ability of Africans to participate in previous episodes of agricultural commercialization and economic change?

There is also an important inherent value in reconstructing Africa's economic past, which remains subject to considerable speculation and public misconception. For example, stereotypical renderings of the colonial era as a period of *benign external influence*, prematurely cut short by post-colonial mismanagement, or, to the contrary, as a period of *external plunder* and unqualified underdevelopment with persistent consequences, continue to be widely reproduced.<sup>11</sup> In either narrative, the variegated nature of African environments, local institutions and colonial experiences are unduly underplayed, and the roles of ordinary Africans in shaping their own destinies remain obscured.

To deepen our understanding of how various external influences and local conditions influenced African agrarian change and economic dynamism, we must define and disentangle the causal mechanisms at stake. The case of Uganda is of particular relevance here, as several defining overall characteristics and internal differences make Uganda a suitable testing ground for generalized views on African development.

In some ways, colonial Uganda was an exemplary case of a 'peasant export economy'. Common characteristics of these peasant export economies were that Africans retained access to their own land (unlike in the 'settler economies' of eastern and southern Africa), and that the colonial economy depended heavily on the self-employed agricultural labour of rural households, even though export marketing tended to be dominated by expatriate firms.<sup>12</sup> As was the case in the most dynamic export economies of West Africa, such as Ghana and the

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<sup>10</sup> Jerven, 'African growth recurring'.

<sup>11</sup> The case that European colonialism was a benign force is made in Ferguson *Empire*, and it also finds its way in political discourse, e.g. Spectator, 'Africa is a mess, but we can't blame colonialism', at <https://blogs.spectator.co.uk/2016/07/boris-archive-africa-mess-cant-blame-colonialism/#>; L'express, 'Pour François Fillon, la colonisation visait à "partager sa culture"' [http://www.lexpress.fr/actualite/politique/pour-francois-fillon-la-colonisation-visait-a-partager-sa-culture\\_1825773.html](http://www.lexpress.fr/actualite/politique/pour-francois-fillon-la-colonisation-visait-a-partager-sa-culture_1825773.html). The case that European colonialism underdeveloped Africa was famously made in Rodney, *How Europe underdeveloped Africa*, and is championed by some leaders, e.g. The Guardian, 'Mugabe denounces Britain as 'thieving colonialists' <https://www.theguardian.com/world/2008/apr/18/zimbabwe.independence>.

<sup>12</sup> Austen, *African economic history*, pp. 122-54; Bowden, Chiripanura and Mosley, 'Measuring and explaining poverty in six African countries'; Austin, 'Explaining and evaluating the cash crop revolution'.

Gambia and Nigeria, African households in Uganda were responsible for a quick expansion of export crop production during the early colonial era.<sup>13</sup> Uganda stood out as the most dynamic peasant export economy of eastern Africa. Within a matter of decades, millions of rural households participated in the cultivation of cotton and coffee, and the most commercialized areas attracted large numbers of labour migrants. Uganda also shared with the peasant export economies of West Africa a levelling off of agrarian change and economic diversification towards the end of the colonial period.<sup>14</sup>

In other ways, however, Uganda was distinctly *different* from the West African peasant economies. First, unlike West Africa, Uganda had no pre-colonial history of export agriculture to speak of, and the cash crop revolution found its origin *after* the imposition of colonial rule. Uganda is situated in the Great Lakes region, which had long been a site of densely populated and centralized polities. At the same time, the region was landlocked and separated from the coast by sparsely populated wasteland, known as the *Nyika*.<sup>15</sup> Until the second half of the nineteenth century, commercialization was limited by prohibitive export costs. Due to the long and hazardous haul to the coast, human captives and ivory presented the only viable exports for those seeking to obtain import commodities. This condition was only overcome shortly after the onset of colonial rule with the completion of a railroad from Mombasa to Lake Victoria in 1901.<sup>16</sup> The reorientation of Uganda's early-colonial economy towards export production was therefore more abrupt than for example in Ghana, the Gambia or Nigeria. This swift breakthrough requires particular clarification.

Second, some of the most pronounced cash crop revolutions in West Africa predated colonialism (groundnuts in Senegal and the Gambia, palm oil on the coast of the Gulf of Guinea), or took place with minimal colonial involvement (cocoa in the West African forest belt, groundnuts in northern Nigeria).<sup>17</sup> In Uganda, in contrast, the cash crop revolution took place after the establishment of colonial control, and the intervention of the colonial government in local economic affairs was much greater than in West Africa. Even though

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<sup>13</sup> Austin 'Explaining and evaluating'.

<sup>14</sup> Fieldhouse, *The West and the Third World*; Austen, *African economic history*; Austin, 'Vent for surplus or productivity breakthrough?'

<sup>15</sup> Austen, *African economic history*, p. 56.

<sup>16</sup> Transport costs from Kampala to the coast per ton dropped from over 300 pound portage costs, to 2.40 pound rail freight on the railways. That is a reduction of transportation costs to the coast of a staggering 99%. The time required for the journey was also cut considerably, from three months to six days. O'Connor, *Railways and development*, pp. 36-7.

<sup>17</sup> Hill, 'Migrant cocoa-farmers'; Hogendorn, *Nigerian groundnut exports*; Swindell and Jeng, *Migrants, credit and climate*.

Uganda was no 'settler colony', its colonial government maintained close connections with the neighbouring British colony of Kenya.<sup>18</sup> Moreover, even though 'peasants' eventually took primacy over 'settlers', the colonial state, seeking a 'business model' for the newly acquired territory, had initially attempted to attract expatriate settlers and plantation owners.<sup>19</sup> A small number of expatriate plantations survived throughout the colonial period.<sup>20</sup> Although the South Asian traders of Uganda performed roles similar to Middle Eastern traders in West Africa, the former were considerably more dominant in Uganda than the latter were in West Africa.<sup>21</sup> Uganda also differs from its West African counterparts in that direct colonial taxes formed a much larger part of the state budget than in West Africa, where trade taxes dominated.<sup>22</sup> To what extent, then, should we attribute economic change in colonial Uganda to either African responses to a unique set of changing local realities, or to externally imposed colonial policies?

Third, Uganda's great reliance upon cotton, for most of the colonial period, contrasts quite sharply with other African export economies. While there was a clear benefit that smallholders in Ghana could reap from cultivating cocoa, and dry-season migrant farmers in Senegal and the Gambia from cultivating groundnuts, the benefits of cotton in Uganda were less obvious. Cotton was a particularly sought-after export commodity among European colonial governments and business interests, and it earned the reputation of being the 'premier colonial crop.'<sup>23</sup> At the same time, however, among African cultivators it had a reputation for being labour intensive, hardly remunerative and disruptive, and it was indeed widely resisted and rejected throughout the continent.<sup>24</sup> Why was the response of Ugandan smallholders so different than elsewhere? This question becomes even more pressing when we consider the fact that, as shown recently by Frankema and Van Waijenburg, the development of urban real wages in Uganda remained close to subsistence level for most of the colonial period, and followed trends much more in line with the neighbouring 'settler colony' of Kenya, rather than the 'peasant export colonies' of West Africa.<sup>25</sup> That Kampala experienced a rapid diversification of economic opportunities for men and women, as has recently been argued by

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<sup>18</sup> Brett, *Colonialism and underdevelopment*; Van Zwanenberg and King, *Economic history of Kenya and Uganda*.

<sup>19</sup> Youe, 'Peasants, planters and cotton capitalists'.

<sup>20</sup> Ahluwalia, *Plantations and the politics of sugar*.

<sup>21</sup> Jamal, 'Asians in Uganda, 1880-1972'.

<sup>22</sup> Frankema and Van Waijenburg, 'Metropolitan blueprints of colonial taxation?'

<sup>23</sup> Isaacman and Roberts, 'Cotton, colonialism and social history', p. 29.

<sup>24</sup> Ibid.

<sup>25</sup> Frankema and Van Waijenburg, 'Structural impediments to African growth?'

Meier zu Selhausen and Weisdorf, adds another layer of ambiguity to the nature of Uganda's colonial economy and its place in comparative debates concerning African welfare development in the colonial era.<sup>26</sup>

On its own terms, Uganda also provides plenty of internal variety to exploit for comparative research, in terms of agro-ecology, market access, population density, and local institutions. Uganda's agro-ecology can be divided into two major zones, separating the country diagonally from the southeast to the northwest. The southwestern zone is characterized by a forest-savannah mosaic, imposed on undulating hills and deep fertile soils. Here, perennial crops – banana, cassava and sweet potato in particular – dominated the diet. The northeastern zone is characterized by flat, woodland savannah. Here, instead, farmers relied primarily on the cultivation of annually sown crops such as millet, groundnuts and sesame seed, as well as cassava and sweet potatoes. Livestock played a key role in some parts of Uganda, although its role and importance is limited in other parts by endemic 'sleeping sickness', which as well as affecting humans, is particularly devastating to livestock.<sup>27</sup> The two farming systems largely coincided with an ethnolinguistic divide, with Bantu speaking groups in the south-west, and Nilotic speaking groups in the north-east. The south-west of Uganda was part of the 'interlacustrine region', which presently encompasses southwestern Uganda, northeastern Tanzania, Rwanda, Burundi, within which a number of centralized Kingdoms had developed over centuries before the arrival of Europeans.<sup>28</sup> This internal variation provides scope for 'natural experiments' to test how the impacts of colonial policies and market integration were uneven and mediated by factor endowments and local institutions.

### **III. Drivers of economic change in colonial Uganda**

This thesis does not intend to provide a comprehensive account of economic change in colonial Uganda, nor does it exhaustively discuss the agrarian sector. Instead, each chapter makes an inroad into contemporary debates of comparative African development. That said, the five papers are linked thematically and share a number of underlying key variables, concepts and theories on the nature of historical and agrarian change. This section aims to

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<sup>26</sup> Meier zu Selhausen and Weisdorf, 'Colonial legacy of African gender inequality?'

<sup>27</sup> Extensive overviews of Uganda's ecology and farming conditions in the twentieth century are provided in Jameson, *Agriculture in Uganda*; Langlands, *Agricultural change in Uganda*; McMaster, *A subsistence crop geography of Uganda*; Parsons, *The systems of agriculture practiced in Uganda*; Tothill, *Agriculture in Uganda*.

<sup>28</sup> Chrétien, *The great lakes of Africa*; Kodesh, *Beyond the royal gaze*; Schoenbrun, *A green place, a good place*.

make this explanatory framework explicit, and to discuss and justify the choice of determinants and variables. The framework is presented in figure 1 below.

Central to the framework are *the productive activities of rural households*. Such activities are an important element of any story of rural commercialization and occupational diversification. Households were particularly central to the ‘peasant export economies’ of colonial Africa, as these economies did not have capital-intensive industries such as mining, industry and high-tech industry. In Uganda, millions of rural households produced the exports crops – as smallholders and rural labourers – providing an interface between the local economy and the world market, generated the taxable income that underpinned the colonial treasury, and accounted for the domestic and subsistence economy upon which the cash-crop economy was grafted. At independence in 1962, Uganda was still overwhelmingly rural and agrarian, with only 3.8 per cent of the entire population living in cities, towns or trading centres. Only 11.5 per cent of the adult population was formally employed at all, and a mere 7.9 per cent outside of agriculture, of which the far majority were men.<sup>29</sup> Rural households, their productive choices and their livelihoods have been studied extensively in contemporary developing context, primarily with the aim to investigate the impact on ‘ordinary people’ of variegated factors, such as climate change, technology diffusion, trade integration and policy interventions.<sup>30</sup> A similar approach can be used to assess the historical impact of trade, colonial policies, local institutions and factor endowments.<sup>31</sup>

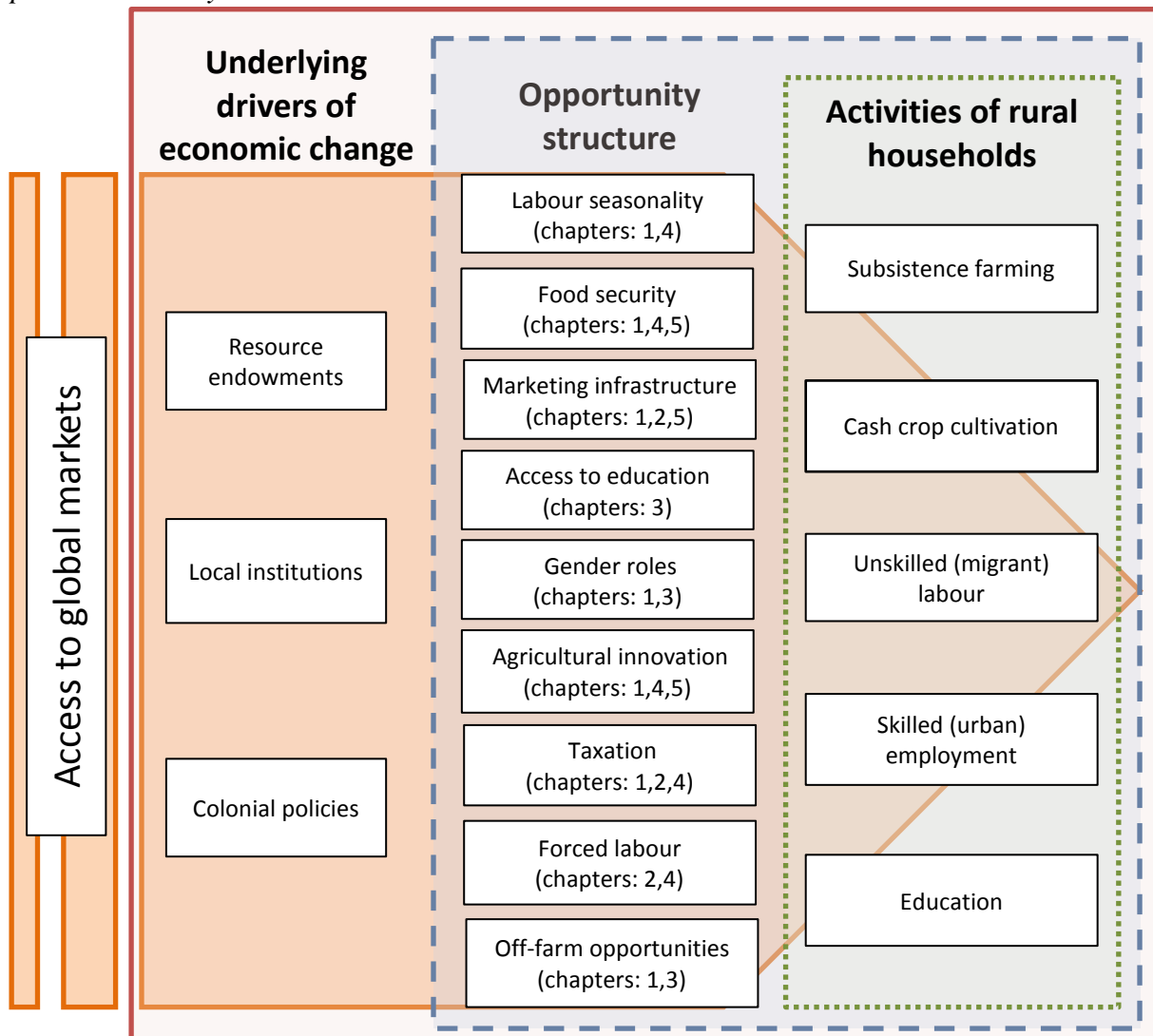
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<sup>29</sup> Based on population estimates from Uganda, *1959 Census*, p.1, and employment estimates from Uganda, *Annual Report of the Labour Department, 1959*, p. 65.

<sup>30</sup> Barrett, Reardon and Webb, ‘Nonfarm income diversification’; Bryceson, ‘The scramble in Africa’; Ellis, ‘Rural livelihoods and diversity’; Scoones, ‘Sustainable rural livelihoods’. For Uganda Deininger and Okidi, ‘Growth and poverty reduction in Uganda’; Ellis and Bahiigwa, ‘Livelihoods and rural poverty reduction’; Rider Smith et al., ‘Livelihood diversification in Uganda’.

<sup>31</sup> As demonstrated, for example, in Berry, *No condition is permanent*.

**Figure 1.** *Conceptual framework to explain agricultural commercialization in a colonial peasant economy*



As illustrated by the arrow in the framework, I treat *increased access to global markets* as the defining external ‘shock’ which set in motion changes in the productive activities of households during the colonial era. The extension of infrastructure – most iconically the railways – has been widely acknowledged as a key determinant of African economic change in the colonial era, and the cash-crop revolution in the peasant export economies in particular. The idea that market integration was central to African economic change in the early twentieth century has found its most explicit articulation in the ‘vent for surplus’ framework (VFS). This framework was developed by the Burmese development economist, Hla Myint, to



describe the rapid growth of agricultural exports in southeast Asia, but has since also been widely applied to an African context.<sup>32</sup>

VFS basically boils down to the idea that new transportation infrastructure provided rural households with an external market ('vent') for underutilized land and labour resources ('surplus'). VFS predicts that market access more or less automatically results in the adoption of export crops. Considering its landlocked position and its historically marginal place in global trade, the role of the railway to create a 'vent' for the Great Lakes region is obvious and can go largely undisputed.<sup>33</sup> It is also important to note upfront that trade integration through the extension of infrastructure was not contingent on colonial rule. In fact, the Kingdom of Buganda had a large internal road network before the arrival of the British, and as several scholars have remarked, it is certainly not unthinkable that the Baganda would have managed to attract investors to build a railroad or road network without colonial interference (as the Ethiopians did).<sup>34</sup>

The impact of access to (global) markets on the (productive) activities of households is not direct, but shaped by local conditions which, in their most abstract rendering, can be subsumed under the headings of 'institutions' and 'geography.' As illustrated in figure 1, I focus on the direct and tangible ways in which environmental conditions, local institutions and colonial policies affected the opportunity structure faced by African rural households. Most of 'deep' geographical and institutional factors which have recently played a central role in the literature on African long-term development fall outside the scope of this study.<sup>35</sup>

The nature and impact of *colonial policies* has been the subject of a longstanding scholarly and public debate, and, in a broader African perspective, have variously been portrayed as 'benign',<sup>36</sup> 'insufficient',<sup>37</sup> or 'extractive'.<sup>38</sup> These differing positions on colonial policy have also been articulated in the economic historiography of Uganda. The first wave of Ugandan economic history originated from the East African (now Makerere) Institute of Social Research (Kampala) during the 1950s and 1960s. It was characterized by a 'qualified

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<sup>32</sup> See Austin, 'Vent for surplus' and Austin, 'Explaining and evaluating' for the most recent comprehensive contribution and a discussion of the older literature.

<sup>33</sup> Wrigley, *Crops and wealth*; O'Connor, *Railways and development*; Brett, *Colonialism and underdevelopment*.

<sup>34</sup> See Austen, *African economic history*, p. 123; Heldring and Robinson, 'Colonialism and development in Africa'; Reid, *Political power in pre-colonial Buganda*; Reid, *A history of modern Uganda*

<sup>35</sup> See footnote 2.

<sup>36</sup> Ferguson, *Empire*; Gann and Duignan, *The Burden of Empire*.

<sup>37</sup> Fieldhouse, *The West and the Third World*.

<sup>38</sup> Rodney, *How Europe underdeveloped Africa*; Acemoglu and Robinson, 'Why is Africa poor?'

optimism' about colonial influences, and focused on labour policies, agrarian change, and the marketing of cotton, among others.<sup>39</sup> This early wave of scholarship fits well with a broader strand of scholarship Austen has labelled 'liberal', and which, in his words, 'tends to stress market imperfections caused by continuing ecological problems as well as misguided political intervention in the economy'.<sup>40</sup> None of these works explicitly interrogated the imperialist motives of Britain in Uganda, nor did they question the positive impact of cash crops on Uganda's economy and society. They did, however, point at the different ways in which specific colonial policies hampered development. Ehrlich, for example, argued that paternalistic tendencies of the British colonial government, and its obsession with 'tidiness,' prevented African traders from entering cotton marketing and developing their entrepreneurial skills.<sup>41</sup>

Inspired by wider trends in scholarship and influenced by Uganda's political and economic collapse, historical scholarship took a very different turn during the 1970s and 1980s. Rejecting the idea that colonialism was essentially benign, scholars began to treat colonial influences as inherently exploitative and malign. Mafeje aimed to demonstrate that colonialism had cut off the potential for sustained agrarian change, Taylor and Youe revisited the issue of cotton marketing, attempting to show how Uganda's colonial economy had been subordinated to the British textile industry, and Vali discussed how colonial policy had engendered social differentiation and racial inequalities.<sup>42</sup> On a more general level, Brett, Mamdani and Jørgensen focused on how colonialism had produced an economic system of internal division and differentiation, and external dependency and unequal trade relations.<sup>43</sup> For Mamdani, Uganda's labour reserves did not arise naturally from their peripheral geography, but were intentionally underdeveloped by the colonial government to gain access to cheap labour. He also argued that the state did not keep Africans out of trading and processing for 'paternalist' reasons, but to protect the interests of European capitalists.<sup>44</sup> Again, Austen provides a useful characterization of this strand of scholarship, labelling it as

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<sup>39</sup> Ehrlich, 'Marketing of cotton'; Powesland, *Economic policy and labour*; Wrigley, *Crops and wealth*.

<sup>40</sup> Austen, *African economic history*, p. 138.

<sup>41</sup> Ehrlich, 'Marketing of cotton'; Ehrlich, 'Some social and economic implications'.

<sup>42</sup> Mafeje, 'Agrarian revolution and the land question in Buganda'; Taylor, 'The struggle for economic control of Uganda'; Taylor, 'Role of the British cotton industry'; Taylor, 'The establishment of a European plantation sector'; Youe, 'Peasants, planters and cotton capitalists'; Youe, 'Colonial economic policy in Uganda'.

<sup>43</sup> Brett, *Colonialism and underdevelopment*; Jørgensen, *Uganda: A modern history*; Mamdani, *Politics and class formation in Uganda*. Van Zwanenberg and King produced a more descriptive account, Van Zwanenberg and King, *An economic history of Kenya and Uganda*.

<sup>44</sup> Mamdani, *Politics and class formation*, pp, 73, 133.

‘structuralist’ or ‘marxist’, and describing its definition of colonial policy as an attempt to preserve ‘traditional modes of production ... by the colonial agencies of capitalism to maintain their position of dominance over the African economy’.<sup>45</sup>

Although they fundamentally disagree in their assessment of colonial policies, both ‘liberal’ and ‘structuralist’ scholars place much weight on policies per se. While liberal scholarship conveyed a belief in ‘getting the policies right’, structuralist scholarship conceptualized colonial economies as inherently exploitative systems, in which expatriate capitalists and their local collaborators were pitted against a victimized, and sometimes resistant, population of African peasants and labourers. More recent scholarship has effectively complicated both narratives. Firstly, there has been a growing awareness that colonial policies were not ‘designed’, but were instead an outcome of complex interactions between variegated and often contradictory actors.<sup>46</sup> Engdahl, for example, again revisited cotton marketing in colonial Uganda, demonstrating that policies were not deliberately ‘paternalistic’ or ‘exploitative’ but shaped by peasants, chiefs, traders, the imperial government and local colonial officers, who were ‘constrained by local circumstances, implementation capacity and by their knowledge of the community which they tried to control’.<sup>47</sup>

Secondly, more recent scholarship has emphasized that external influences interacted with existing *local institutions*<sup>48</sup> and *resource endowments*.<sup>49</sup> Through an in-depth study of Bunyoro, and a second comparative study of two Ugandan and one Tanzanian region, Doyle has shown that demographic patterns in various regions varied substantially, and has highlighted how these different outcomes resulted from different ecologies, indigenous social structures and uneven colonial influences.<sup>50</sup> Carswell has zoomed in on agrarian change in Kigezi, a region peripheral to Uganda’s cash-crop economy, arguing that the colonial focus on cash crops failed here because farmers preferred to commercialize food crops rather than cultivate the cash crops introduced by the colonial government.<sup>51</sup> Hanson has argued that the impact of colonial policies on Buganda should be seen in light of an ongoing transformation

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<sup>45</sup> Austen, *African economic history*, p. 138.

<sup>46</sup> For the original argument, formulated in the context of the ‘settler colony’ Kenya, Lonsdale and Berman, ‘Coping with the contradictions’. For Portuguese colonial agrarian politics, Pitcher, *Politics in the Portuguese empire*.

<sup>47</sup> Engdahl, ‘Exchange of cotton’, p. 232.

<sup>48</sup> Berry, *No condition is permanent*.

<sup>49</sup> Tosh, ‘Cash-crop revolution’; Austin, ‘Resources, techniques and strategies’.

<sup>50</sup> Doyle, *Crisis and decline in Bunyoro*; Doyle, *Before HIV*.

<sup>51</sup> Carswell, ‘Food crops as cash crops’; Carswell, *Cultivating success in Uganda*.

of Buganda's economic system based on 'reciprocal obligation' to one organized on the basis of commercial transactions.<sup>52</sup> Pallaver discussed the long-term history of monetary practices, in which the introduction of colonial currency was only one step in a longer sequence of changes towards increased commercialization in Buganda.<sup>53</sup>

While resource endowments play an important part in the work of Doyle, Carswell and Hanson, its crucial importance for understanding agrarian change in Uganda has been most explicitly addressed in the pioneering studies of John Tosh. Tosh grounded his argument in his own field and archival research in Lango, an area in northern Uganda,<sup>54</sup> but extended it into a comparative assessment of agricultural commercialization in colonial Africa.<sup>55</sup> The central tenet of Tosh's argument is that the adoption of cash crops for export was constrained in the 'savanna' – which covered most of Sub-Saharan Africa – by short growing seasons and labour-intensive agricultural practices, resulting in seasonal labour scarcity which limited the extension of agriculture. In the context of Uganda, Tosh emphasized the difference between the 'forest' region in the south, which relied on banana cultivation, and the 'savannah' region in the north, which relied on more labour-intensive grain cultivation, as a determinant of farmers' receptivity towards cash crops. Tosh's perspective has played an important role in subsequent literature addressing the place of Uganda in Africa's colonial economic and agrarian history.<sup>56</sup>

Another important trend in recent scholarship has been an 'empirical turn' away from integrated, theory-driven assessments of colonial policy, and towards measuring specific colonial influences and legacies.<sup>57</sup> Doyle's work on the demographic impact of colonialism has been pioneering in this respect, making extensive use of colonial censuses, surveys and studies, as well as missionary parish registers.<sup>58</sup> More recently, Meier zu Selhausen, Weisdorf and Van Leeuwen have made a substantial contribution to this empirical strand of literature, assessing the impact of colonial and missionary influences on female empowerment, social mobility and human capital formation on the basis of a large dataset of Protestant marriage

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<sup>52</sup> Hanson, *Landed obligation*.

<sup>53</sup> Pallaver, 'The African native has no pocket'.

<sup>54</sup> Tosh, *Colonial chiefs*; Tosh, 'Lango agriculture'.

<sup>55</sup> Tosh, 'Cash-crop revolution'.

<sup>56</sup> Austen, *African economic history*; Austin, 'Resources, techniques, and strategies'; Austin, 'Explaining and evaluating the cash crop revolution'.

<sup>57</sup> Austin, 'The "Reversal of Fortune" thesis'; Austin and Broadberry, 'Renaissance of African economic history'; Fenske, 'The causal history of Africa'; Fourie, 'The data revolution in African economic history'; Hopkins, 'New economic history of Africa'.

<sup>58</sup> Doyle, *Crisis and decline in Bunyoro*; Doyle *Before HIV*.

registers.<sup>59</sup> Recently, Meier zu Selhausen, Doyle and Weisdorf have begun to explore patient registers as well.<sup>60</sup>

The ‘empirical turn’ has allowed for explicit comparisons between Uganda and other colonial settings. Bowden, Chiripanhura and Mosley have examined long-term trends in poverty in a sample of ‘peasant’ economies and ‘settler’ economies, to conclude that the colonial legacy of the former was more conducive to poverty reduction in later years.<sup>61</sup> Bossuroy and Cogneau have examined social mobility outcomes in a sample of British colonies and French colonies, to conclude that the former were characterized by greater levels of social mobility between the rural and urban sectors.<sup>62</sup> Frankema has investigated the emergence of formal education in a set of British colonies, to conclude that British educational policies were ‘endogenous to the local political and economic context’.<sup>63</sup> Frankema and Van Waijenburg have studied wages and taxes in a large sample of countries in East Africa and West Africa, to conclude that wages were lower, and direct taxes higher in the former, which they attribute to different local conditions.<sup>64</sup> Papaioannou and De Haas have mapped the cash-crop production in more than 200 individual districts in British colonial Africa, demonstrating that districts with cash crops were less susceptible to social destabilization during weather shocks.<sup>65</sup> Simson has compared colonial bureaucratic legacies within British East Africa.<sup>66</sup>

Empirical approaches to African and Ugandan history have measured, evaluated and explained a variety of outcome variables (including health, urban incomes, biological standards of living, taxation and education provision), but rural livelihoods have so far remained out of scope. This striking rural omission in the expanding empirical literature on African long-term development has been attributed to the paucity of data on historical rural

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<sup>59</sup> Meier zu Selhausen, ‘Missionaries’; idem, ‘Women’s empowerment’; Meier zu Selhausen and Weisdorf, ‘Colonial legacy’; Meier zu Selhausen, Weisdorf and Van Leeuwen, ‘Social mobility’.

<sup>60</sup> Ongoing research: paper presented at the Sixth Annual Meeting of the African Economic History Network Meeting, Sussex (UK), 21-22 Oct. 2016.

<sup>61</sup> Bowden, Chiripanhura and Mosley, ‘Measuring and explaining poverty’.

<sup>62</sup> Bossuroy and Cogneau, ‘Social mobility’. Austin reinterprets their findings in the ‘peasant versus settler’ framework, Austin ‘African economic development and colonial legacies’.

<sup>63</sup> Frankema, ‘Origins of formal education’, p. 352.

<sup>64</sup> Frankema and Van Waijenburg ‘Structural impediments to African growth?’; idem, ‘Metropolitan blueprints of colonial taxation?’.

<sup>65</sup> Papaioannou and De Haas, ‘Weather shocks and agricultural commercialization’. Although Uganda, for data reasons, was not included in the regression analysis on social destabilization, their later, non-published replication effort confirms that Uganda, complying with the broader pattern in export-oriented areas, was comparatively insensitive to weather shocks.

<sup>66</sup> Simson, ‘Patronage or meritocracy?’.

Africa.<sup>67</sup> While such data limitations are real and cap the potential for detailed historical reconstruction, recent contributions have shown that there is still plenty of scope for further exploitation of available primary source materials. Cogneau and Rouanet, Moradi, and Moradi, Austin and Baten have examined individual micro-data from military recruit records to explore the development of the (rural) biological standard of living in several African colonies.<sup>68</sup> Obikili has used a survey of cocoa farmers in Nigeria in 1952 to study the relationship between social and human capital.<sup>69</sup> Arthi and Fenske have used detailed time-use data in a Nigerian village in 1939, extracted from the diary of an anthropologist, to study intra-household allocation of labour.<sup>70</sup> This thesis further pursues this agenda of reconstructing, evaluating and explaining economic change, taking the rural household as the focal point.

#### **IV. Methods and sources**

Most of the research conducted for this thesis pertains to colonial Uganda, but the underlying research questions are comparative. The nature of the comparison, method chosen, and data and sources used, are tailored to each of the subjects treated in the five individual papers. For example, the reconstruction of livelihoods of farmers and labourers in colonial Uganda (chapter 1) is grounded in a method chosen to reconstruct and compare real wages, based on a time series of annual wages and consumer prices, which I supplement with producer prices and incidental household level agricultural surveys. The assessment of the role of migrants from Belgian Ruanda-Urundi in Uganda's labour market (chapter 2) is equally based on the construction of a time series based on wages and prices, but complemented this time by extensive narrative and quantitative evidence from administrative records in colonial archives in Belgium, the United Kingdom and Uganda. The reconstruction of educational and occupational opportunities (chapter 3) relies on a range of colonial reports, studies, and censuses, as well as backward projection and econometric cross-sectional analysis of individual-level microdata from the 1991 population census. The impact of labour seasonality and food security on cash-crop cultivation (chapter 4) is based on an econometric panel analysis of district-level time series on monthly rainfall and annual cotton acreages, as well as

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<sup>67</sup> Jerven, 'Users and producers of African income'.

<sup>68</sup> Cogneau and Rouanet, 'Living conditions in Côte d'Ivoire and Ghana'; Moradi, 'Towards an objective account'; Moradi, Austin and Baten, 'Heights and development'.

<sup>69</sup> Obikili, 'Social capital and human capital'.

<sup>70</sup> Arthi and Fenske, 'Intra-household labor allocation'.

cross-sectional analysis of household level agricultural statistics, both from colonial sources. The comparison of ‘cotton revolutions’ in twentieth century Africa (chapter 5) is most explicitly comparative in character, and based on a close reading of secondary literature, as well as time series of cotton production, prices and yields. The final two chapters are additionally informed by semi-structured interviews in Teso District in Uganda, which was known to be particularly receptive to cotton in the colonial era. In six separate locations, I interviewed approximately 30 selected elderly farmers with recollections of the colonial period. For the entire thesis, these interviews were vital in balancing and corroborating arguments that were otherwise based primarily on colonial source materials.

Two sources deserve particular mention, as they illustrate the breadth of the data collection effort that underpins this thesis. At one end of the spectrum, I used the *1991 Population and Housing Census*, which contains information on age, sex, religion, education and a range of other variables for more than 1.5 million individuals, and has been made available digitally through the IPUMS project.<sup>71</sup> At the other end of the spectrum, I collected approximately 25 village surveys which had been conducted across Uganda from the 1930s to the 1960s. As noted before, data on African rural development is patchy, which makes reconstruction painstaking and difficult. In that light, the Ugandan village surveys provide a particularly detailed and unique insight into the activities of ordinary rural households. What makes them particularly accessible is that they followed a standardized procedure of measuring and reporting, which was maintained throughout the entire period. In some cases, villages were visited on multiple occasions. A share of the survey reports was published by the colonial agricultural department in the 1930s, in some cases with the accompanying household level data appended.<sup>72</sup> Many other surveys, however, were not included in this publication, and I had to retrieve them from archives in the United Kingdom (Cambridge and London) and Uganda (Jinja and Kabale), as well as other published sources. Unfortunately, most of the underlying household-level microdata that was initially collected has not survived the ravages of termites, civil war and neglect, although some remains and has been used in chapter 4.

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<sup>71</sup> Minnesota Population Center, *Integrated Public Use Microdata Series*. Original data from Uganda Bureau of Statistics, *1991 Population and Housing Census*.

<sup>72</sup> Tothill, *Nineteen surveys*.

## **V. Overview of chapters**

The first chapter of this thesis aims to reconstruct Ugandan rural welfare development. Recent scholarship on historical welfare development in Sub-Saharan Africa has uncovered long-term trends in standards of living. How most rural dwellers fared, however, remains largely elusive. I develop a new approach to reconstruct rural living standards in a historical context, building upon a well-established real wage literature, but moving beyond it to capture rural realities, employing sub-national rural survey, census, and price data. The approach is applied to a case study of colonial and early post-colonial Uganda (1915–70), and yields a number of findings. While an expanding smallholder-based cash-crop sector established itself as the backbone of Uganda's colonial economy, farm characteristics remained largely stagnant after the initial adoption of cash crops. Smallholders maintained living standards well above subsistence level, and while the profitability of cash crops was low, their cultivation provided a reliable source of cash income. Around the time of decolonization, unskilled wages rose rapidly while farm incomes lagged behind. As a result, an urban–rural income reversal took place. The study also reveals considerable differences within Uganda. Smallholders in Uganda's banana regions required fewer labour inputs to maintain a farm income than their grain-farming counterparts, creating opportunities for additional income generation and livelihood diversification.

The second chapter zooms in on one of the largest flows of labour migration during the colonial era, which emerged in the early 1920s, and connected Belgian-controlled Ruanda-Urundi to British-controlled Buganda, on the shores of Lake Victoria. The emergence of new labour mobility patterns was a key aspect of economic change in colonial Africa. Under conditions of land abundance and labour scarcity, the supply of wage labour required either the 'pull' forces of attractive working conditions and high wages, or the 'push' forces of taxation and other deliberate colonial interventions. Building upon primary sources, I show that this case diverges from the 'conventional' narrative of labour scarcity in colonial Africa. I argue that Ruanda-Urundi should be regarded as labour abundant and that migrants were not primarily 'pushed' by colonial labour policies, but rather by poverty and limited access to agricultural resources. This explains their willingness to work for low wages in Buganda. I show that African rural employers were the primary beneficiaries of migrant labour, while colonial governments on both sides of the border were unable to control the course of the flow.



The third chapter, co-authored with Ewout Frankema, zooms out of the rural economy, evaluates the broader opportunity structures faced by African men and women in Uganda, and discusses the interaction of local institutions and colonial policies as drivers of uneven economic change. We engage with a recent article by Meier zu Selhausen and Weisdorf (2016) to show how selection biases in, and Eurocentric interpretations of, parish registers have provoked an overly optimistic account of European influences on the educational and occupational opportunities of African men and women. We confront their dataset, drawn from the marriage registers of the Anglican Cathedral in Kampala, with Uganda's 1991 census, and show that trends in literacy and numeracy of men and women born in Kampala lagged half a century behind those who wedded in Namirembe Cathedral. We run a regression analysis showing that access to schooling during the colonial era was unequal along lines of gender and ethnicity. We foreground the role of Africans in the spread of education, and argue that European influences were not just diffusive but also divisive, and that gender inequality was reconfigured rather than eliminated under colonial rule. This chapter also makes a methodological contribution. The renaissance of African economic history in the past decade has opened up new research avenues for the study of the long-term social and economic development of Africa. A sensitive treatment of African realities in the evaluation of European colonial legacies, and a critical stance towards the use of new sources and approaches, is crucial.

The fourth chapter, co-authored with Kostadis Papaioannou, singles out the role of resource endowments in explaining Uganda's 'cotton revolution' in a comparative African perspective. Why did some African smallholders adopt cash crops on a considerable scale, while most others were hesitant to do so? We set out to explore the importance of factor endowments in shaping the degrees to which cash crops were adopted in colonial tropical Africa. To this end, we conduct an in-depth case study of the 'cotton revolution' in colonial Uganda to put the factor endowments perspective to the test. Our empirical findings, based on an annual panel data analysis at the district-level from 1925 until 1960, underscore the importance of Uganda's equatorial bimodal rainfall distribution as an enabling factor for Uganda's 'cotton revolution'. We also provide evidence at a unique spatial micro-level, capitalizing on detailed household surveys from the same period. We demonstrate that previous explanations associating the variegated responses of African farmers to cash crops either to the role of colonial coercion, or to a distinction between 'forest/banana' and 'savannah/grain' zones cannot explain the widespread adoption of cotton in Uganda. We argue, instead, that the key

to the cotton revolution was Uganda's two rainy seasons, which enabled farmers to grow cotton while simultaneously pursuing food security. Our study highlights the importance of food security and labour seasonality as significant determinants of agricultural commercialization in colonial tropical Africa.

The fifth, and final, chapter further investigates African smallholders' experience with cotton cultivation, providing a comparative explanatory analysis of variegated cotton outcomes, focusing particularly on the role of colonial and post-colonial policies. I challenge the widely accepted view that (i) African colonial cotton projects consistently failed, that (ii) this failure should be attributed to conditions specific to Africa, which made export cotton inherently unviable and unprofitable to farmers, and that (iii) the repression and resistance often associated with cotton resulted from the stubborn and overbearing insistence of colonial governments on the crop per se. I argue along three lines. Firstly, to show that cotton outcomes were diverse, I compare cases of cotton production in Sub-Saharan Africa across time and space. Secondly, to refute the idea that cotton was *a priori* unattractive, I argue that the crop had substantial potential to connect farmers to markets and contribute to poverty alleviation, particularly in vulnerable, marginal and landlocked areas. Thirdly, to illustrate how an interaction between local conditions and government policies created conducive conditions for cotton adoption, I zoom in on the few but significant 'success stories' of cotton in twentieth-century Africa. Smallholders in colonial Uganda adopted cotton because of favourable ecological and marketing conditions, and policies had an auxiliary positive effect. Smallholders in post-colonial Francophone West Africa faced much more challenging local conditions, but benefitted from effective external intervention and coordinated policy.

## **VI. Conclusions and directions for future research**

Throughout this introduction, I have justified a study of rural livelihoods, agricultural commercialization and occupational diversification in colonial Uganda along two lines. Firstly, I have pointed out that a study of past episodes of economic growth can inform us about the ways in which external influences and local geographical and institutional realities shaped the ability of Africans to respond to and benefit from increased trade integration. Secondly, I have argued that the case of Uganda is particularly compelling, since Uganda's boom was abrupt, emerged during the colonial period and was centred on cotton, a cash crop that failed elsewhere during the colonial era. What, then, explains Uganda's unique cotton

revolution? And how should we understand Uganda's failure to sustain the process of economic growth and welfare development?

I characterize Uganda's cotton revolution as a productivity breakthrough followed by extensive growth. This pattern was predicated on a number of interacting local conditions, which were unique to the context. I have argued that Uganda's cotton revolution extended beyond Buganda and the banana-growing south. This has important implications, because it suggests that neither centralized pre-colonial institutions, nor the favourable agro-ecology of southwest Uganda, can be put forward as plausible explanations for cash-crop adoption itself. Instead, I have pointed to Uganda's equatorial bimodal rainfall pattern as the crucial enabling factor, which allowed farmers to sustainably superimpose the cultivation of cotton upon their subsistence activities. I have also noted that colonial agricultural and marketing policies, while far from impressive, were less harmful to agricultural commercialization than in most other prospective cotton regions in colonial Africa, and created price incentives, marketing conditions, and food provisioning structures that were sufficient – considering Uganda's favourable resource endowments – to effectuate widespread adoption of cotton. The presence of South Asian expatriates, willing and able to trade and process cotton at low cost, further contributed to a particularly conducive environment for a 'cash-crop revolution'.

The situation in Buganda, the most dynamic and occupationally diversified region in colonial Uganda, deserves particular mention. While Buganda does not stand out in terms of cotton cultivation, it does in other respects. Firstly, farmers in Buganda switched from cotton to coffee during the late colonial period. Since coffee yields much greater returns to labour than cotton, the question for Buganda should be: why did farmers not adopt coffee in the first place, or did this switch not happen earlier? The answer is multifaceted. Firstly, one important advantage of cotton was that it yielded quick returns, providing farmers in the early colonial period the means to fulfil their monetary obligations and consumer aspirations. Secondly, the late switch to coffee lay partially in a development towards greater tenure security during the 1920s, which incentivized farmers to invest in a crop that yielded returns only after a number of years. Thirdly, the fact that cotton was sustained for a long time in Buganda should also be seen in the light of an abundant inflow of impoverished migrants from Ruanda-Urundi, which provided Ganda farmers and landlords access to cheap agricultural labour, seasonal tenants and sharecroppers.

Even though Uganda was one of the most dynamic cash-crop economies in colonial Africa, there were also clear limits. Throughout the period, farmers continued to pursue self-sufficiency in food crops, and food-crop cultivation was only commercialized to a very limited extent. The productivity of Ugandan agriculture was low, and yields meagre and stagnant, especially when compared to the substantial yield gains that characterized the cotton take-off in postcolonial Francophone West Africa. Uganda remained overwhelmingly rural, and occupational opportunities outside agriculture were very limited, especially for women, and concentrated in Buganda only. At independence, Uganda's economy was heavily dependent on cotton and coffee, and characterized by substantial spatial, ethnic, racial and gender inequalities.

I foreground two aspects of colonial influences and legacies in Uganda. Firstly, from the study of educational, agricultural and labour policies arises a picture of the British colonial administration in Uganda as pragmatic and complacent. Considering Uganda's highly suitable resource endowments and local institutions, the 'cash-crop revolution' was effectuated and sustained with only minimal colonial investment and limited intervention by colonial officials. It took approximately three decades before a self-sustaining economic structure was in place, relying on voluntary cultivation of cash crops on millions of individual African smallholdings. A coalition with Ganda elites played a crucial role in this early phase. By the 1920s, Uganda's food position was comparatively secure, and its labour supply particularly abundant. Observers from the 1920s onwards commonly referred to Uganda as 'wealthy' and 'rich' compared to other African territories. Christianity and commerce had diffused on a substantial scale, and even the spread of formal education in Uganda was a self-sustaining process. Cash crops were a convenient and easily extractable source of revenue to sustain a colonial administration, and officials (at least until the very final years of colonial occupation) felt little urgency and pressure to effectuate a more profound transformation of occupational and educational opportunity structures for ordinary rural households. Metropolitan cotton interests, rather than spurring on development or extraction in colonial Uganda, jumped on the bandwagon.

That Ugandan economic development increasingly ran its course without heavy-handed colonial intervention<sup>73</sup> should not be taken, however, to imply that colonial policies had little impact on Ugandan long-run development. In many ways, colonial policies were characterized by complacency rather than a genuine commitment to development, and the

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<sup>73</sup> Perhaps with the exception of cotton marketing, as discussed in chapter 5.

colonial economy held limited promise for ordinary Ugandans. Trade and small-scale industry were run by an expatriate minority, and no efforts were made to develop entrepreneurial skills and expand commercial opportunities for Africans. The labour market was dominated by labour migrants willing to work for low wages, and there were no attempts to raise wages and improve working conditions. Farming was commercialized only to a limited extent and yields were poor, but cash crops were forthcoming in sufficient amounts, and there were no attempts to effectuate substantial agricultural productivity gains. The export economy was predicated on food self-sufficiency and the consumption of imported goods, with no efforts to stimulate internal trade and regional specialization. Occupational and educational opportunities were heavily biased towards Buganda, and there was little need to bring these to the rural hinterlands that provided cotton, labour and tax revenues. Pragmatism and complacency had two adverse long-term consequences. Firstly, if Uganda's colonial period provided a 'window of opportunity' to establish foundations for sustained economy growth, this opportunity was largely squandered. By the time the colonial government came to a similar realization, during the mid-1950s, it lacked the legitimacy and time to effectuate change.<sup>74</sup> Secondly, colonial economic policy, both in its presence and its complacent absence, amplified inequalities and institutionalized internal divisions, which manifested themselves clearly and tragically during the post-colonial period.<sup>75</sup>

While this thesis builds on a rich existing literature, and itself contributes to this literature with five targeted 'interventions', there is still ample scope for further research on Uganda's economic past. Firstly, the methods developed in chapter 1 to measure rural welfare development could be further refined and employed in explicit comparisons with rural households in other 'peasant economies'. Such comparisons could generate a better understanding of the commonalities and differences between areas of considerable agrarian dynamism during the colonial period, and thus locate the drivers both enabling and limiting agricultural commercialization and occupational diversification in the long-run. An obvious case for comparison would be Ghana, for which sufficient price, wage, census and survey data are available to make such a comparison. Secondly, to push the 'frontiers' of Ugandan agrarian and economic history itself, it would be helpful to study the reasons for and consequences of the remarkably limited commercialization of food crops. Thirdly, there is

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<sup>74</sup> A point made, for example, by Lury, 'Dayspring mishandled'. Also see Hall, 'Some aspects of economic development'.

<sup>75</sup> Jamal, 'Asians in Uganda, 1880-1972'; Karugire, *The roots of instability in Uganda*; Mutibwa, *Uganda since independence*; Wrigley, 'Four steps to disaster'.

also still much work to be done to quantify Uganda's occupational structure and measurement of regional, ethnic and racial inequality. Finally, I would argue that there is considerable scope for *regional* economic history, which both highlights the interconnectedness *between* different colonial territorial units (e.g. Uganda and Ruanda-Urundi, as demonstrated in chapter 2), and differentiates *within* them. Such an approach, which so far has been tried only to a very limited extent,<sup>76</sup> would counterbalance the excessive primacy that previous ('liberal' and 'structuralist') scholarship has put on 'colony' or 'empire' as the unit of analysis, and would enable us to further foreground drivers of development that defy colonial borders, such as resource endowments and local institutions.

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<sup>76</sup> Chrétien, *Great lakes of Africa*; Doyle, *Before HIV*.

## Chapter 1.

### *Measuring rural welfare in colonial Africa: did Uganda's smallholders thrive?<sup>77</sup>*

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<sup>77</sup> This chapter has been published as De Haas, M., 'Measuring rural welfare in colonial Africa: did Uganda's smallholders thrive?' *The Economic History Review* 70, 2 (2017): 605-31, DOI: 10.1111/ehr.12377. An earlier version has been published as De Haas, Michiel, 'Measuring rural welfare in colonial Uganda: why farmers would not work for wages', *African Economic History Working Paper Series*, No 18 (2014). I thank Jutta Bolt, Corinne Boter, Denis Cogneau, Angus Dalrymple-Smith, James Fenske, Ewout Frankema, Erik Green, Ellen Hillbom, Doreen Kembabazi, Bas van Leeuwen, Felix Meier zu Selhausen, Alexander Moradi, Elise van Nederveen Meerkerk, Kostadis Papaioannou, Jop Woltjer, Susan Zimmerman, colleagues at the Rural and Environmental History Group, Wageningen University, and three anonymous referees for valuable comments on previous drafts of this article. I also thank participants of 'Colonial legacies in African economic history' session at the Tenth Swedish Economic History Meeting, Lund University (5 October 2013); the Social Economic History Graduate Seminar, Utrecht University (31 March 2014); the panel on 'Imperial connections and household labour relations' at the Tenth European Social Science History Conference, Vienna (25 April 2014); the session on 'Measuring changes in living standards' at the Tenth New Frontiers in African Economic History Workshop, London School of Economics (25 October 2014); and the 'Long-run perspectives on African agricultural development' session at the World Economic History Congress, Kyoto (6 August 2015). I am grateful to Grace Carswell for kindly sharing an unpublished rural survey from Kigezi district (Uganda) and to Shane Doyle for directing me to further unpublished survey materials in several archives in the UK.

## Introduction

Recent scholarship on historical welfare in Sub-Saharan Africa has uncovered long-term trends in national income, the biological standard of living, and urban real wages. How the majority of rural dwellers fared, however, remains largely elusive. This paper offers two contributions. First, it develops a new approach to reconstruct living standards of ordinary rural Africans in a historical context with limited data availability. This approach employs sub-national rural survey, census, and price data, and moves beyond a well-established real wage literature to capture rural realities. Second, this approach is applied to a case study of colonial and early post-colonial Uganda (1915–70), using primary source materials to reconstruct typical farm sizes, calculate smallholder welfare ratios, and estimate on-farm labour inputs.

Uganda has been selected as a first case for various reasons. First, colonial Uganda was a typical example of a ‘peasant export economy’. In this type of economy, which was found in large parts of colonial tropical Africa, urbanization was low, the role of expatriates as landowners and employers was limited, and colonial state revenues depended heavily on the production of export crops on a large number of independent, partly commercialized African smallholdings.<sup>78</sup> Within a wider African context, a range of studies have observed the virtues of ‘peasant economies’ over ‘settler economies’ and ‘concession economies’, most notably a tendency towards more equitable distribution of land and income.<sup>79</sup> The impact of smallholder export agriculture on rural welfare remains highly relevant today.<sup>80</sup> In order to establish the extent to which African smallholders in ‘peasant economies’ thrived, a closer investigation of disaggregated rural data is needed.

Second, Uganda’s colonial economy contains a paradox that gives it additional weight as an interesting case. While exports expanded at a rapid pace, previous studies have shown that urban unskilled real wages remained well below those of the West African peasant economies, and close to those of neighbouring, settler-dominated Kenya, where African cash-crop farming was restricted and native smallholders were forcibly moved into native reserves.<sup>81</sup> This paradox further begs the question of whether ordinary rural Ugandans

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<sup>78</sup> Studies on rural Africa either use the term ‘peasant’, ‘farmer’, or ‘smallholder’. I use ‘smallholder’ and ‘farmer’, which are the most neutral options with less connotations of socio-political status than ‘peasant’.

<sup>79</sup> Austen, *African economic history*; Austin, ‘Explaining and evaluating’; Bowden, Chiripanhura, and Mosley, ‘Measuring and explaining poverty’.

<sup>80</sup> Collier and Dercon, ‘African agriculture’; Jayne, Chamberlin, and Headey, ‘Land pressures’.

<sup>81</sup> Frankema and Van Waijenburg, ‘Structural impediments’, pp. 919–20.



benefitted from the country's export boom, and if so, why this did not translate into higher unskilled wages.

Third, Uganda's considerable agro-ecological variety enables us to explore the role of uneven factor endowments in the process of agricultural commercialization.<sup>82</sup> The southern areas of Uganda, bordering Lake Victoria, provided benevolent agro-ecological conditions for the high-yielding, perennial green banana.<sup>83</sup> Previous studies have attributed the success of Uganda's cash-crop revolution to the banana, arguing that it left ample time to cultivate cotton, and intercropped well with coffee.<sup>84</sup> Farming in the northern and eastern areas, on the other hand, involved more arduous annual field crop rotations which, it has been argued, inhibited cash-crop adoption.<sup>85</sup> Nevertheless, as will become clear, export cotton became an integral part of this labour-intensive farming system as well.

This study yields a number of findings. First, although African smallholders widely adopted cash crops, they continued to cultivate large quantities of food crops as well. This persistent pattern of *partial commercialization* is explained by existing farming and marketing conditions. While food crops were highly valued but difficult to sell, cotton yielded a modest but reliable flow of cash to ordinary households. Eventually, many smallholders switched from cotton to the more lucrative cultivation of coffee, but the coffee boom was too short-lived to put the Ugandan rural economy on a path towards specialization and upscaling. The data shows that, beyond the adoption of new cash crops, the properties of the typical individual smallholding remained remarkably constant over time. It can be reasonably concluded that Uganda's impressive export statistics should be primarily attributed to a process of extensive growth, resulting from population growth and the gradual spatial diffusion of export crop cultivation.

Second, the study sheds light on the position of unskilled wage labour in a 'peasant economy'. Uganda's rural and urban unskilled labour markets were dominated by male labour migrants from the country's less-connected peripheral regions, as well as from neighbouring Ruanda-Urundi. In the colonial era, unskilled labour was attractive only to those who could not profitably cultivate cash crops. Around the time of independence, an urban-rural reversal took place. Policy changes resulted in unskilled wages taking off from the subsistence level, while farms did not scale up and a temporary cash crop price boom came to an end. Farm income

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<sup>82</sup> Austin, 'Resources, techniques, and strategies'.

<sup>83</sup> Referred to in colonial sources as plantain; presently known as 'green banana' or 'cooking banana', and locally as 'matooke'.

<sup>84</sup> Austin, 'Resources, techniques, and strategies', p. 579; Tosh, 'Cash-crop revolution', p. 92.

<sup>85</sup> Tosh, 'Lango agriculture'; idem, 'Cash-crop revolution'.

began to lag, heralding an era of relative rural deprivation, even before the collapse of Uganda's economy under the rule of Idi Amin (1971–9).

Third, the study shows that the adoption of cash crops had a heterogeneous impact on the different farming systems within Uganda. While households in Uganda's grain areas had to assign the bulk of household labour inputs to the cultivation of food and cash crops, banana farmers could diversify their incomes beyond the farm and profit from off-farm opportunities.

The remainder of the text is structured as follows. Section I provides the motives for the reconstruction of African rural incomes. Section II introduces the Ugandan case. Section III reconstructs the properties of typical smallholdings. Section IV calculates smallholder welfare ratios for Uganda's cash-crop regions. Section V estimates agricultural labour inputs. Section VI concludes.

## **I. Measuring African welfare development**

Recent studies have pioneered the application of established methods of economic history to an African colonial context, including national income reconstruction, anthropometrics, real wage estimation, and, most recently, the analysis of marriage registers. Knowledge of African living standards has been extended into the pre-independence era, and African welfare development has been put in a global perspective.<sup>86</sup> Based on distinct methods and source materials, these different approaches come to the interestingly similar conclusion that colonial economies were dynamic, and that the standards of living of ordinary Africans experienced some degree of improvement during the era of (late) colonial rule.

There are caveats, however. Efforts at national income reconstruction are challenged by the unreliability and incompleteness of aggregate colonial statistics.<sup>87</sup> Figures derived from such statistics apply to those parts of the economy for which the most reliable aggregate data are available, such as the public sector and foreign trade. However, they tell us much less about other sectors or the distribution of income.<sup>88</sup> Micro-data approaches have the potential to circumvent such pitfalls and limitations. Historical anthropometric studies, primarily based on military records, provide a valuable proxy of welfare development.<sup>89</sup> However, heights only represent one developmental outcome, and do not provide us with the means to disentangle

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<sup>86</sup> Austin and Broadberry, 'Renaissance'.

<sup>87</sup> Prados de la Escosura, 'Output per head'; idem, 'Human development'; Jerven, 'West African experiment'.

<sup>88</sup> Jerven, 'West African experiment', p. 973.

<sup>89</sup> Moradi, 'Towards an objective account'; Austin, Baten, and Van Leeuwen, 'Biological standard of living'; Moradi, Austin, and Baten, 'Heights and development'; Cogneau and Rouanet, 'Living conditions'.

the different mechanisms that feed into welfare development. Studies based on Anglican marriage registers provide new insights into labour market dynamics, gender relations, and human capital formation, but issues of sample selection bias limit the potential for generalization beyond the sampled populations.<sup>90</sup>

Reconstructing ‘welfare ratios’, a method originally established by Allen,<sup>91</sup> provides yet another angle to study welfare development.<sup>92</sup> The *numerator* in welfare ratio studies consists of an annual male unskilled wage, usually in an urban setting. The *denominator* contains a fixed amount of food and basic consumer goods to sustain a household at barebones subsistence level. The fact that it has well-defined parameters, and exploits widely available estimates of unskilled wages and urban market prices, endows the method with unrivalled comparative scope.<sup>93</sup> Frankema and Van Waijenburg have provided the most encompassing African real wage study yet, providing estimates for the temporal development of unskilled workers’ purchasing power in the major cities of British colonial Africa.<sup>94</sup>

Real wage studies aim to provide a direct insight into household welfare development, but run into a number of limitations. The *numerator* is appropriate for estimating the purchasing power of male wages, but it does not proxy well for household income, especially in conditions where men do not work full-time, where non-wage sources of income form a crucial component of household livelihoods, and where women and children generate sizeable wage- and non-wage incomes. In colonial Africa, these limitations of the suitability of male wages as an estimator of household income are particularly relevant. Commonly, male wage labour was temporary or even seasonal, and supplementary rather than full-time.<sup>95</sup> Instead, farming was the backbone of household income, and women and children made crucial contributions to farming and other income-generating activities.<sup>96</sup> The assumed male breadwinner in stable wage employment supporting a wife and children only gained some importance around the time of independence. Hence, the suitability of male urban wages for

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<sup>90</sup> Meier zu Selhausen, ‘Missionaries and female empowerment’; Meier zu Selhausen and Weisdorf, ‘Colonial legacy’; Meier zu Selhausen, Van Leeuwen, and Weisdorf, ‘Social mobility’.

<sup>91</sup> Allen, *British industrial revolution*, pp. 35–42.

<sup>92</sup> Bolt and Hillbom, ‘Potential for diversification?’; Bowden et al., ‘Measuring and explaining poverty’; De Zwart, ‘South African living standards’; Frankema and Van Waijenburg, ‘Structural impediments’; Rönnbäck, ‘Pre-colonial Gold Coast’.

<sup>93</sup> For a Eurasian comparison, Allen, Bassino, Ma, Moll-Murata, and Van Zanden, ‘Wages, prices, and living standards’; for the Americas, Allen, Murphy, and Schneider, ‘Colonial origins’; for an Afro-Indian comparison, Frankema and Van Waijenburg, ‘Structural impediments’.

<sup>94</sup> Frankema and Van Waijenburg, ‘Structural impediments’.

<sup>95</sup> Miracle and Berry, ‘Migrant labour’.

<sup>96</sup> Boserup, *Woman’s role*; Cleave, *African farmers*.

measuring the welfare development of large sections of the population in largely agrarian African societies is debatable.

In a recent article on colonial Bechuanaland, Bolt and Hillbom extend the numerator in their welfare ratio beyond urban wages, producing a number of social tables which incorporate income from other non-wage sources, most notably cattle ownership.<sup>97</sup> Before their suggested approach can be extended further into an agricultural, rather than pastoral, context, the intricacies involved in measuring agricultural production and rural income need to be addressed. This study takes a first step in that direction by replacing the male wage in the numerator by a range of livelihood components that form the bulk of smallholder livelihoods, including non-traded, non-monetary sources of income.

The *denominator* in welfare ratio studies has been criticized for underestimating household consumption needs, and not accounting for differences in household composition within and across specific historical settings.<sup>98</sup> Humphries has pointed out that the baskets in Allen's denominator are too meagre. This point applies especially in an agrarian context in which considerable amounts of calories are required to work the fields. In response to this critique, Allen has recently modified his estimate of household consumption needs from three (adult male equivalent) baskets of 1,940 calories to four (per capita) baskets of 2,100 calories.<sup>99</sup> This study adopts Allen's new per capita estimate. It also investigates the extent to which Uganda's family structure fits Allen's assumed household size, and adjusts the number of baskets accordingly.<sup>100</sup>

## II. The 'cash-crop revolution' in colonial Uganda

The broad contours of Uganda's rural economic history are well known. Trade statistics show an impressive expansion following the completion of the Uganda railway in 1901, which made the export of bulky agricultural commodities viable.<sup>101</sup> African smallholders soon

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<sup>97</sup> Bolt and Hillbom, 'Social structures'.

<sup>98</sup> Humphries, 'Lure of aggregates', pp. 703–8; Schneider, 'Real wages and the family'.

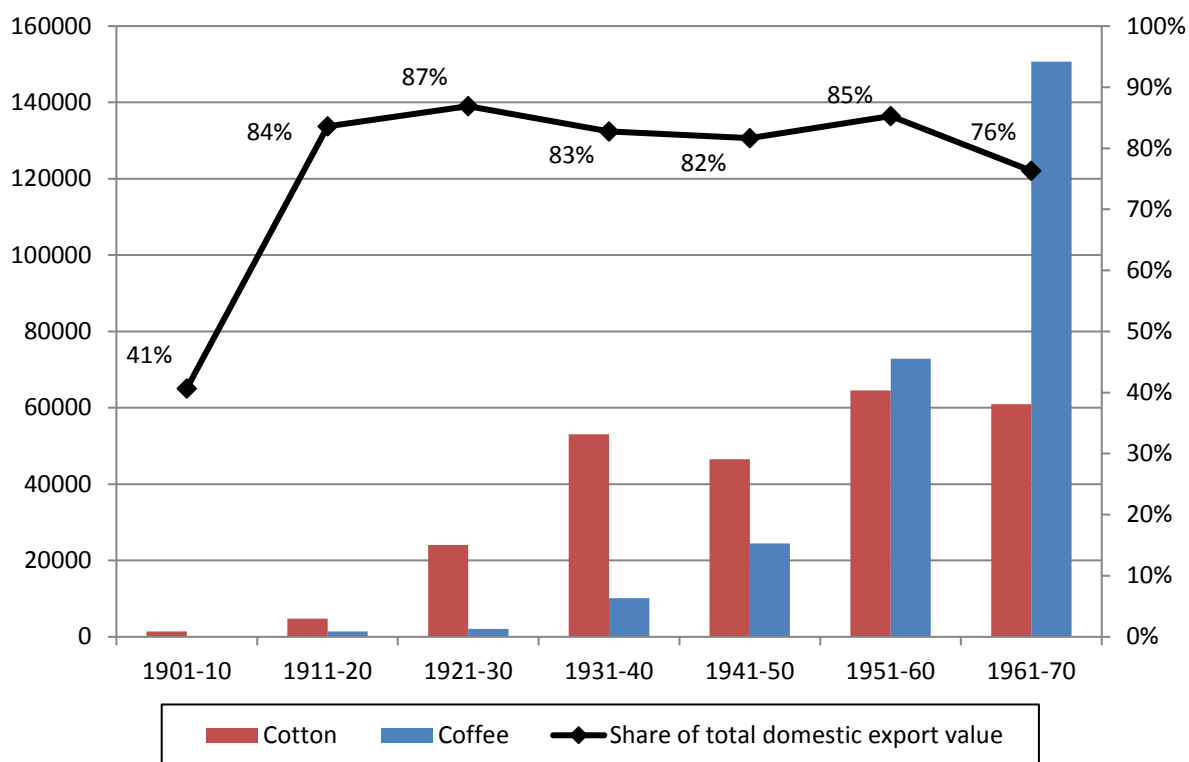
<sup>99</sup> Humphries, 'Lure of aggregates', pp. 698–703; Allen, 'Restatement', pp. 5–6. The adaption implies that all previous welfare ratios have to be adjusted downwards, but that comparisons will not be affected.

<sup>100</sup> Recent welfare ratio studies have also worked with the concept of 'physical activity level' (PAL) to fine-tune caloric requirements by taking into account different occupations and activities; Humphries, 'Lure of aggregates', pp. 701–2. Considering the overall accuracy of the data used in this study, estimating PALs would merely introduce an illusion of precision while unnecessarily complicating the analysis.

<sup>101</sup> Landlocked Uganda's pre-colonial participation in overseas trade was marginal. Internal trade of a limited number of items, such as salt, bark cloth, iron hoes, dried food crops, and human captives, took place; Reid, *Political power*, pp. 133–73.

became the backbone of a colonial cash-crop economy.<sup>102</sup> By the 1930s, cotton had spread to the majority of districts, and was still diffusing. As Uganda did not have an indigenous cotton textile industry, virtually all raw cotton found its way to the export market. At the same time, Robusta coffee began to replace cotton as the key cash crop in the fertile strip adjacent to Lake Victoria. In 1963, Uganda, by then a country of 8 million inhabitants, counted approximately 1.2 million smallholdings, of which some 46 per cent cultivated coffee and 63 per cent cotton.<sup>103</sup> Figure 1 illustrates the magnitude of Uganda's 'cash-crop revolution'.<sup>104</sup>

**Figure 1.** Average annual export of cotton lint and coffee (in tonnes) from Uganda per decade, 1901–70



*Notes:* Cotton is lint; coffee is mostly (unhulled) Robusta. Total domestic export volume only includes exports of domestic produce; re-exports are excluded. Export figures are fairly representative for total production. During the 1950s and 1960s, some 5,000 additional tonnes of cotton were produced annually for a locally established textile factory; Jameson and Tothill eds., *Agriculture in Uganda*, p. 121.

*Sources:* Trade (export) sections in Uganda, *Blue Books* (1901–45); Annual Board of Trade, *Statistical Abstracts* (1946–9); Uganda, *Statistical Abstracts* (1950–70).

<sup>102</sup> Wrigley, *Crops and wealth*, pp. 31–43.

<sup>103</sup> Uganda, *Report on Uganda Census*, vol. 1, p. 27; vol. 3, pp. 61, 70. Sugar and tea (plantations) and tobacco (smallholders) were also commercially cultivated in the late colonial era, but their contribution to income and trade was small compared to cotton and coffee.

<sup>104</sup> The term is borrowed from Tosh, 'Cash-crop revolution'.

Leaving aside ecological niches, colonial rural Uganda can be divided into two major agricultural zones.<sup>105</sup> In the south and west, soils were fertile, and rainfall plentiful and well-distributed throughout the year. High-yielding perennial banana gardens, which provided the bulk of the caloric requirements, were combined with rotating field crops, such as beans, groundnuts, maize, and cotton. Over time, increasing numbers of farmers substituted part of their field crops for coffee, which could be conveniently interplanted with banana. In the north and east, rainfall was generous and well-distributed, but soils and precipitation patterns did not allow for productive banana or coffee cultivation.<sup>106</sup> Instead, smallholders practised more extensive annual field crop rotations, alternating grains and a range of supplementary food crops and cotton with periods of fallow. Livestock was important in large parts of the grain area, and during the colonial period ox ploughs were gradually integrated into farming practices.<sup>107</sup>

Besides affecting farming practices directly, cash crops also generated economic activity in trade, transport, and commodity processing. Few Ugandans, however, left the farm behind in exchange for an urban, ‘proletarian’, male breadwinner lifestyle.<sup>108</sup> Kampala, by far Uganda’s largest urban centre, harboured only 92,837 individuals in 1959, on the eve of independence, which corresponded to a meagre 1.2 per cent of the total population.<sup>109</sup>

### **III. Reconstructing typical smallholdings**

Having established that male unskilled wages are not a satisfactory starting point for estimating the welfare levels of ordinary African households in the colonial era, the following three core sections of this paper set out to find a suitable alternative. In order to estimate rural income, it is necessary to acknowledge the multifaceted, localized, and changing characteristics of rural livelihood portfolios.<sup>110</sup> Sources of income include subsistence and cash crops, livestock, hunting, fishing, gathering, (seasonal) wage labour, and household crafts and trades. In the absence of recurrent, regular, and consistent household surveys, we

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<sup>105</sup> Overviews are provided in Tothill, *Agriculture in Uganda*; Jameson and Tothill eds., *Agriculture in Uganda*; Parsons, *Systems of agriculture*; McMaster, *Subsistence crop geography*.

<sup>106</sup> This observation is consistent with Food and Agriculture Organization (FAO) crop suitability indices for millet, banana, and coffee; see FAO website <http://gaez.fao.org>.

<sup>107</sup> See Vail, *Agricultural innovation*, pp. 91–105, on the role of ox-ploughs in Teso District. Pastoralism was practised only among relatively small groups in east and southwest Uganda.

<sup>108</sup> Elkan, *Migrants*, p. 134; Bantebya Kyomuhendo and McIntosh, *Women*, pp. 88–9.

<sup>109</sup> This includes the peri-urban area. Uganda, *Census 1959*, p. 91.

<sup>110</sup> This is a central theme in Berry, *No condition*.

must rely on sporadic, but insightful, rural surveys and agricultural censuses, conducted mostly from the 1930s onwards.<sup>111</sup>

The approach adopted here starts from a reconstruction of the key properties of typical smallholdings in Uganda, primarily on the basis of two sources. First, this study exploits 24, partly unpublished, village surveys, covering a total of 2,924 households, dating from 1933-61. Most observations date from after the adoption of cash crops, and hence this analysis applies to the gradually increasing number of smallholders who had already adopted cash crops. With that limitation in mind, they provide a relatively balanced cross-section of rural Uganda, even though no formal sampling or randomization procedures were followed.<sup>112</sup> Second, the paper analyses the findings of an agricultural sample census in 1963, covering 12,614 households, aggregated in 14 districts.<sup>113</sup> The sources provide consistent figures on crop acreages, livestock ownership, and household sizes, and scattered insights into income, consumption, and labour allocation.<sup>114</sup> The location of villages and districts is indicated in figure 2.

The average size and composition of smallholdings with cash crops, as observed in the village and district level inquiries, show remarkably little change between the interwar era and the 1960s. The same goes for the share of resources allocated to cash crops, food crops, and livestock. The average annually cultivated acreage in the grain area remained constant at ca. nine acres per household, with just over 2.5 acres allocated to cotton. The cultivated area among smallholders in the banana area dropped slightly, from five to four acres, with just under two acres allocated to cotton and coffee. In areas with cash crops, practically all smallholders participated in their cultivation, but continued to cultivate food crops as well.<sup>115</sup> A notable shift took place among banana farmers, who partly switched from cotton to coffee.<sup>116</sup>

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<sup>111</sup> Anderson, 'Depression'; FAO, *1950 World Census*; idem, *1960 World Census*.

<sup>112</sup> Appendix Table A; Tothill, ed., *Nineteen surveys*.

<sup>113</sup> Appendix Table A. This census was Uganda's contribution to the 1960 World Census of Agriculture. For elaboration on the methodology of the census, see Uganda, *Report on Uganda Census*, vol. 1. In 1966, another smaller survey was commissioned by USAID, covering 1,641 households (Nelson, *Baseline survey*). Its results are similar to the overall 1963 Census results, but less detailed.

<sup>114</sup> A summary of the survey results is reported in Appendix Table A.

<sup>115</sup> I also find, but, due to space constraints, do not report, that farm size *distributions* remained quite stable throughout the period studied.

<sup>116</sup> Appendix tab. S1.

**Figure 2.** Map of Uganda indicating the location of village surveys and district censuses



Notes: The village locations are the author's approximations based on place names and coordinates in Tohill, ed., *Nineteen surveys*. (Colonial) district borders are from Uganda, *Report on Uganda Census*, vol. 1, p. 74.

To ascertain the real value of a smallholding to the household which cultivates it, we need to establish the number of dependent consumers. At this stage, rather than following Allen by hypothesizing a 'typical' household to consist of a man, wife, and two children, it is appropriate to investigate the extent to which this type fits with local rural household constellations. In fact, several studies indicate that Ugandan smallholdings were most



commonly supporting a monogamous couple with a few children.<sup>117</sup> Being the head of a polygynous household was highly regarded, but, for most, maintaining multiple wives (and paying the accompanying bride price) was unaffordable. Moreover, polygynous families were commonly split up into smaller economic units, with wives tending to live on separate smallholdings and to support independent households.<sup>118</sup> In a recent study, Doyle finds that the average number of live births per woman in Buganda in the colonial era was no higher than three over their entire course of life.<sup>119</sup> The estimate is consistent with the average household sizes observed in the village surveys and district censuses. It is also important to note that households in the grain areas tended to be slightly larger than in the banana areas. The data indicate that smallholdings of an average size also typically supported a household of an average size.<sup>120</sup>

Drawing on the available evidence on farm and household sizes, three typical farms are constructed to represent the increasing share of Ugandan smallholdings incorporated into the export crop economy during the colonial and early post-colonial period. For the sake of simplicity, the data are aggregated into four categories: export crops; a staple food crop; a protein crop; and livestock, expressed in terms of ‘tropical livestock units’ (TLUs), a standard conversion for the value of different types of livestock.<sup>121</sup> Although most observations date from the late interwar and post-war years, it is assumed that the typical smallholdings thus constructed are representative for cash-cropping smallholders in the period 1915–70. It should be noted that, especially in the earlier period, a great number of Ugandan smallholdings did not cultivate cash crops, and hence do not fit into any of the categories presented. However,

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<sup>117</sup> Of 813 households surveyed in the 1930s, 58% were ‘monogamous’ (one man and wife), 27% were ‘polygynous’ (more than one wife), and the remainder ‘single’ (bachelors, unmarried women, and widow(er)s). Data from the villages Lubogo, Kawoko, Kayuji, Namungalwe, Ajuluku, Opami, Gayaza, and Kitozho. See Appendix Table A for sources. In 1966, 63% of 1,541 sampled households across Uganda were monogamous, while 20% were polygynous and 17% single; Nelson, *Baseline survey*, p. 12. A study of 352 households in Buganda in 1965–7 finds similar shares; Robertson and Hughes, ‘Family farm’, p. 427.

<sup>118</sup> The ‘Instructions to enumerators’ for the 1963 Uganda Census of Agriculture, in the Uganda National Archives, instructed enumerators to define a smallholder household as a group of people ‘living together and sharing their meals’; p. 3.

<sup>119</sup> For the parish of Kisubi (Buganda), Doyle reports a gradual increase from between 2 and 2.5 children baptized per woman in the interwar period, to 2.5 and 3 children in the late colonial and early post-colonial period. He also quotes a 1952 Buganda survey, which found an average of three live births per woman (aged 45 and above); Doyle, *Before HIV*, pp. 238, 269.

<sup>120</sup> Appendix Table A.

<sup>121</sup> International Livestock Centre for Africa, *Livestock Production*.

the data strongly suggest that, once they entered the orbit of the cash-crop economy, neither farm structure nor crop mix changed significantly.<sup>122</sup> The typical farms are reported in table 1. The surveys and censuses provide extensive evidence on cropped acreage and livestock ownership, but are less informative when it comes to crop yields and actual agricultural output. To arrive at a production figure, we must rely on incidental yield surveys.<sup>123</sup> Available historical estimates suggest that Uganda's yields were, at best, stagnant. This seems plausible. The size of smallholdings did not drop considerably during the period studied, which suggests that there was probably no 'Boserupian' pressure to intensify agricultural practices. Improved seeds, fertilizers, and pesticides were only used on a limited scale.<sup>124</sup> Moreover, any technology-driven yield gains may have been cancelled out by soil erosion.<sup>125</sup> Relevant yield estimates are reported in table 2.

Application of the yield figures to the estimated staple and protein crop acreages and available TLUs indicates that typical smallholdings, in years of normal weather conditions and yields, were able to generate sufficient basic nutrients to feed their dependants without having to purchase additional basic foodstuffs. Estimating five consumers per household, the main staple crops, protein crops, and livestock products on a typical smallholding in the grain areas produced over 2,500 calories and 135 grams of protein, while a smallholding in the banana areas, with 4.5 consumers, yielded approximately 2,000 calories and some 50 grams of protein per dependent consumer per day, a figure that was probably further augmented by yields from small vegetable and fruit gardens, the collection of wild plants and insects, hunting, and fishing, sources frequently mentioned in the village surveys.<sup>126</sup>

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<sup>122</sup> Note that, although smallholders respond to market opportunities, fig. 1 shows that only two crops, cotton and coffee, dominated cultivation for export. The literature provides no evidence that the role of food crops and livestock changed markedly in the years within this timeframe for which fewer data are available (1915–33 and 1940–53).

<sup>123</sup> Nye, 'Some results'; Tothill, *Agriculture in Uganda*; Masfield, 'Some recent observations'. Regional reports on shifting cultivation (1952) in TNA,CO892/15; Burgess, 'Calories and proteins'; Parsons, *Systems of agriculture*; McMaster, *Subsistence crop geography*; Uganda, *Report on Uganda Census*, vol. 4; Jameson and Tothill, *Agriculture in Uganda*; Fermont and Benson, 'Estimating yield of food crops'.

<sup>124</sup> Nelson, *Baseline survey*, pp. 11, 34.

<sup>125</sup> The fear of soil erosion, in fact, motivated the survey effort; Tothill, ed., *Nineteen surveys*.

<sup>126</sup> The high caloric yields at grain farms should be treated with some care. As will become clear in section V, grain smallholdings required more labour, hence higher caloric intake. Moreover, grain was harvested only once or twice. Seasonal hunger may have been a challenge for some households.

**Table 1.** *Key dimensions of typical smallholdings in Uganda, 1915–70*

Farming system	Consumer units	Total acreage	Staple crop acreage	Protein crop acreage	Cash crop acreage	Livestock (TLU)
Banana with cotton	4.5	4	1.5	1	2	0.5
Banana with coffee	4.5	3.5	1.5	0.5	1.5	0.5
Grain with cotton	5	8	3.5	2	2.5	2

*Notes:* Author's estimates based on farm surveys, censuses, and secondary sources. See text for further explanation of methodology. Mean households in the banana area tended to have two or three children, while average households in the grain areas had three to four. I adopt Allen's estimate of four baskets to represent consumption needs of a family with two to three children. I add 0.5 baskets in the case of the grain farm to account for larger household size. To be on the conservative side, I also add 0.5 baskets to account for the additional caloric requirements of women and children to participate in running the farm. Compare Allen, 'Restatement', pp. 7–9.

*Sources:* See Appendix Table A for the original survey and census data.

**Table 2.** *Estimate of average annual yields (per acre) of common Ugandan farm produce*

Product	Actual (gross) yield	On-farm waste	Seed ratio	Economic yield
Grains (acre)	700 lbs	14%	10%	541 lbs
Banana (acre)	7850 lbs	29%		5961 lbs
Protein crops (acre)	750 lbs	19%	10%	525 lbs
Cotton (acre)				200-400 lbs
Robusta coffee (acre)				1000 lbs
Milk (TLU)	12 gallons	16%		10.1 gallons
Meat (TLU)	50 lbs	21%		39.5 lbs

*Notes:* Crop yield estimates refer to areas where the crop was grown most. Seed cotton yields are set at 400 lbs for the banana area and 200 lbs for the grain area. Banana and coffee are perennial crops and do not require seed storage. Cotton seeds were distributed by the colonial state for free among smallholders. Grain includes millet, sorghum, and maize. Banana yields include stem and peel. Sweet potato and cassava were grown in addition to bananas and grain but are left out of the analysis for the sake of simplicity. I use beans to account for a wider range of protein crops (peas and groundnuts). Coffee yields refer to unhulled beans and are averaged over 10 years, including three initial years without production. Meat and milk are assumed to be obtained from goats. Cows are converted into goats on a 7:1 ratio. The average slaughter age of goats is set at four years, meaning that the annual 'yield' is 0.25 goat. I estimate that a slaughtered goat yields 20 lbs of meat, which corresponds with an average of 5 lbs annually. I assume that 20% of the goat population gives milk, at an average of six gallons of milk annually, corresponding with an average milk yield per goat of 1.2 gallons. One TLU corresponds to 10 goats.

*Sources:* I take my food crop yield estimates from a meta-study on yields in Uganda by Fermont and Benson, and deduct waste and losses as well as seed ratios following FAO, *Global Food Losses*. Cotton and coffee yields are the author's conservative estimates based on a range of colonial sources. Meat yields are from Burgess, 'Calories and proteins'. Milk yields are from Foster, *Population growth*. Caloric estimates are from Latham, *Human nutrition*.

This reconstruction of typical smallholdings in colonial Uganda produces a number of insights into the development of rural livelihoods. From the available farm-level evidence, we can only speculate that the *initial* adoption of cotton may have presented a significant opportunity for smallholders to commercialize part of their farming activities. Cotton may, for example, have replaced cultivated planned surpluses, which were previously grown to hedge against harvest failure, but became obsolete due to improved infrastructure and food relief policies that went hand in hand with the diffusion of the colonial cash-crop economy.<sup>127</sup> As no solid indicators exist on Ugandan livelihoods before the introduction of cash crops, it is difficult to substantiate this argument quantitatively.<sup>128</sup>

What the data do allow us to conclude with a much higher degree of confidence is that the adoption of cash crops was followed by the consolidation and stabilization of farming practices. There are two sides to this story. On the one hand, average farm sizes did not *contract*, suggesting that, overall, physical land scarcity was not a constraining factor for most households.<sup>129</sup> On the other hand, the vast majority of smallholders did not *scale up* or *specialize*.<sup>130</sup> The aggregate expansion of cash-crop production, despite stable smallholding characteristics, can be explained as a two-pronged process of extensive growth: the geographical diffusion of cash crops, and substantial population growth, both leading to cash-crop cultivation on an increasing number of Ugandan smallholdings.<sup>131</sup>

The stagnant character of smallholder agriculture is a common theme in Ugandan historiography. Wrigley argues that Uganda's independent, partly commercialized smallholdings provided 'the prescription both for political stability and a deeply conservative agrarian peasantry'.<sup>132</sup> The colonial state itself made little genuine effort to put Uganda's smallholders on a path of rapid productivity growth. The 1952 *Agricultural Report*, for

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<sup>127</sup> Such as the introduction of cassava and famine relief schemes; Tosh, 'Lango agriculture', p. 436; Vail, *Agricultural innovation*, pp. 108–10.

<sup>128</sup> Cross-sectional data from the 1960s substantiate the positive correlation between commercialization and income in tropical Africa; Cleave, *African farmers*, p. 22.

<sup>129</sup> This stands in marked contrast to recent decades: average farm sizes have shrunk from 8.2 acres in 1963 to 5.4 acres in 1991, and only 2.2 acres in 2006; Jayne et al., 'Land pressures', p. 4.

<sup>130</sup> As our data do not provide panel data on the individual household level, we should not rule out the possibility that some households gradually expanded their farming capacities. In fact, we know that a small minority of banana farmers in Buganda managed to scale up their coffee plantations markedly. See Appendix Table E; Richards, Sturrock, and Fortt eds., *Subsistence to commercial farming*; and the repeated survey data for the village of Namakata (1937 and 1962) in Appendix Table A1.

<sup>131</sup> The population of Uganda is roughly estimated to have grown from 3.5 million in 1900 to 6.8 million in 1960; Frankema and Jerven, 'Writing history backwards', Data Appendix.

<sup>132</sup> Wrigley, *Crops and wealth*, p. 67.

example, notes that ‘the basic concept of [primitive and unimproved peasant farming], with its opportunities for individual initiative and its strong domestic and social bonds, is of incalculable value as a steadying influence in an age of rapid progress and developing political ideas’.<sup>133</sup>

#### **IV. Rural and urban incomes**

Having estimated *production* on typical smallholder farms, the next challenge is to arrive at a measure of *income*. This is not a straightforward procedure. Typical Ugandan smallholder households were to a large extent producer-consumers, obtaining a sizeable share of their non-monetary income from subsistence cultivation, while procuring their cash income mainly from cotton and coffee.<sup>134</sup> To measure the value of smallholder farm production properly, we need to establish the value of non-traded subsistence goods.

In a context of thin rural markets with high transport costs, we can expect a large gap between producer and consumer prices. In Uganda, consumer prices for food crops were indeed much higher than producer prices, due to a range of market failures, which are likely to have resulted, at least partly, from the fact that colonial investments in the infrastructure focused on cash crops.<sup>135</sup> Hence, the use of (rural) consumer prices to estimate the value of food crops requires justification.

Here it is argued that, so long as crops are produced for subsistence, smallholders will value them at the (high) consumer price level, as this would be the price of obtaining food from the market. As soon as smallholders produce a marketable surplus, (low) producer prices become the more appropriate measure of value, as produce would have to be taken to, and sold on, the market, incurring considerable transaction costs.<sup>136</sup> This primary subsistence function of food crop production in Uganda justifies the use of rural consumer prices to estimate its value.

There is an additional advantage to using (market) prices to quantify the value of subsistence production. Price differences can be interpreted as an indicator of the quality, desirability, and

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<sup>133</sup> Uganda, *Annual Report*, 1966, p. 2; also Ehrlich, ‘Paternalism in Uganda’.

<sup>134</sup> Appendix Table A and D. There were some notable exceptions to this state of affairs. Carswell, ‘Food crops’, shows that smallholders in southwestern Uganda, situated on an important labour migration route, relied on the sale of food crops to earn cash. Village surveys give some examples of individual farmers who supplied large amounts of food crops; Tohill, ed., *Nineteen surveys*, pp. 91–2, 100.

<sup>135</sup> Oloya and Poleman, *Food supply*.

<sup>136</sup> This reasoning is based on de Janvry, Fafchamps, and Sadoulet, ‘Peasant household behaviour’, pp. 1401–3.

taste of various food crops. Urban welfare ratios are based on a barebones basket with the cheapest staple available,<sup>137</sup> which, in the Ugandan case, was usually cassava or maize meal. Smallholders, however, produced their preferred and ‘respectable’ food crops, most notably bananas, with a much higher market value per calorie.<sup>138</sup> This rural ‘consumption premium’ will show up once we divide the nominal (market) value of smallholder production by the nominal (market) price of the barebones basket.

On a cautionary note, converting subsistence production into a monetary value also has downsides. The use of abstract monetary values ignores the fact that smallholders were ‘trapped in subsistence’: they may have wished to trade (a part of) their produce for consumer goods, but found it uneconomical to do so, since transaction costs were too high. They may have wished to focus on a cash crop, but found that food crops were too expensive, and supply too erratic to justify specialization in non-foods.

To estimate the temporal development of both *nominal* income (that is, farm produce value generated from food crops, cash crops, and livestock) and the *cost of living*, annual price series are constructed, using cotton and coffee producer prices; Kampala market prices for livestock, a range of foodstuffs, and basic consumer goods;<sup>139</sup> and average rural prices, based on 20 markets throughout Uganda.<sup>140</sup> It is interesting to note that, in this period, the price of farm produce in rural market towns was typically around 50 per cent of the Kampala price, while urban and rural market prices of (imported) consumption goods were surprisingly equal.<sup>141</sup>

Because prices of millet, the main staple grain, are not reported for all years, the value of food crops on grain farms is estimated on the basis of the cheapest (in terms of price/calorie) of three grains: maize, sorghum, and millet. Beef, and cow milk prices, are used to estimate the value of livestock per TLU.<sup>142</sup>

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<sup>137</sup> Frankema and Van Waijenburg, ‘Structural impediments’, p. 905.

<sup>138</sup> Cf. the ‘respectability basket’ in Allen, *British industrial revolution*, p. 36.

<sup>139</sup> Appendix Table B.

<sup>140</sup> Rural prices are only available for the period 1925–45. I use the rural–urban wage gap to impute rural farm produce prices for the post-war years. The comparison is based on construction workers in Kampala and agricultural workers on rural sugar estates. In the post-war period, urban and rural wages converge (Appendix Table B). Keeping the urban–rural farm produce price gap constant does not affect the overall results of this article.

<sup>141</sup> Appendix Figure A.

<sup>142</sup> Per calorie, beef was cheaper than mutton, fowl, and fish. I use beef to estimate the value of livestock conservatively.

By accounting for seed ratios (table 2), some production costs have already been taken into account. Further production costs were modest, consisting mainly of basic implements and some rent and tribute. Pesticides and fertilizers were sparsely used (if at all), and few investments were made in keeping the relatively small number of livestock.<sup>143</sup> Monetary production costs are set at 10 per cent of the 'gross' value of production on each of the three farm types.<sup>144</sup>

The resultant nominal 'net' farm income series allows us to establish the share of cash crops, food crops, and livestock in total farm income. On a typical smallholding with bananas and coffee, 42 per cent of total estimated nominal income was generated from cash crops, and only 4 per cent from livestock products. On smallholdings with bananas and cotton 31 per cent of income was generated from cash crops, and an equally small share of 4 per cent from livestock. Smallholdings with grain and cotton were the least commercialized, with 21 per cent of their income generated from cash crops, but with a more comparatively substantial 17 per cent from livestock.<sup>145</sup>

Taxes are not commonly deducted in the numerator in real wage studies, as they only account for a small share of the annual wage income.<sup>146</sup> However, since only part of smallholders' income is monetized, taxes could significantly constrain a household's ability to buy goods on the market. To illustrate this point, let us focus on the 1930s, when, as a result of depressed prices, the real tax burden on smallholders was at its highest. In Busoga District, where farmers primarily cultivated bananas and cotton, taxes (which include commuted labour services) corresponded to only 15 per cent of the total net farm income, but a more substantial 49 per cent of the cash income from cotton. A typical smallholding with bananas and coffee in Buganda Province faced a 20 per cent tax rate on the entire farm income and 66 per cent of cash income from coffee. A typical smallholding with grain and cotton in Lango District faced a tax burden of only 14 per cent of total farm income, but a striking 71 per cent of cotton income.<sup>147</sup> Hence, we can conclude that tax obligations took away a considerable

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<sup>143</sup> According to a sample survey in 1966, only 27% of all farms in Uganda had a cattle enclosure, only 8% a sheep and goat enclosure, and only 7% a fowl run; Nelson, *Baseline survey*.

<sup>144</sup> The estimate is in line with an estimate of production costs in *ibid.*, p. 18.

<sup>145</sup> Farmers may have sold some livestock and livestock products to compensate for their low cash crop incomes; Vail, *Agricultural innovation*, pp. 119–27.

<sup>146</sup> Frankema and Van Waijenburg, 'Structural impediments', pp. 916–8.

<sup>147</sup> Note that households without cash crops in Uganda's outlying areas were also subject to labour commutation payments and a poll tax, albeit at slightly lower rates. The tax burden there was the equivalent of 24 days of unskilled construction work in Kampala. The tax rate (poll tax plus a communal labour commutation of 10

chunk of smallholders' cash income. Further exploration of the issue falls outside the scope of this article.<sup>148</sup>

To estimate real income, the 'net' value of production on each of the typical farms is divided by the price of a rural 'barebones subsistence basket' multiplied by the number of consumers in the household (table 1). Standard procedures are used to construct the basket, reported in table 3. In the absence of annual yield data, the annual food price fluctuations observed in the series cannot be meaningfully interpreted. Hence, five-year moving averages are used. Although the comparison should be made with caution, it is interesting to view the real incomes of smallholders in the perspective of the real income of a *hypothetical* male breadwinner household. This comparison informs us about how smallholder livelihoods held up against the urban male breadwinner alternative, and the extent to which urban wages and agricultural incomes exhibited parallel trends. The welfare ratio is calculated for a household relying on the wage of an unskilled construction worker in Kampala.<sup>149</sup> The household size is set at four consumers. The calculation includes Allen's suggestion to add a 20 per cent markup to the male wage to account for contributions of other members of the urban household, such as women producing marketable handicrafts.<sup>150</sup> Urban and rural welfare ratios are reported in figure 3.

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shillings) in the period 1930–9 was 31 shillings in Busoga, 40 shillings in Buganda (including a 10 shilling levy on cash crop production for the land owner), 28 shillings in Lango, and 16 shillings in West Nile and Kigezi, two districts which supplied large numbers of labour migrants (tax rates from Uganda, *Blue Book* (1936), pp. 49–50; labour commutation rates from Uganda National Archives, Kampala, C-series, box 19, file A58, 'Native taxation'; cash crop levy from Richards, ed., *Economic development*).

<sup>148</sup> For a broader British African perspective, see Frankema and Van Waijenburg, 'Structural impediments', pp. 916–8. For a discussion of the role of taxes in Bechuanaland Protectorate, see Bolt and Hillbom, 'Potential for diversification?', pp. 113–5.

<sup>149</sup> A similar series has already been produced in Frankema and Van Waijenburg, 'Structural impediments'. Mine differs slightly, as the result of different assumptions and a newly constructed wage and price dataset.

<sup>150</sup> Allen, 'Restatement', p. 7. Meier zu Selhausen, 'Missionaries and female empowerment', p. 90, indeed finds that, during the colonial era, more than half of all Protestant women in his Kampala sample reported textile-related activities. The contribution of these activities to household income is likely to have been modest; Bantebya Kyomuhendo and McIntosh, *Women*, pp. 103–4.



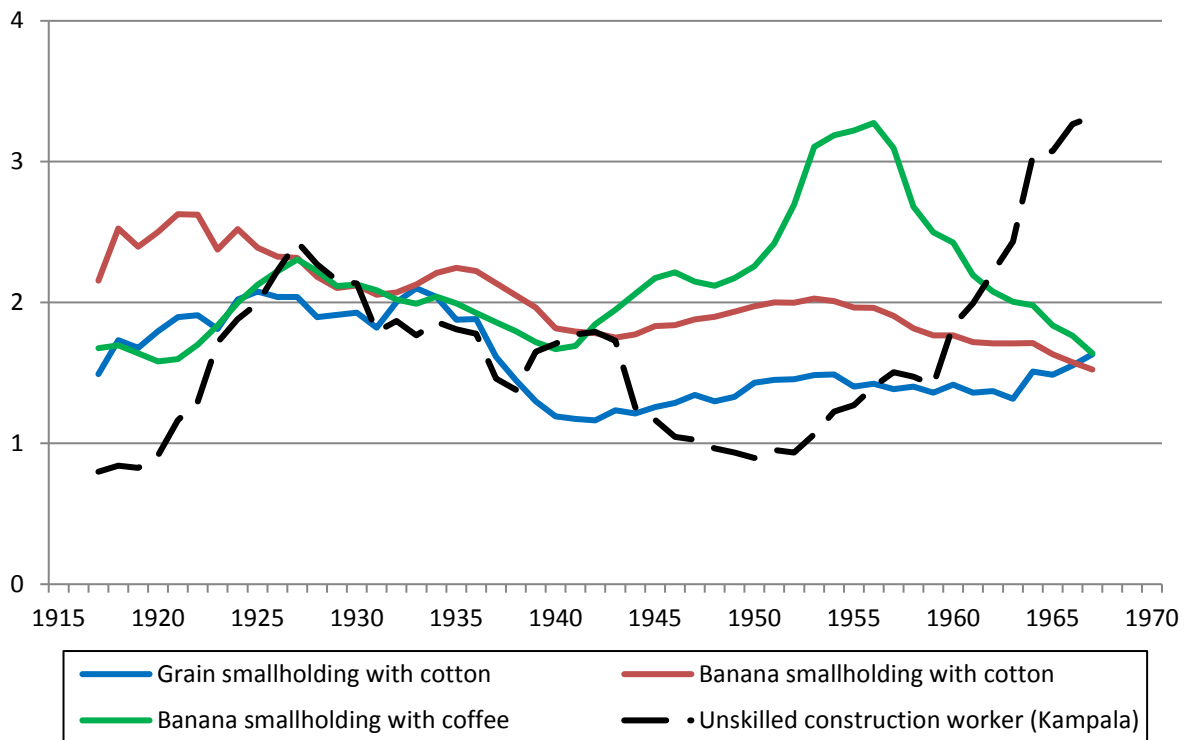
**Table 3. Barebones basket for Uganda**

	Unit	Quantity pp/year	Nutrients per pound (lbs)		Nutrients /person / day	
			Calories	Protein (gram)	Calories	Protein (gram)
Cheapest of:						
<i>Maize</i>	Lbs	410	1605	42	1800	47
<i>Millet</i>	Lbs	424	1550	47	1800	55
<i>Sorghum</i>	Lbs	419	1568	49	1800	56
<i>Banana</i>	Lbs	2144	307	5	1800	16
<i>Sweet potato</i>	Lbs	1378	477	5	1800	29
<i>Cassava</i>	Lbs	971	677	8	1800	15
Beans	Lbs	44	1514	107	183	13
Beef	Lbs	6.6	523	100	9	2
Cheapest of:						
<i>Cooking oil</i>	Lbs	6.6	4018	0	94	0
<i>Sesame seed</i>	Lbs	13.2	4018	0	94	0
Sugar	Lbs	4.4	1705	0	21	0
Cloth	Yard	3.3				
Soap	Lbs	2.9				
Kerosene	Gallon	0.22				
<i>Total</i>					2107	>31

*Notes:* For bananas, only the edible part is included in the quantity. Marketed bunches (including stem and peel) are twice as heavy (without additional nutritional content). The content of this basket diverges slightly from that of Frankema and Van Waijenburg, 'Structural impediments'. In their cross-country study, Frankema and Van Waijenburg have not been able to include beans and peas, due to a lack of data availability. For Uganda, however, bean prices are consistently reported. Moreover, they only consider millet and cassava, while this study also considers maize, sorghum, bananas, and sweet potato. Following Frankema and Van Waijenburg, I add 10% to the cost of a basket to account for candles and firewood/charcoal, for which prices are missing in most years. I also add a 5% mark-up to the full basket price to account for rent (urban), or the construction and maintenance of a simple dwelling (rural). Most of the materials to build a house, such as wattle and mud, could be obtained at low cost; bricks and corrugated iron roofs would require more investment, but cannot be considered among the 'bare necessities' that are covered by the barebones basket. The protein content of the cassava, banana, and sweet potato baskets are insufficient. Indeed, protein deficiency was a real problem among Ugandans who primarily subsisted on these crops. However, analogous to Frankema and Van Waijenburg, I argue that the cheap leaves, known as 'greens', which were commonly consumed, compensated for the lack of protein in the main staple.

*Sources:* Masfield, 'Some recent observations'; Frankema and Van Waijenburg 'Structural impediments', pp. 904–8. See Allen, 'Restatement', pp. 5–6, for the updated caloric content of the barebones basket. Nutritional data from Latham, *Human nutrition*.

**Figure 3.** *Welfare ratios in Uganda (five-year averages), 1915–70*



*Notes and sources:* See text, section IV.

Construction of the welfare ratios provides a number of interesting findings which resonate with Ugandan historiography. As was to be expected from the stagnant farm sizes (see section III), incomes on smallholdings with cash crops did not exhibit sustained improvement during the period studied. However, considerable temporary fluctuations can be observed due to price movements, while smallholder welfare ratios sometimes diverged strongly from wage-based welfare ratios, especially towards the end of the period.

Unskilled real wages before the mid-1920s were very low, probably due to the existence of a colonial forced labour system from 1908-22.<sup>151</sup> Smallholder welfare ratios, especially those of banana farmers with cotton, contrasted favourably with urban livelihoods in this period. From the mid-1920s up to the early 1940s, the purchasing power obtained by smallholders from farming activities only just outperformed the real wage income of a hypothetical urban male breadwinner household, while exhibiting a similar, mildly declining trend.

In the first post-war decade, a rural–urban divergence occurred, as smallholder incomes rose considerably, while real wages continued to decline. In 1945 and 1949, when the purchasing

<sup>151</sup> Powesland, *Economic policy and labour*, pp. 18–34.

power of wages was at its lowest, strikes and unrest broke out in Uganda's towns.<sup>152</sup> At the same time, as a result of a coffee price boom in the 1940s and 1950s, the adoption of coffee temporarily boosted the living standards of banana farmers in southern Uganda, who substituted coffee for cotton on a large scale.<sup>153</sup> Proceeds from coffee enabled smallholders to save, invest in education, and outsource farming to hired wage labourers.<sup>154</sup> The price boom was short-lived, and only a small share of coffee farmers invested in an extension of their cash-crop acreage.

From the early 1950s onwards urban real wages rose sharply. It is tempting to interpret this as a sign of early post-independence economic growth, before the subsequent economic collapse during the Idi Amin era (1971–9). However, the initial wage take-off was largely the result of specific colonial policy interventions to 'stabilize' the labour force.<sup>155</sup> The early post-independence state adopted and extended existing colonial wage policies to further its own objectives. At the same time, smallholder agriculture did not experience a similar take-off, and smallholders were confronted with declining prices.

This emerging urban–rural gap was noted by contemporary observers. One scholar pointed out that 'from the middle of the 1950s wage earners were beginning to become much better off than their rural counterparts'.<sup>156</sup> In the late 1960s, a study in Buganda found that 'if economic growth was occurring in the towns, it is likely that in many rural areas incomes had not risen in real terms for several years',<sup>157</sup> while a handbook on Ugandan agriculture noted that 'it appears that the average employee outside agriculture is considerably better off than the self-employed farmer, and unless the level of agriculture rises rapidly this gap may be expected to widen'.<sup>158</sup>

As noted in section II, Uganda's urban centres remained very small during the colonial era. Urban labourers tended to reside in their place of work alone and temporarily, trying to save up and send some remittances before returning home.<sup>159</sup> In the context of rising wages around the time of independence, an urban male breadwinner lifestyle became more attractive. Urban

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<sup>152</sup> Thompson, 'Uganda disturbances'. For a broader discussion of late colonial wage policies in British and French Africa, see Cooper, *Decolonization*.

<sup>153</sup> On the relative profitability of coffee and cotton, see Kajubi, 'Coffee and prosperity'.

<sup>154</sup> In 1963, more than a third of smallholders in Buganda employed labour at some point during the year; Uganda, *Report on Uganda Census*, vol. 1, p. 56.

<sup>155</sup> Elkan, *Migrants*, pp. 75–96.

<sup>156</sup> Hutton, *Reluctant farmers?*, p. 18. Cf. Bantebya Kyomuhendo and McIntosh, *Women*, p. 118.

<sup>157</sup> Richards et al. eds., *Subsistence to commercial farming*, p. 43.

<sup>158</sup> Jameson and Tothill eds., *Agriculture in Uganda*, p. 116.

<sup>159</sup> Appendix Table C.

labour surveys suggest that the share of unskilled labour migrants taking their families to town increased sharply.<sup>160</sup> During the 1960s, rural–urban migrants in search of work fuelled considerable urban growth, with Kampala’s population growing more than threefold.<sup>161</sup> However, due to the fact that demand rapidly outstripped the supply of jobs, a large share of urban migrants was relegated to under- or unemployment.<sup>162</sup> Many returned home disenchanted, only to become ‘reluctant farmers’.<sup>163</sup>

## V. Returns to labour

The above procedure of real income estimation starts from a reconstruction of typical farm size, production, and income. However, there is no reason to assume that farming was a full-time activity, nor that it was the only source of income for ordinary rural households. We know that an important share of subsistence income was generated by women, enabling men to seek additional off-farm income.<sup>164</sup> Additionally, agricultural labour was unevenly distributed throughout the year, leaving time for additional productive activities in the agricultural off-season.<sup>165</sup> Moreover, at least a share of what colonial administrators labelled as ‘leisure time’ was in fact taken up by activities that functioned to secure (future) access to productive resources.<sup>166</sup>

The census and survey materials suggest that a minority of smallholders obtained significant off-farm income.<sup>167</sup> However, as households may not have disclosed their full income portfolio, fearing colonial intervention and higher taxes, this is likely to be an underestimate. Evidence from a number of small-scale, in-depth rural income surveys indicates that up to 40 per cent of smallholder cash income was, in fact, generated through non-agricultural activities such as wage labour and small-scale trading.<sup>168</sup> Although it is commonly held that, due to a de

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<sup>160</sup> Kampala: from 22% (1949) to 67% (1964); Jinja: from 26% (1952) to 73% (1965). Uganda, *Report on a Cost of Living Survey*; Uganda, *Unskilled Workers in Kampala*; Uganda, *Unskilled Workers in Jinja, November 1952*; Uganda, *Unskilled workers in Jinja, June 1965*. Also see Appendix Table C.

<sup>161</sup> From 92,837 in 1959 to 330,700 in 1969. The share of Ugandans living in Kampala rose from 1.4 to 3.5%; Uganda, *Census 1959*; Langlands, *Atlas*, tab. 31.

<sup>162</sup> Average monthly formal employment rose from 220,999 in 1961 to 298,868 in 1970; Elliot, *Employment and income distribution*, p. 6.

<sup>163</sup> Hutton, *Reluctant farmers?*

<sup>164</sup> Ugandan surveys indicate that women contributed approximately half of the on-farm labour input; Cleave, *African farmers*, p. 32; also Bantebya Kyomuhendo and McIntosh, *Women*, pp. 44–115.

<sup>165</sup> Austin, ‘Resources, techniques, and strategies’, pp. 597–9; Cleave, *African farmers*, p. 120.

<sup>166</sup> Berry, *No condition*, pp. 142–5.

<sup>167</sup> Appendix Table A.

<sup>168</sup> Appendix Table D.

facto racially segregated labour market, opportunities for Africans were limited,<sup>169</sup> a large number of smallholders seem to have been able to diversify into household manufacturing, trade, and (semi-)skilled administrative jobs.<sup>170</sup> The high share of brides and grooms who record off-farm occupations in colonial Kampala's marriage register indeed hints at the importance of off-farm income, at least for the more privileged social strata.<sup>171</sup> Apparently, the labour demands of agriculture did not prevent households from seeking additional sources of income.

This section estimates the labour inputs necessary to obtain the real income estimated in the previous section. To calculate labour inputs for the key farming activities on the three typical smallholdings, a number of colonial-era studies on agricultural labour inputs have been consulted.<sup>172</sup> These indicate that the hours effectively worked per day in farming were significantly fewer than the lengthy working days expected in supervised unskilled wage labour for expatriate employers. Smallholder working days effectively spent in the field lasted some five hours on average throughout the year, even though working hours fluctuated strongly between seasons.<sup>173</sup>

Most authors agree that a banana garden was relatively easy to maintain, requiring some 80 agricultural working days of sustained, but relatively light and well-distributed, labour inputs throughout the year.<sup>174</sup> The cultivation of cotton required approximately 120 man-days, protein crops 100 man-days, and coffee 80 man-days annually. Although coffee required no ploughing and much less weeding, its major disadvantage was the labour investment required for the first three years during which no income could yet be derived from the young trees.

In the grain areas, labour requirements per acre were lower than in the banana regions due to more extensive farming methods and the use of the plough. At the same time, these field crops yielded significantly fewer calories per acre than bananas, and cotton yields were typically lower (table 2). Cultivating an acre of grains required some 40 agricultural working days, protein crops 50 days, and cotton 60 days of labour input.

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<sup>169</sup> Ehrlich, 'Paternalism in Uganda'; Jamal, 'Taxation and inequality'.

<sup>170</sup> Elkan, *Migrants*, pp. 21–32.

<sup>171</sup> Meier zu Selhausen and Weisdorf, 'Colonial legacy', pp. 240–1. Although this is not explicitly recognized by the authors, it is likely, in the light of Kampala's small size, that many of those who report a non-farm occupation were in fact smallholders who had successfully expanded their income portfolio to include non-farm activities.

<sup>172</sup> Masefield, *Agricultural change*; Parsons, *Systems of agriculture*; Kennedy, 'Study of economic motivation'.

<sup>173</sup> This estimate excludes a range of domestic chores such as maintaining the homestead, cooking, and fetching water and firewood. In the grain areas of Uganda, the labour demand in the 'peak' month (July) was estimated to be more than 2.5 times higher than in the 'slack' month (Feb.); Cleave, *African farmers*, pp. 32, 122.

<sup>174</sup> Masefield, 'Some recent observations'; Chrétien, *Great lakes*, p. 64.

The labour requirements of livestock, however, are difficult to estimate. Although larger-scale cattle owners outsourced livestock rearing to specialized herders, the typical smallholder only owned a few goats or cows, which were kept on the farm and lived primarily off waste and leftovers. Children were commonly assigned the task of keeping an eye on livestock. Productive livestock had to be milked. Here it is estimated that one livestock unit (TLU) required one hour of care per day which corresponds to 73 agricultural man-days per year.

These labour input figures allow us to compare the efforts spent on attaining the incomes reported in the previous section. Applying the estimates to the acreages cultivated on typical farms (table 1), we find that agricultural labour requirements on typical smallholdings in banana areas with cotton amounted to 2,283 hours (457 five-hour agricultural working days), and with coffee only 1,633 hours (327 days). Labour inputs on a typical grain farm totalled up to 3,130 hours of labour (626 working days).

These figures clearly indicate that farming in the grain zone required more substantial labour inputs, firmly implying that the entire household had to participate in agricultural operations such as ploughing, weeding, picking, and livestock maintenance. The widespread use of communal labour arrangements in Uganda's grain regions further testifies to the scarcity of labour, especially during peak seasons when millet had to be harvested and cotton planted.<sup>175</sup> This contrasts with banana farmers, who, as the result of lower labour requirements, must have had a considerable part of the year available to branch into off-farm activities. A colonial officer indeed noted in 1940 that 'after the [cotton] crop has been harvested, [the cultivator] has from five to six months available in which he can devote himself to other money-making pursuits, while in any case he [*sic*] produces the bulk of his food requirements'.<sup>176</sup>

It is interesting to put these labour inputs in the perspective of a hypothetical urban male breadwinner household, when relying on the assumption that a typical urban wage labourer worked eight hours a day, for six days a week, and 26 days or 960 hours to earn a month's wage.<sup>177</sup> As in the previous section, it is assumed that women add 20 per cent of income to the male breadwinner household. Allen estimates that western European women in the nineteenth century earned just under half of that was earned by their male counterparts.<sup>178</sup>

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<sup>175</sup> For a general discussion of labour and seasonality, see Austin, 'Resources, techniques, and strategies'. For specifics on Uganda's grain areas, see Vail, *Agricultural innovation*; Tosh, 'Lango agriculture'.

<sup>176</sup> Nye, 'Some results', p. 462. The quotation also reveals the male-focused attitude of colonial officials, while most of the work in food crop cultivation was in fact taken care of by women; Bantebya Kyomuhendo and McIntosh, *Women*, p. 50.

<sup>177</sup> Frankema and Van Waijenburg, 'Structural impediments', p. 908.

<sup>178</sup> Allen, 'Restatement', p. 10.

Although similar data on female remuneration of labour in Uganda are absent, women were marginalized on the formal labour market.<sup>179</sup> The productivity of informal labour (for example, household textile production) can be presumed to have been low. Hence, it is assumed that women in a hypothetical Ugandan male breadwinner household would work 50 per cent of their time to contribute 20 per cent to the household's income.

These assumptions lead to a total household labour input of 3,744 hours, or 468 eight-hour working days. This corresponds to 751 five-hour agricultural working days, which is substantially more than the hours worked on the typical smallholdings. This figure is substantiated by narrative evidence. A colonial officer, pointing at labour inputs, remarked in 1940 that a typical cultivator is 'appreciably better off than the labourer'.<sup>180</sup> Similarly, an observer in Lango district, where cotton and grains were cultivated, noted that unskilled labourers were scarce and could only be found among young men saving money for marriage: 'As soon as they have saved sufficient to enable them to marry, they leave the odious work of a porter for that of a farmer'.<sup>181</sup> From the male perspective, transitioning into an urban male breadwinner lifestyle was a particularly unattractive alternative to farming, as it would result not only in a higher total labour input by the household, but also a much greater contribution by the 'breadwinner' himself relative to the other household members.

The livelihood strategies of most Ugandans consisted of a calibrated mix of on- and off-farm activities. As noted, an increasing share of households opted for cotton or coffee cultivation as their primary means to obtain cash income. Other households supplemented their subsistence income with male migrant wage labour. To compare the relative real returns to labour in different farm and off-farm livelihood activities, the labour requirements to earn the equivalent value of one per capita barebones basket are estimated. Results are reported in figure 3. Since food crops could probably not be traded for other goods at consumer prices (discussion in section IV), the food crop series (which includes staple and protein crops) should be interpreted with caution.

The estimation of labour inputs, and returns to labour in different activities, produces additional findings. First, it is now possible to see differences in welfare attainment opportunity between grain and banana farmers. Although smallholder welfare ratios in the banana areas were, in most years, only slightly above those in the grain areas, smallholders in

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<sup>179</sup> Bantebya Kyomuhendo and McIntosh, *Women*, pp. 44–115; Meier zu Selhausen, 'Missionaries and female empowerment'.

<sup>180</sup> Nye, 'Some results', p. 462.

<sup>181</sup> Steiger-Hayley, 'Wage labour', p. 17.

the grain areas had to put in much more labour to sustain their farm income, while banana smallholders had considerably more time and opportunity to diversify their activities. The fact that the cultivation of bananas freed up (male) labour has major implications. Some scholars have connected this characteristic of banana cultivation to the development of complex pre-colonial political institutions.<sup>182</sup> These conditions, in turn, can be argued to have made the banana zone attractive for colonial investments,<sup>183</sup> which further expanded the availability of local off-farm opportunities in commerce, government, and the mission.

Second, we can use the breakdown of labour inputs in different activities to compare the returns to subsistence farming and cash-generating enterprises. The high returns to labour in food crop cultivation, relative to cash crops and unskilled wage labour, provide a powerful explanation for the absence of a clear trend towards specialization in cash crops. At the same time, markets for food crops were insufficiently reliable and accessible for most smallholders to rely on them for cash income.<sup>184</sup> As such, smallholders resorted to cash-crop cultivation (for which an elaborate marketing infrastructure was erected by the colonial state) or unskilled wage labour to provide a steady and reliable flow of cash income for tax payment and market purchases.

Third, we can assess the relative appeal of different strategies to obtain a cash income. Figure 4 shows that, for most of the years in the period studied, coffee was substantially more lucrative than cotton, which was, in its turn, more remunerative than wage labour. Smallholders in the cash-crop areas, with access to a steady flow of cash income, were hardly inclined to offer themselves as unskilled labourers. During the entire colonial era, cotton cultivation yielded higher rewards than unskilled (migratory) wage labour. It is unsurprising then that smallholders in areas with a suitable marketing infrastructure for cotton opted to stay on the farm. In Uganda's northern and western areas, the absence of marketing, trade, and processing facilities prevented a sizeable cash-crop industry from developing. Instead, labour migration was the key strategy to obtain cash income.<sup>185</sup> Large numbers of unskilled migrant

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<sup>182</sup> Chrétien, *Great lakes*, p. 64.

<sup>183</sup> Colonial investments were heavily tilted towards the banana areas on the shores of Lake Victoria.

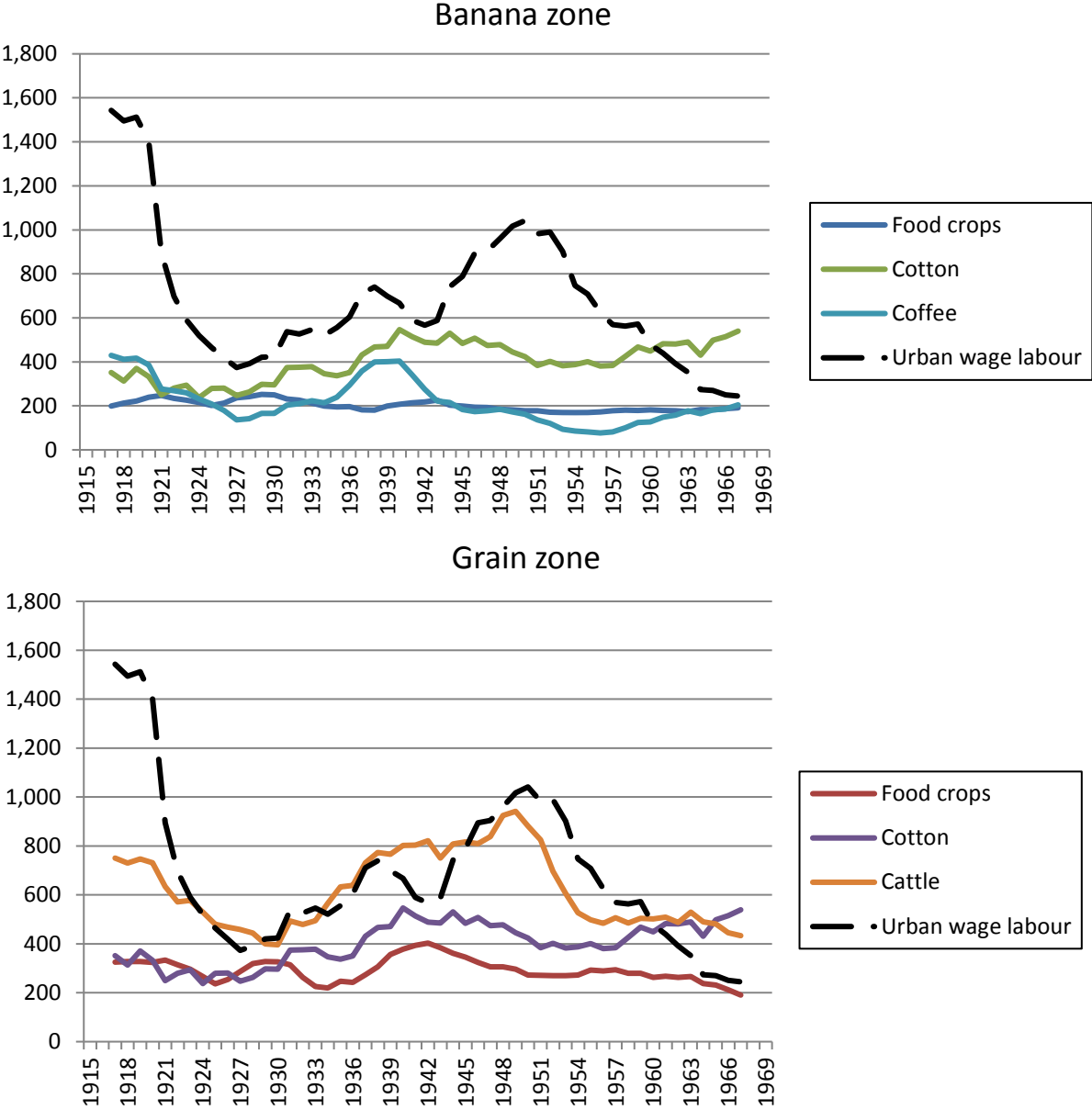
<sup>184</sup> Uganda exported few food crops. If marketed at all (Appendix Table D), food crops were sold in local markets. In such conditions, all households tended to be net sellers or net buyers in the same year; De Janvry et al., 'Peasant household behaviour', p. 1402. Cotton, instead, was sold on foreign markets, and demand and prices were much less affected by local conditions.

<sup>185</sup> In 1963, only 5% of smallholders who cultivated cotton in the grain areas reported absence from the farm of more than one month per year, compared to 25% in districts with few to no cash crops; Uganda, *Report on Uganda Census*, vol. 1, p. 36.



labourers came annually to Buganda to work on native farms and expatriate-owned sugar plantations, as well as in industry and trade.<sup>186</sup>

**Figure 4.** Returns to different types of common farm work in the banana and grain region and migratory wage labour, expressed in hours to earn one per capita barebones basket (five-year averages), 1915–70



*Notes:* The inevitable excess living costs incurred by labour migrants in Kampala due to higher urban food prices, are subtracted from the urban unskilled wage. The construction worker is assumed to consume 3,160 calories per day, or 1.5 per capita barebones baskets, obtained from local markets. This male consumption estimate follows Allen’s new caloric estimates for an active adult male. See Allen, ‘Restatement’, pp. 5–6.

*Sources:* See text on sources of prices (section IV) and labour inputs (section V).

<sup>186</sup> Elkan, *Migrants*, pp. 33–47.

As cash crops gradually diffused to more outlying areas, wage labourers had to be recruited from further and further afield. Increasingly, African migrants from across Uganda's borders dominated the supply of unskilled labour. In the early 1920s, migration flows from the neighbouring Belgian-mandated colony of Ruanda-Urundi were first mentioned in administrative sources. From the 1930s to the 1950s, some 100,000 immigrants crossed the border from Ruanda-Urundi to Uganda annually. Substantial numbers of migrants also came from Tanganyika, Kenya, and the Belgian Congo.<sup>187</sup>

Most unskilled migrant labour was employed on the shores of Lake Victoria. Interestingly, a large number of migrants stayed away from 'formal' unskilled wage labour, instead preferring to work for African smallholders. In order to profit from opportunities in the cash-crop economy, they entered sharecropping arrangements, rented a piece of land for the cotton season, or even settled as permanent tenants.<sup>188</sup> The share of migrants in Buganda Province rose from 13 per cent in 1931 to 45 per cent in 1959. In the latter year, more than a quarter of Buganda's population reported Ruanda-Urundi origins.<sup>189</sup> At the time of independence, 12 per cent of all smallholders in Buganda originated from Ruanda-Urundi.<sup>190</sup>

## **VI. Conclusion**

This study has proposed a new approach to improving our understanding of rural welfare development in colonial Africa. It has reconstructed typical smallholdings, calculated real income from farming activities, and estimated labour inputs and returns to labour, all for the purpose of generating insights into the material standards of living of Ugandan households engaged in cash-crop cultivation. The key findings have wider implications for debates in African economic history.

Unlike previous welfare reconstructions, this study explicitly measures the contributions of traded and non-traded food crops and cash crops to household income. This approach has enabled us to establish that partly commercialized smallholdings, which were typical of Uganda's cash-crop regions, provided ordinary households with incomes well above subsistence level. At the same time, the properties of typical smallholdings, observed in a range of detailed village and district-level survey and census materials from the 1930s up to

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<sup>187</sup> Richards, ed., *Economic development*, pp. 13–51.

<sup>188</sup> *Ibid.*, pp. 119–40.

<sup>189</sup> *Ibid.*, pp. 101–12; Uganda, *Census 1959*.

<sup>190</sup> Uganda, *Report on Uganda Census*, vol. 1, p. 33.

the 1960s, remained remarkably constant over time. The farm-level data strongly suggest that beyond the gradual spread of cotton and coffee, Uganda's agricultural economy experienced little dynamism. Although this does not mean that individual households did not accumulate wealth or capital, the aggregate expansion of exports resulted primarily from a process of extensive growth.

For the increasing share of Ugandan smallholders with access to cash crops, unskilled wage labour was not a lucrative proposition during the colonial era. The paradox of low wages in a thriving, smallholder cash-crop economy is explained as being the result of surprisingly low returns to cotton cultivation, in combination with the presence of a significant 'labour reservoir' from peripheral regions which provided a large and consistent flow of migrant labourers. Around the time of independence, Ugandan unskilled wages rose considerably. The fact that this growth was not matched by increased smallholder incomes should make us cautious about taking (urban) wages as a proxy for development in rural economies. Indeed, wage rises around the time of independence resulted, at least partly, from policy interventions targeted at urban workers and barely affected the livelihoods of most rural smallholders. It would be worthwhile to carry out further study of the respective roles of factor endowments and policy in bringing about these colonial labour market conditions. Moreover, the distinct variations in the returns to different cash crops, in this case cotton and coffee, suggest that further research into the differences between the various 'peasant export economies' would be useful. A reasonable starting point could be a distinction between tree cash crops (such as cocoa and coffee) and field cash crops (such as cotton and tobacco).

Eventually, cash crops were almost universally adopted among smallholders in southern Uganda who cultivated bananas as their main staple crop, as well as smallholders in northern and eastern Uganda who cultivated more arduous, labour-intensive field crops. This finding runs contrary to earlier explanations of Uganda's cash-crop revolution, which focus on the labour-extensive qualities of banana cultivation enabling farmers to adopt a cash crop without sacrificing food security. At the same time, while labour bottlenecks seem not to have impeded the adoption of cash crops even in a labour-intensive farming system, grain farmers may have been more limited in their ability to diversify their income portfolio further into off-farm activities.

On a methodological level, the study has presented a novel approach able to be employed, and further developed and tested in other rural settings in colonial Africa and beyond. Debates about welfare and smallholder production in Africa are still current and can benefit from a

historical perspective. A replication of this method in other settings could contribute to a deeper insight into the impacts of different factor endowments, cash crops, and (colonial) policies on welfare development. In-depth comparisons would help us to understand patterns of labour migration, to elucidate processes of commodity specialization and urbanization, and, ultimately, to establish the conditions under which – and the extent to which – smallholders can thrive.

## Chapter 2.

*Labour abundance in colonial Africa: poverty, policy and labour migration  
from Rwanda and Burundi to Buganda, 1923-58.<sup>191</sup>*

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<sup>191</sup> I am grateful to Andreas Eckert, Leigh Gardner, Ewout Frankema, Hilde Greefs, Doreen Kembabazi, Niek Koning and Elise van Nederveen Meerkerk for in-depth feedback on earlier versions of this chapter. For valuable comments I thank participants of the ‘Family demography and labour relations workshop’ (Amsterdam, Dec. 2014), the American Social Science History Association Conference (Baltimore, Nov. 2015) and the African Studies Association Conference (Cambridge, Sep. 2016).

## Introduction

There is a widely held scholarly view that Africa in the colonial period was characterized by land abundance and labour scarcity.<sup>192</sup> As a result of these factor proportions, the supplies of labour necessary to effectuate capitalist development were not readily available locally, neither did labour migration arise ‘naturally’ from land scarcity and low marginal productivity of labour in the subsistence sector.<sup>193</sup> There were basically two ways in which this African ‘labour problem’ was overcome.<sup>194</sup> First, prospective labourers were ‘pulled’ towards centres of employment by attractive wages and ‘incentive’ goods such as imported textiles.<sup>195</sup> This ‘pull’ was strengthened if seasonal employment opportunities were available that coincided with the ‘slack season’ in the sending region, during which labour had little value.<sup>196</sup> Second, people were deliberately ‘pushed’ onto the migrant labour market by colonial governments, using targeted policies to generate a reserve of cheap labour. Such policies included the institution of monetary taxes forcing people to obtain a cash income, and the creation of ‘artificial’ land scarcity through land alienation.<sup>197</sup>

While labour scarcity may have been the norm in colonial Africa, it was not a universal and uniform condition. In this paper, I make the case that labour in the Great Lakes region of East Africa, for most of the colonial period, was abundant and cheap. The labour market in this region was centred on Buganda, a pre-colonial kingdom on the shores of Lake Victoria that was incorporated into the British Protectorate of Uganda. In the early colonial period (up to ca. 1920), Buganda faced a ‘labour problem’ that was quite typical for African conditions, and labour coercion was used to overcome labour scarcity. However, after ca. 1920, labour became abundantly available with the ‘spontaneous’ inflow of large amounts of impoverished migrant labourers from neighbouring Rwanda and Burundi, which were at this time unified as Ruanda-Urundi under Belgian control. Within a matter of years after its emergence in the

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<sup>192</sup> Austin, ‘Resources, techniques and strategies’; Frankema and Van Waijenburg, ‘Structural impediments’; Herbst, *States and power in Africa*; Hopkins, *Economic history of West Africa*, pp. 222-4; Iliffe, *Africans*. On the transition to land scarcity in more recent times, Jayne, Chamberlin and Headey, ‘Land pressures’. The idea that African labour was particularly difficult to procure is also common to colonial literature. See Buell, *Native problem in Africa*; Orde-Browne, *African labourer*.

<sup>193</sup> As in Lewis, *Economic development with unlimited supplies*.

<sup>194</sup> A third solution was the forceful recruitment of labour, which was important and highly visible but which only involved a small share of existing labour mobility. E.g. Frankema and Juif, ‘Coercion or compensation’; Paton, ‘Labour export policy’.

<sup>195</sup> Berg, ‘Backward-sloping labor supply functions’; Miracle and Berry, ‘Migrant labour and economic development’; Swindell, ‘Labour migration in underdeveloped countries’.

<sup>196</sup> Austin, ‘Resources, techniques and strategies’.

<sup>197</sup> Amin, ‘Underdevelopment and dependence’; Arrighi, ‘Labour supplies in historical perspective’; Cordell and Gregory, ‘Labour reservoirs and population’; Mosley, *Settler economies*; Newbury, ‘Historical aspects’.

early 1920s, the flow of circular migrants from Ruanda-Urundi to Buganda swelled from a trickle to approximately 80,000 migrants annually, and hovered around this level for the remainder of the colonial period. Initially, migrants were primarily men, who participated in the cultivation of cotton and coffee as farm labourers, sharecroppers or seasonal tenants, or found jobs in construction, cotton ginning or sugar cutting. Over time, increasing numbers of migrants resettled at their destination. In 1959, within 50 years of the onset of the flow, 220,808 men and 133,555 women in Buganda identified as Banyarwanda or Barundi, constituting a fifth of the total population.<sup>198</sup> After independence, the migrant-connection between Rwanda, Burundi and Buganda consolidated, but most of the new arrivals now came as refugees, fleeing social upheaval.<sup>199</sup> Table 1 and figure 1 below illustrate the magnitude of migration from Ruanda-Urundi to Buganda, in the broader regional context and over time. Column 1 in table 1, gives the number of Banyarwanda and Barundi in Buganda, as counted in three census years. For comparison, column 2 provides the number of other immigrants in Buganda, and column 3 gives the number of Banyarwanda and Barundi counted in other areas of Uganda and Tanganyika, the neighbouring British territory. As can be seen from the table, Buganda attracted about half of all Banyarwanda and Barundi migrating to British territory, and about half of all migrants in Buganda originated from Rwanda and Burundi. The high male:female ratios for Buganda reveals the importance of circular (male) migration, but, over time, the importance of women in the migration flow rose considerably, as a growing share of migrants settled at their destination. The growing stock of migrants, illustrated in figure 1, reflects this trend towards settlement. In terms of magnitude, Buganda was a major attractor of migrants. For comparison, groundnut cultivation in the Senegambia attracted ca. 65,000 circular migrants annually in the 1920s, and cocoa cultivation in Ghana attracted ca. 125,000 annual migrants in the 1950s.<sup>200</sup>

A number of characteristics of this migration flow are at odds with the dominant view that labour migration in colonial Africa played out in a context of endemic labour scarcity. To begin with, the typical ‘pull factors’ required to attract labour migrants in a land-abundant context seem absent in colonial Buganda. As recent comparative research on urban wages has shown, unskilled construction wages in Kampala remained close to subsistence level for most of the colonial period, and were substantially lower than wages in other centres of voluntary

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<sup>198</sup> Uganda, *Uganda Census 1959*.

<sup>199</sup> Mamdani, *When victims become killers*; Prunier *The Rwanda crisis*.

<sup>200</sup> Hopkins, *Economic history of West Africa*, p. 224. I take the average of the ranges cited by Hopkins.

immigration, such as the West African cities or the Copperbelt.<sup>201</sup> Moreover, until the Second World War, Buganda's main export crop was cotton, which yielded much lower returns to labour than, for example, cocoa in the Ghanaian forest, and had a notorious reputation among African farmers across colonial Africa for its labour intensive nature and its association with colonial repression.<sup>202</sup> On top of this, rainy seasons in Buganda and Ruanda-Urundi were synchronous. Unlike farmers in Senegal and the Gambia who migrated seasonally to cultivate groundnuts, Banyarwanda and Barundi did not use migration to seek employment during the dry 'slack season', but forewent their potential contribution to farming at home.<sup>203</sup>

**Table 1.** *Migration from Ruanda-Urundi in regional context, based on census estimates*

		(1)	(2)	(3)
		R-U migrants in Buganda	Other migrants in Buganda	R-U in other parts of British territory
1931	Total counted	22,436	66,271	*
	M/F Ratio	7.15	2.64	*
	% of pop	3%	8%	*
1948	Total counted	206,438	248,601	247,642
	M/F Ratio	2.26	1.92	0.99
	% of pop	16%	19%	*
1957/9	Total counted	354,363	419,282	321,479
	M/F Ratio	1.65	1.57	1.03
	% of pop	19%	23%	*

*Notes:* 'Other migrants' include all people present in Buganda but not identifying as Ganda, except Banyoro in Mubende District. A small number of Banyarwanda and Barundi who worked in Kenya is not accounted for in column 3.

*Sources:* Uganda, *Census Returns 1931 Uganda, Uganda Census 1959*; East African Statistical Department, *African population of Uganda Protectorate 1948*; East African Statistical Department, *African population of Tanganyika Territory 1948*; East African Statistical Department, *Tanganyika Census, 1957*.

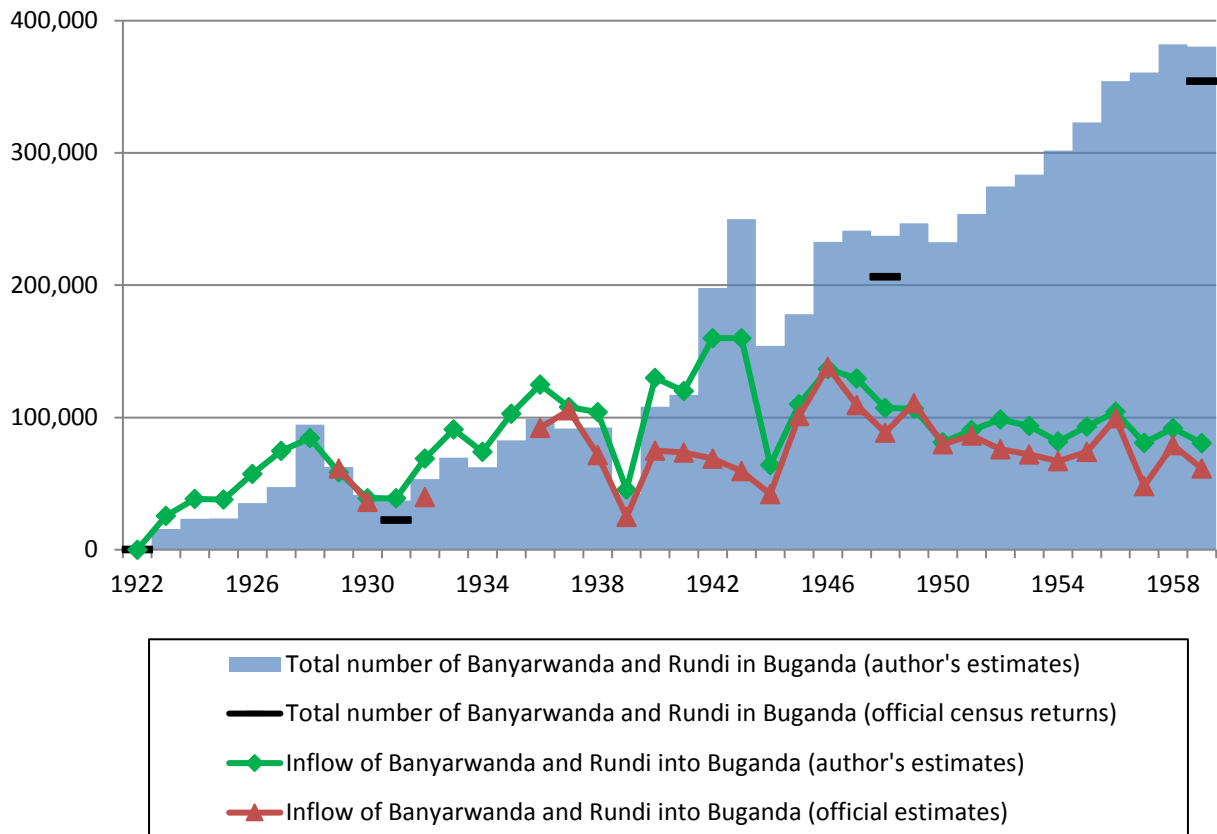
<sup>201</sup> For a comparison of wages in Uganda and the West African peasant economies, see Frankema and Van Waijenburg, 'Structural impediments'. For the Copperbelt, Frankema and Juif, 'Coercion or compensation'. For a closer look at rural and urban incomes in colonial Uganda, De Haas, 'Measuring rural welfare'.

<sup>202</sup> On cocoa in Ghana, Austin, *Land, labour and capital*; Hill, *Migrant cocoa-farmers*. For generally negative responses of African farmers to cotton, see Isaacman and Roberts eds., *Cotton, colonialism and social history*.

<sup>203</sup> On groundnuts in the Gambia, Swindell, *Migrants, credit and climate*.



**Figure 1.** *Numbers of Banyarwanda and Rundi migrants in Buganda, 1923-1959*



*Notes and sources:* The estimates are the author's estimates on the basis of scattered observations about levels and changes by colonial officials, previous in-depth studies, and colonial statistics. The most important sources are Uganda, *Enquiry*, Uganda, *Organisation*; KDA LAB 1 10i Survey of Banyaruanda Complex 1950, section II; Powesland, *Economic policy and labour*; Richards, *Economic development and tribal change*.

Buganda's subsistence wages and high direct taxes are reminiscent of conditions in the 'settler economies' of Kenya and South Africa, where people were deliberately pushed onto the labour market in order to generate a supply of cheap labour. However, migration from Ruanda-Urundi to Buganda was not the outcome of a targeted colonial labour policy in the sending areas.<sup>204</sup> Belgium hesitantly took over Ruanda-Urundi from Germany after the First World War, and subsequently tried to reorient Ruanda-Urundi westwards towards the Congo.<sup>205</sup> Ruanda-Urundi was considered overpopulated and poor. Consequently, policies were designed to first improve the subsistence position of the territory by draining marshes, ridge eroded soil and extend the cultivation of famine crops, and subsequently retain labour locally to produce Arabica coffee for export and commercial food crops for the settler farms

<sup>204</sup> Cf. Amin, 'Underdevelopment and dependence', p. 504.

<sup>205</sup> Louis, *Ruanda-Urundi*, p. 255; Baker, 'Reorientation in Rwanda', p. 70; Pedersen, *The guardians*, pp. 207-10, 245.

in Kivu and mines in Katanga.<sup>206</sup> An uncontrolled ‘exodus’ of labour was considered undesirable.

Also, migrants from Ruanda-Urundi were not actively recruited. British colonial authorities in Uganda designed their own labour policies, based on compulsion and the development of ‘labour reserves’ in the northern and western parts of the territory which were far removed from the railhead.<sup>207</sup> They were not particularly interested in gaining access to Ruanda-Urundi, but rather were confronted with a ‘spontaneous’ inflow of migrants which they failed to control. Unlike, for example, the Mozambican and South African governments, the British and Belgian colonial authorities did not negotiate labour recruitment programs between Ruanda-Urundi and the British territories until after the Second World War, when large scale migration was already an established fact.<sup>208</sup> ‘Unsolicited’ immigration from neighbouring territories in colonial Africa was certainly not unique to Uganda. For example, large numbers of migrants in French West Africa migrated to British-controlled Gambia and Ghana, attracted by greater economic opportunity and freedom.<sup>209</sup> As I will argue, however, it is the economic ‘push’ factors which played a more pronounced role in the case under consideration here.

I draw my source materials from several colonial archives, including the *Archives Africaines* in Brussels (AAB), the *Kabale District Archive* in Uganda (KDA)<sup>210</sup>, and *The National Archives of the UK* in London (TNA). Since migrants crossed a border which not only separated two colonial territories, but also two empires, the Ruanda-Urundi migrants attracted comparatively large amounts of attention from both the Belgian and British colonial governments.<sup>211</sup> Moreover, unlike many other cases of migration in colonial Africa, large scale mobility here started *after* colonial rule had been established firmly enough to document how, and under which conditions, it unfolded. This study also builds upon the work of several scholars who have previously studied aspects of the labour market in the colonial Great Lakes region in general, and migration from Ruanda-Urundi in particular. My assessment of pre-colonial labour markets is grounded in the analysis of Vansina for Rwanda, and Hanson for

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<sup>206</sup> Dorsey, ‘Rwandan colonial economy’.

<sup>207</sup> Powesland, *Colonial policy and labour*.

<sup>208</sup> A point I will further develop in sections V and VI of this paper.

<sup>209</sup> Asiwaju, ‘Migrations as revolt’.

<sup>210</sup> I am indebted to Ashley Rockenbach for sharing many of her relevant materials with me while we were working in the Kabale District Archive.

<sup>211</sup> Compared to, for example, migrants who migrated to Buganda from Uganda’s outlying districts.

Buganda.<sup>212</sup> For the colonial era, I rely mostly on Dorsey for Ruanda-Urundi, and Powesland for Buganda.<sup>213</sup> The nature and characteristics of the migration flow itself were studied in great detail in the early 1950s by a team of scholars lead by anthropologist Richards.<sup>214</sup> More recently, Chrétien has provided an assessment of the drivers and consequences of migration, while other scholars have investigated particular aspects of migration.<sup>215</sup>

This study integrates different issues highlighted in previous scholarship, to develop a systematic argument about labour market dynamics in the Great Lakes region. Using new empirical evidence from various primary sources, I argue that labour abundance in the sending areas affected the labour market in Buganda, and created a dynamic that sets this case apart from other examples of labour migration in colonial Africa. Such a synthetic and comparative approach is due for two reasons. Firstly, whereas the economies of southern and west Africa have received scholarly attention as cross-border ‘macro regions’,<sup>216</sup> no such perspective has yet been developed in the Great Lakes region, despite the great economic interdependence of the different colonial territories.<sup>217</sup> Secondly, most of the debate on the ‘labour problem’ in colonial Africa has played out in the context of the ‘settler economies’ of southern Africa and Kenya, and the ‘peasant economies’ of west Africa.<sup>218</sup> Despite the fact that Buganda was one of the largest recipients, and Ruanda-Urundi one of the largest suppliers of labour migrants in colonial Africa, this case has only received tangential treatment in the comparative literature on labour markets and migration in colonial Africa.<sup>219</sup>

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<sup>212</sup> Hanson, *Landed obligation*; Vansina, *Antecedents to modern Rwanda*.

<sup>213</sup> Dorsey, ‘Rwandan colonial economy’; Powesland, *Economic policy and labour*. Also, Elkan, *Migrants and proletarians*.

<sup>214</sup> Richards, ed., *Economic development and tribal change*.

<sup>215</sup> Chrétien and Mworoha, ‘Le cas de l’émigration’; Chrétien, ‘Sédentaires devenus migrants’; Lyons, ‘Foreign bodies’; Rutabajuuka, ‘The conditions of migrant labour’; Rutabajuuka, ‘Colonial capitalism and labour regulation’.

<sup>216</sup> For the seminal study of west Africa, Hopkins, *Economic history of West Africa*.

<sup>217</sup> More often, in line with the partition among colonial empires, Uganda was treated together with other British east African colonies, e.g. Harlow and Chilver, *History of East Africa*; Low and Smith, *History of East Africa* Van Zwanenberg, *Economic history*, Brett, *Colonialism and underdevelopment*. The work of Pierre Chrétien, albeit not primarily written from an economic history perspective, is the exception. Chrétien, *Great Lakes*; Chrétien, ‘Sédentaires devenus migrants’; Chrétien and Mworoha, ‘Le cas de l’émigration’.

<sup>218</sup> For extensive treatment of West African cases of labour migration, see Austen, *African economic history*, Austin, *Land, labour and capital*; Cordell, Gregory and Piche, *Hoe and wage*; Hopkins, *Economic history of West Africa*; Manchuelle, *Willing migrants*; Swindell, *Migrants, credit and climate*.

<sup>219</sup> For its magnitude, the case of migrants from Ruanda-Urundi to Buganda is particularly marginally treated and poorly represented in e.g. Amin, ‘Underdevelopment and dependence’, p. 504; Austen, *African economic history*, p. 168, Freund, *Making of contemporary Africa*, p. 94, Duignan and Gann, *Colonialism in Africa*, pp. 315, 667, and completely absent from Sender and Smith, *Development of capitalism in Africa*, pp. 35-66.

The paper consists of the following sections. Section I develops the argument that migrants originated from labour abundant conditions in Ruanda-Urundi. Section II discusses labour scarcity in Buganda before the arrival of migrants. Section III assesses the role of push and pull factors in triggering and sustaining labour migration, and discusses the impact of migration on Buganda's labour market. Section IV demonstrates how the supply of cheap labour was amplified by favourable labour conditions in Buganda's rural economy. Sections V and VI show how colonial labour policies were put in place in response to labour migration, and how they were shaped by the particular conditions of the regional labour market. Section VII concludes.

### **I. Determinants of labour supply in Rwanda and Burundi**

I begin by zooming in on the conditions in the sending areas. Why did so many people opt to migrate out of Ruanda-Urundi and offer their labour cheaply elsewhere? To answer this question we need to look at three peculiar conditions characterizing the economies and societies of Rwanda and Burundi in the late nineteenth and early twentieth centuries, and the ways in which these characteristics interacted with colonial policies.

Firstly, the pre-colonial economies of Rwanda and Burundi were isolated, and commercialized only to a very limited extent. The two kingdoms were located on the southwestern frontier of African Great Lakes region in the east African interior. The hilly topography and absence of navigable waterways impeded the development of industry and that of trade in bulky commodities, including food crops. The far majority of the population lived in a rural setting, and tilled the soil for home consumption.<sup>220</sup> Economic relations certainly existed with neighbouring polities, but mainly involved livestock products which were either traded with or raided from neighbouring peoples. Illustrative of this isolated position and limited economic development, is that it took European explorers until the 1890s to first set foot on Rwandan soil, while they had already developed extensive commercial, political and religious stakes in Buganda in the late 1850s.<sup>221</sup> Foreign traders who began to penetrate Rwanda from 1900 onwards, had to resort to extortion to make locals trade their cattle for the imported goods they brought.<sup>222</sup>

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<sup>220</sup> Dorsey, 'The Rwandan colonial economy'.

<sup>221</sup> Louis, *Ruanda-Urundi*, p. 104.

<sup>222</sup> Desforges, *Defeat*, p. 46-8.

Secondly, Rwanda and Burundi are remarkably densely populated, certainly in an African perspective. By the mid-twentieth century, Ruanda-Urundi was about 2.5 times more densely populated than Nigeria, Africa's second most crowded territory, and almost 20 times more densely populated than neighbouring Congo.<sup>223</sup> In the early 1950s, the territory's governor estimated a population 'surplus' of 145,000 families (out of a total of 780,000), and a surplus of 450,000 head of cattle (out of a total of 960,000) beyond the territory's estimated carrying capacity. A United Nations committee even spoke of an excess of 180,000 families.<sup>224</sup> Post-colonial Rwanda has been framed as a 'Malthusian' economy by various scholars.<sup>225</sup>

Thirdly, cattle herding played a crucial role in most aspects of economic, cultural, social and political life. Access to resources was regulated through a complex and multi-layered set of unequal relations between patrons and clients, such as the hereditary and non-dissolvable *Ubugabira* contract in Rwanda (*Ubugabira* in Burundi), in which a patron provided cattle in usufruct and protection to a client in return for political submission and labour services.<sup>226</sup> Such arrangements were widespread in the Great Lakes area, but took on an exploitative character in the labour-abundant and land-scarce conditions that increasingly characterized Rwanda and Burundi. As early as the seventeenth century, land scarcity limited herds in Rwanda to suboptimal sizes.<sup>227</sup> In an economy based on capital (livestock) rather than labour, high population densities were a problem rather than an asset, and labourers could easily be neglected and discarded. It is illustrative for the abundance of cheap labour in Rwanda and Burundi that slavery – an institution that several scholars have associated with labour scarcity – played only a marginal role.<sup>228</sup>

For centuries, people in search of better living conditions and political freedom had migrated to the peripheries of their kingdoms. However, there were increasingly fewer exit options.<sup>229</sup> With population growth, the *internal* land frontier began to close. To the east, Rwanda and Burundi faced dense tropical rainforest, so colonization of new lands was necessarily a gradual and slow process. To the north and west, Rwanda and Burundi were bordered by

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<sup>223</sup> Based on present day borders, and population estimates by Frankema and Jerven, 'Writing history backwards or sideways'.

<sup>224</sup> Cited in Chrétien and Mworoha, 'Sédentaires devenus migrants', p. 653.

<sup>225</sup> André and Platteau, 'Land relations under unbearable stress'; Diamond, *Collapse*.

<sup>226</sup> Vansina, *Antecedents*, p. 47, Louis, *Ruanda-Urundi*, p. 111.

<sup>227</sup> Or more precisely the Nyiginya Kingdom, the predecessor to Rwanda.

<sup>228</sup> Iliffe, *African Poor*, p. 61. See Chrétien 'The slave trade'. On the relationship between slavery and labour scarcity see Domar, 'Causes of slavery', Austin 'Resources, techniques and strategies', p. 609.

<sup>229</sup> Vansina, *Antecedents*, p. 129-30.

other centralized polities, most notably Bunyoro, Buganda, Nkore and Karagwe, so there was no external frontier to colonize in these directions. With few exit options for ‘surplus labour’, the position of ordinary people gradually deteriorated. As argued by Jan Vansina, by the late nineteenth century, access to farm land had become conditional on the supply of ‘crushing tributes’ in foodstuffs and manufactured goods and could demand hefty *corvée* labour from the peasants: 2 out of every 4 days of the Rwandan week. Fearing to lose their access to land, peasants had few options but to comply with these stringent demands.<sup>230</sup> Around 1900, landlessness had become a reality for the poorest elements of society, who hired themselves out to ‘whomever would pay them in foodstuffs’,<sup>231</sup> while many others struggled to eke out a living and sustain the dues required by their patrons. According to John Iliffe, ‘Rwanda and Burundi were among the worst parts of Africa in which to be poor’.<sup>232</sup>

Pre-colonial Rwanda and Burundi were, thus, already characterized by the existence of a large and underemployed ‘reservoir of cheap labour’ well before Europeans first arrived. However, colonialism reinforced the socio-economic inequalities on which poverty was partly founded, while failing to improve the subsistence position or expand economic opportunity.<sup>233</sup> The Germans, who ended up controlling the largest part of Rwanda and Burundi in 1894 until they were ousted in 1916, effectuated very little commercial development during that period.<sup>234</sup> A plan to build a railway came to nothing, and the expansion of indigenous trade was also constrained, as the German colonizers, fearing erosion of the social order on which their authority relied, were reluctant to let foreign (i.e. Ganda, Indian and Swahili) traders enter the country.<sup>235</sup> Livestock continued to be the only economic asset of considerable export value.

In 1916, Belgium occupied Ruanda-Urundi and in 1923 the territory was officially mandated to Belgium by the League of Nations. The Belgians, who had planned to use their war-time occupation of Ruanda-Urundi as a bargaining chip during post-war negotiations, accepted the mandate reluctantly.<sup>236</sup> Unlike the Germans, the Belgian colonizers set out to lift Ruanda-Urundi from its ‘poverty trap’ and economic isolation, partly pressured by the Mandatory

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<sup>230</sup> This links in with the idea that Rwanda is characterized by a ‘culture of obedience’, which, according to Straus, ‘stems from the calculation that – given demographic density, settlement patterns and territorial visibility – successful evasion or exit from state demands is highly improbable.’ Straus, *Order of genocide*, p. 216.

<sup>231</sup> Vansina, *Antecedents*, p. 42, 130, 134; Iliffe, *African Poor*, p. 61, 63.

<sup>232</sup> Iliffe, *African Poor*, p. 64.

<sup>233</sup> And also gave it a more ‘racialized’ character, with dire long-term consequences.

<sup>234</sup> Louis, *Ruanda-Urundi*, p. 175.

<sup>235</sup> Desforges, *Defeat*, p. 54.

<sup>236</sup> Louis, *Ruanda-Urundi*, p. 255.

responsibilities assigned by the League of Nations,<sup>237</sup> partly anticipating that its new acquisition could develop into a valuable asset for the development of the Congo. Like their German predecessors, Belgian administrators feared that the poor and underfed inhabitants of Ruanda-Urundi could not stand the climate and labour demands elsewhere.<sup>238</sup> Moreover, labour migration would take away the strongest men, who were most needed to jumpstart local development. Even though some labour was recruited for Congolese enterprises in the late 1920s, these attempts were soon aborted, as I will discuss further in section V. In order to improve the subsistence situation, an ambitious set of projects was rolled out, including the forced cultivation of famine reserve crops, anti-erosion projects and swamp drainage.<sup>239</sup> In order to stimulate economic development, an extensive road building and maintenance effort was undertaken to connect Ruanda-Urundi to the industrial centres of the Congo, primarily with the aim to export food from the fertile western parts of Ruanda-Urundi.<sup>240</sup> In 1931, households were obliged to cultivate a fixed number of Arabica coffee trees, a crop requiring much labour but relatively little land and was therefore considered suitable in the land-constrained context.<sup>241</sup>

The Belgian policies were framed as ‘necessary for development’.<sup>242</sup> However, a number of factors pre-empted rapid improvement. Firstly, the execution of colonial policies and mobilization of labour came to rely heavily on collaboration with the Tutsi elites.<sup>243</sup> That being the case, the Belgian colonizers reinforced a system of unequal access to resources that was one of the drivers of poverty in the first place. This was a policy that, in the words of Catherine Newbury, was ‘not designed to limit abuses’.<sup>244</sup> Secondly, soon after the consolidation of Belgian rule, its currency depreciated. Between 1919 and 1923, the Belgian

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<sup>237</sup> In particular German and British officials and media kept a close eye on Ruanda-Urundi. Pedersen, *The guardians*

<sup>238</sup> In 1909, the German East Africa had explicitly prohibited labour recruitment from Ruanda-Urundi. This decision was based in the belief that the feeble ‘mountain people’ from the region could not stand the malarial coast, or would carry sleeping sickness. Instead of tapping into the ‘labour reservoir’, the demand for labour on coastal plantations was sustained by aggressive labour recruitment policies elsewhere, and even by delaying the abolition of slavery. Sunseri, *Vilimani*, pp. 27, 140, 185.

<sup>239</sup> Leading Dorsey, who frames Belgian colonial policies in Ruanda-Urundi as geared towards capitalist exploitation, to comment that ‘the emphasis on subsistence production offers very little revenue for state accumulation. So the state’s decision to compel Africans to plant specific food crops, as anti-famine measure, must have been done with some reluctance.’ Dorsey, ‘Rwandan colonial economy’, p. 349.

<sup>240</sup> Pedersen, *The guardians*, pp. 207-10, 245; Dorsey, ‘Rwandan colonial economy’, p. 117.

<sup>241</sup> Dorsey, ‘Rwandan colonial economy’, pp. 166-205.

<sup>242</sup> Halewyck de Heusch, Director General of Political and Administrative Affairs at the Belgian Colonial Ministry, 22 October 1925, quoted in Pedersen, *Guardians*, p. 233.

<sup>243</sup> Desforges, *Defeat*; Dorsey, ‘Rwandan colonial economy’, p. 26, Pedersen, *Guardians*, p. 242.

<sup>244</sup> Newbury, *Cohesion of oppression*, p. 155.

franc lost three-fifths of its value relative to the pound sterling. By 1927, when the franc reached its lowest point, its rate to the pound had halved again.<sup>245</sup> Since the Belgian administration followed a low-wage policy, people faced a considerable decline in their purchasing power for imported items such as hoes and cloth.<sup>246</sup> Thirdly, prospects for improvement in the near future were pre-empted by the reduction of – already minimal – local government funds during the Great Depression of the 1930s, for which the revenues generated from compulsory coffee cultivation could not (yet) compensate.<sup>247</sup>

In conclusion, factor proportions in Rwanda and Burundi should be regarded as an aberration from the broader colonial African pattern of land abundance and labour scarcity. This was not just a matter of ‘overpopulation’, but the outcome of a combination of factors including a cattle-oriented economy with strong vertical socio-economic relations, the relative geographic isolation of Ruanda-Urundi, and a closed land frontier. During the first decades of colonial rule, poverty, underemployment, and low marginal productivity of labour characterized the labour situation in Ruanda-Urundi. It is illustrative that the *per capita* value of exports from Ruanda-Urundi during the 1920s and 1930s were just 7 per cent of the *per capita* exports from Uganda. Only after the Second World War did some improvement in the labour situation take place. Anti-famine measures began to pay off, and coffee production began to generate export revenues. Primarily as a result of the latter, in the period 1946 to 1959, Ruanda-Urundi’s value of exports had risen to 33 per cent of Uganda’s, in per capita terms.<sup>248</sup>

## II. The ‘labour problem’ in Buganda

What attracted migrants to Buganda? The introduction of this paper pointed out that colonial Buganda does not seem an obvious destination for labour migrants, because of its low wages and high taxes. In this section, I argue that Buganda was labour scarce nonetheless, and that low wages in the early colonial period were an outcome of repressive labour policies, which had been introduced to solve Buganda’s ‘labour problem’. I argue that the abolition of these policies in the early 1920s resulted in a rapid increase of wages and produced an environment conducive to the absorption of large numbers of labour migrants. As discussed in more detail

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<sup>245</sup> Exchange rates calculations based on Officer ‘Exchange rates’.

<sup>246</sup> Dorsey, ‘Rwandan colonial economy’, pp. 91, 121.

<sup>247</sup> The link between the Great Depression and compulsory coffee cultivation is a central theme in Dorsey, ‘Rwandan colonial economy’, pp. 166-205. For coffee in Ruanda-Urundi, also see Van Melkebeke “‘Changing grounds’”

<sup>248</sup> Leurquin, *Agricultural change; Ruanda-Urundi, Rapport Annuel 1922-59*; Uganda, *Blue Book 1922-1945*; Annual Board of Trade, *Statistical Abstracts (1946–9)*; Uganda, *Statistical Abstracts (1950–59)*.



in section III, the subsequent return to low wages from the 1930s onwards was a direct consequence of the abundant supply of cheap migrant labour.

Compared to Rwanda and Burundi, labour conditions in pre-colonial Buganda were favourable. Population and livestock densities were high for African standards, but much lower than in Rwanda and Burundi. Buganda's rural population profited from an open land frontier, and particularly fertile soils and abundant rainfall. Moreover, civil war during the 1880s and early 1890s, as well as a rinderpest epidemic in the 1890s and a sleeping sickness epidemic in the 1900s, led to a decline in Buganda's population.<sup>249</sup> The effect of this decline, and subsequent low fertility, on labour supply was a key concern of local elites, colonial doctors, and administrators during the early colonial period.<sup>250</sup> By 1959, even after decades of immigration, Buganda's population density was still only half that of Ruanda-Urundi.<sup>251</sup> Moreover, unlike Rwanda, Buganda was centrally located in the Great Lakes region, adjacent to Lake Victoria, and had a much more open economy. Buganda specialized in raiding and trading, and by the late nineteenth century, it was the dominant military and commercial power in the region, playing a central role in the expanding ivory and slave trades of the Indian Ocean.<sup>252</sup>

The maintenance of Buganda's administrative system, elaborate road network, and standing army, was predicated on the production of an agricultural surplus. Two institutional solutions evolved which enabled the extraction of surplus from the rural population in the context of an open land frontier.<sup>253</sup> Firstly, agricultural production relied heavily on slave labour, of which there were many different types.<sup>254</sup> Most slaves were of foreign origin, and acquired from raids on neighbouring polities. The majority of them were women, 'held in domestic servitude as cultivators, wives and concubines',<sup>255</sup> and their most important task was to work alongside other female members of the household to provide agricultural and domestic labour. Secondly, as argued by Holly Hanson, open land access meant that 'a chief had to treat his

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<sup>249</sup> Doyle, *Before HIV*, chapter 2; Hanson, *Landed obligation*, chapter 4; Reid, *Political power*.

<sup>250</sup> Doyle, *Before HIV*, p. 84.

<sup>251</sup> And only one quarter if we only count the Baganda population and discard migrants. Uganda, *Census 1959*; Ruanda-Urundi, *Rapport Annuel 1959*.

<sup>252</sup> See Reid, *Political power in pre-colonial Buganda*.

<sup>253</sup> Commonly referred to as the 'Nieboer problem', see Domar, 'Causes of slavery', Austin, 'Resources, techniques and strategies', p. 609. On the relationship between state formation and labour abundance, Herbst, *States and power in Africa*.

<sup>254</sup> Tuck, 'Women's experiences of enslavement'.

<sup>255</sup> Slaves were often women, 'held in domestic servitude as cultivators, wives and concubines.' Richards, 'Assimilation', pp. 170-2; Tuck, 'Women's experiences of enslavement', p. 176.

followers reasonably well' in order to prevent them from seeking better conditions elsewhere.<sup>256</sup> As a result of this competition, Ganda farmers were enticed by political elites to engage in mutually beneficial economic relations, rather than forced into unequal relationships like their Rwandan counterparts. The relatively favourable position of ordinary Ganda is illustrated by their access to slaves. In Richard Reid's assessment, 'a significant proportion of wealthier peasants and non-chiefs owned at least one or two serviles'.<sup>257</sup> Slaves themselves probably also benefitted, at least to some extent, from the affluence and relatively fluent social categories in Buganda.<sup>258</sup> Although their freedom was constricted, and they faced increasing risks towards the late nineteenth century of being sold for export, slaves were not necessarily poor in a material sense.<sup>259</sup>

Colonial intervention had major repercussions for labour conditions in Buganda. With the establishment of the British Uganda Protectorate in 1894, rural employers could no longer resort to slave labour.<sup>260</sup> The abolition of slavery, as well as the gradual decline of polygyny resulting from Christianization from the 1870s onwards,<sup>261</sup> diminished access to female domestic and agricultural labour. The imposition of colonial rule also coincided with a demographic crisis (as noted earlier). The issue of labour scarcity became acute with the completion of the Uganda Railway in 1901, which connected the African Great Lakes region to the Indian Ocean. The immense reduction in transport costs effectuated by the railway created unprecedented scope for trade. Textiles, imported via the 'caravan trade' with the coast, had been a highly valued item for at least decades before the completion of the railway, but its consumption had been the preserve of the wealthier strata of society.<sup>262</sup> Now, textiles came within the reach of a much larger share of the rural population.<sup>263</sup> Buganda's fertile soils and bimodal rainfall provided a promising context for the development of an export crop economy. However, to reap the benefits from its newly acquired access to world markets, substantial amounts of labour had to be mobilized to develop the necessary infrastructure and other public works, and cultivate, transport and process the actual cash crops.<sup>264</sup>

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<sup>256</sup> Hanson, *Landed obligation*, p. 182, also, p. 17.

<sup>257</sup> Reid, *Political power*, p. 116, also, Hanson *Landed obligation*, pp. 97-8.

<sup>258</sup> Reid, *Political power*, p. 127.

<sup>259</sup> Hanson, *Landed obligation*; Reid, *Political power*.

<sup>260</sup> See Médard and Doyle, *Slavery in the Great Lakes region*. Although in German East Africa/Tanganyika Territory slavery was not formally abolished until 1923, see Sunseri, *Vilimani*

<sup>261</sup> This prohibition was at least partially observed by Buganda's quickly growing Christian population.

<sup>262</sup> Reid, *Political power*, pp. 158, 165.

<sup>263</sup> Wrigley, *Crops and wealth*, p. 58.

<sup>264</sup> Powesland, *Economic policy*, pp. 13-34; Wrigley, *Crops and wealth*, pp. 13-30.

In order to overcome imminent labour scarcity, a coercive system of local labour extraction was put in place by a coalition of the colonial state and Ganda chiefs. This system relied on chiefs' private ownership over the bulk of Buganda's fertile soils, known as *Mailo*. As argued by Hanson, these new, rigid land institutions undermined the bargaining power of tenants, and enabled elites and the state to extract more labour.<sup>265</sup> People were expected to work a month per year for low wages for the colonial state (*kasanvu*) and provide a month of unpaid communal labour (*luwalo*). On top of that, peasants had to pay rent (*busulu*) and tithe (*envujo*) to their landlords, and a poll tax to the colonial state, which required them to work even more, or produce marketable crops, such as cotton, in their own gardens.<sup>266</sup> The labour burden on the rural population, especially the poorest and most vulnerable elements, indeed reached very large proportions, adding up to 6 months of unpaid or meagrely remunerated labour by the end of the 1900s.<sup>267</sup> Labour demands were widely detested. Many people saw it as degrading to work for wages and do the kind of menial tasks that were previously performed by female serviles, or had been part of broader reciprocal arrangements. Much of the cultivation of cotton ended up being performed by women, who had traditionally been responsible for agriculture.<sup>268</sup> Moreover, the system of forced labour depressed wages, as people were pushed onto the labour market to avoid being conscripted for *corvée* labour. The heavy reliance on forced labour during the First World War – 200,000 Ugandans were recruited for the war effort – further increased resistance to the existing labour regime.<sup>269</sup>

In the 1920s, following decades of labour repression, labour conditions in Buganda improved considerably. Firstly, *Kasanvu* was phased out and formally abolished in 1921, which resulted in a rapid increase of nominal wages. Secondly, the British territories in East Africa experienced a currency crisis from 1919 to 1921, the outcome of which was a conversion of wages from rupees to shillings at a fixed exchange rate, which meant a large windfall increase of the purchasing power of wages, in terms of imported goods.<sup>270</sup> In terms of imported cloth, the purchasing power of unskilled construction wage in Kampala doubled between 1921 and

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<sup>265</sup> Hanson, *Landed obligation*. In 1906, the Colonial Office in London was informed that in Buganda 'practically the whole of the land is in the hands of its chiefs and their influence over the peasantry is at present sufficiently strong to ensure a steady and abundant supply of unskilled labour.' Powesland, *Economic Policy*, p. 15.

<sup>266</sup> Powesland, *Economic policy*, pp. 13-34.

<sup>267</sup> Hanson, *Landed obligation*, p. 171.

<sup>268</sup> *Ibid.*, pp. 129-36, 176-9; Powesland, *Economic policy*.

<sup>269</sup> Jørgensen, *Uganda*, p. 61

<sup>270</sup> Powesland, *Economic policy*, p. 33.

1923.<sup>271</sup> Farmers also saw the value of their produce increase. After a stark and sudden collapse of cotton grower prices in 1921 (partly related to the currency crisis), prices recovered and stabilized. As a result of these improvements, the acreage planted with cotton in Buganda rose fivefold between 1921 and 1925.<sup>272</sup>

Thirdly, during the second half of the 1920s, a number of policies improved the position of tenants vis-a-vis landlords and chiefs. The initial empowerment of land-owning chiefs had limited the ability of ordinary rural dwellers to profit from the cultivation of cash crops and functioned as a break on the further development of the export economy. Moreover, the tight coalition with these chiefs was no longer required to pacify and control Uganda. Therefore, the colonial government pushed for the passing of the *Busulu & Envujo Law* in 1928, which curbed the extractive powers of landowners and their ability to evict tenants. Fourthly, from 1930 onwards, unpaid *Luwalo* labour could be commuted into a monetary payment.<sup>273</sup> With tributes and labour demands diminished and with increased tenure security, Ganda peasants could now devote more of their energies more profitably to the cultivation of export crops. Greater tenure security also contributed to a rapid expansion of Robusta coffee, which would eventually become Buganda's most profitable cash crop. The expansion of coffee itself also provided a new impetus to the demand for wage labour. Not only did coffee yield higher returns to labour than cotton, its cultivation was also characterized by a marked labour peak during the harvesting season, pushing up the demand for temporary farm labour.

In conclusion, during the 1920s, Buganda transitioned from a system of labour coercion which had served to solve its 'labour problem', to a much more open labour market. After the abolition of *Kasanvu* labour, the British administration began to actively recruit labour migrants for public works in Buganda from Uganda's outlying districts. In 1919, an administrative officer had been appointed in Uganda to advise on finding new ways to remedy increasing labour shortages, and, by 1924, a fully-fledged labour department was established, primarily to that aim.<sup>274</sup> It is in this context that labour migrants from Ruanda-Urundi began to arrive.

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<sup>271</sup> Wages and cloth prices from De Haas, 'Measuring rural welfare', cf. his figure 3.

<sup>272</sup> From ca. 0.04 acres to ca. 0.23 acres per capita. Uganda, *Blue Books*.

<sup>273</sup> Elliot, *Investigation*, p. 26; Powesland, 'History', pp. 25, 43.

<sup>274</sup> Powesland, 'History', p. 24; Uganda, *Enquiry*, p. 9.

### **III. Onset of migration and the integration of labour markets**

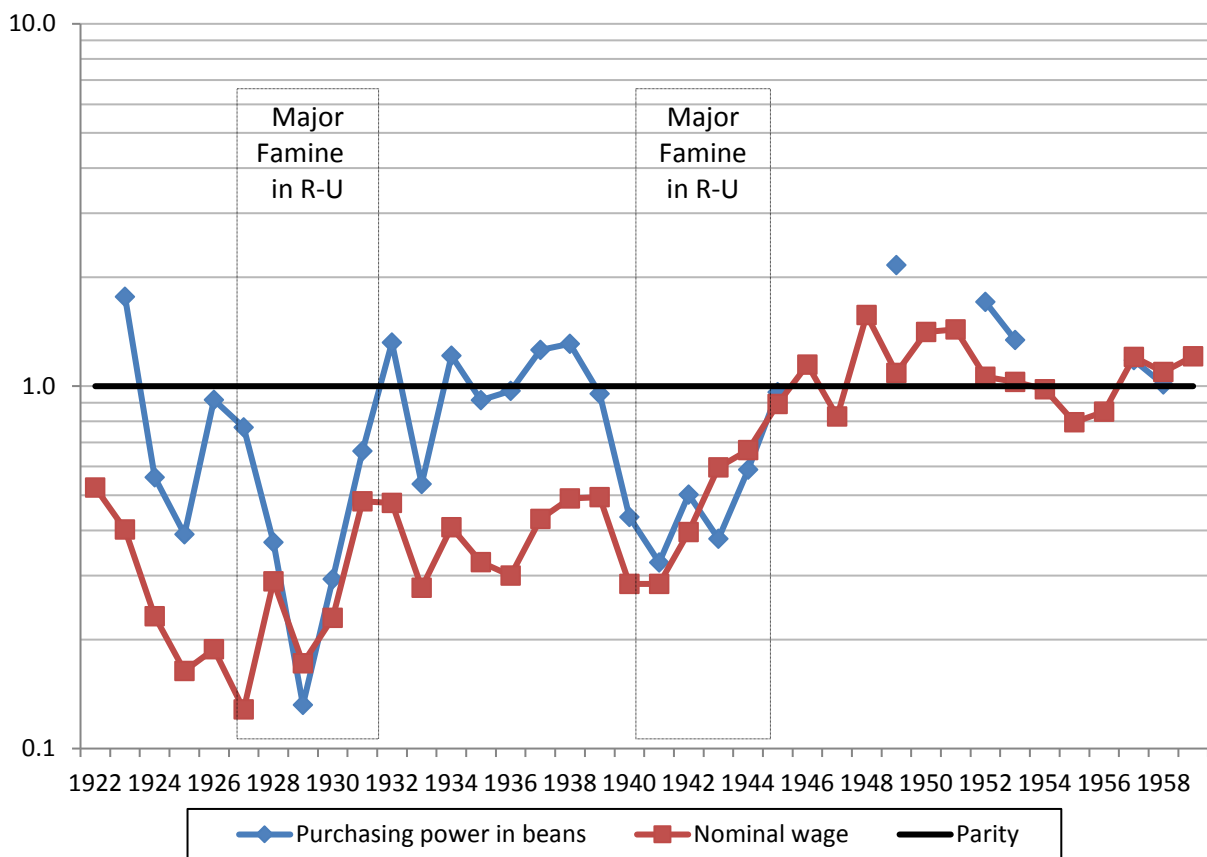
The previous two sections make the case that labour abundance provided ‘push’ conditions in Ruanda-Urundi, while labour scarcity during the 1920s provided ‘pull’ conditions in Buganda. Interestingly, after peaking in the mid-1920s, real wages experienced a secular decline, which sets Uganda apart from other ‘peasant economies’ where wages rose substantially during the latter half of the colonial period.<sup>275</sup> This decline does not signify a return to labour coercion or declining demand for labour. Instead, as I argue in this section of the paper, it was primarily the result of the influx of large numbers of migrants willing to work for low wages.

To illustrate how uneven labour market conditions translated into an economic incentive for migration, figure 2 compares wages of unskilled construction workers in Usumbura (Ruanda-Urundi) to those of their counterparts in Kampala (Buganda). I compare wages (i) in nominal terms and (ii) in terms of purchasing power in beans, which was a key food crop in the diet of Banyarwanda and Barundi. A ratio of 1 means that wages were at parity. A ratio of 0.5 means that the Usumbura worker had half the wage of his Kampala counterpart.

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<sup>275</sup> The decline of real wages is clearly reflected in figure 3 of De Haas, ‘Measuring rural welfare’. In their study on construction wages in British colonial Africa, Frankema and Van Waijenburg observe substantial increases in real wages in the Gambia, Gold Coast, Sierra Leone, Southern Nigeria, Nyasaland during the latter half of the colonial period. Only in Tanganyika did wages decline compared to the 1920s baseline.

**Figure 2.** *Unskilled construction wages: Usumbura as a share of Kampala (1=parity)*



*Notes:* Prices of unbleached cloth in Usumbura were not recorded in the annual reports before 1947. I estimate market prices using the *Ugandan* cloth market prices in shilling converted into a value in francs, using the official exchange rate.

*Sources:* Unskilled construction wages, bean prices and unbleached cloth prices for Kampala from De Haas ‘Measuring rural welfare’, and for Usumbura from Belgique Ministre Des Colonies, *Rapport sur l’Administration Belge du Ruanda-Urundi pendant l’Année 1927-1959*. Exchange rates from Officer, ‘Exchange rates’.

Wages expressed in terms of their local purchasing power in beans were more or less equal during most years. Only during famine years (most notably from 1927-31, and again during the Second World War, as indicated in the figure)<sup>276</sup> were ‘bean wages’ in Ruanda-Urundi substantially lower than in Buganda.<sup>277</sup> At the same time, there was a substantial disparity in terms of nominal wages until the end of the Second World War. The massive nominal wage difference during the 1920s arose from opposite trends on both sides of the border. Labourers in Usumbura were not compensated for the depreciation of the franc by an (equivalent) rise in

<sup>276</sup> Detailed accounts of these famines are given in Cornet, *Histoire d’une Famine*; Singiza, *La famine Ruzagayura*.

<sup>277</sup> It is worth noting that the low food prices benefitted Belgian colonial enterprises in the Congo, which imported Ruanda-Urundi’s cheap food. Dorsey, ‘Rwandan colonial economy’, p. 117.

wages. At the same time, labourers in Kampala benefitted from the competitive labour market and currency conversion, as noted in the previous section. At the peak of this divergence, in 1927, Usumbura workers' nominal wages were a mere 13 per cent of their Kampala counterparts. It should be noted that this disparity translated directly into a similarly massive gap in terms of purchasing power of imported goods, such as unbleached cloth, since Ruanda-Urundi imported most of its textiles from the Shilling zone.<sup>278</sup> From the late 1920s onwards, Kampala wages experienced a *downward trend*, even touching the barebones subsistence floor during the late 1940s, before recovering somewhat during the last decade of colonial rule.<sup>279</sup> Nominal wages in both Usumbura and Kampala remained more or less *at par* during the late 1940s and 1950s. The increase in nominal wages in Ruanda-Urundi after the Second World War is indicative of its greater participation in international trade.

The devaluation of the franc and the divergence of nominal wages were important factors intensifying cross-border trade and triggering the onset of migration. In 1921, the Belgian colonial government pointed out that an intensive cattle trade took place over the northern border to replenish herds in Uganda.<sup>280</sup> When the governor of Ruanda enquired in 1925 with his district administrators about the causes of migration, most of them insisted in reply that migrants were motivated by economic opportunity in British territory, not famine.<sup>281</sup> Individual administrators noted how Indian and Swahili speaking traders set up trading missions in 1923 and 1924 to Uganda and Tanganyika to sell cattle, skins and hides from Ruanda-Urundi in return for textiles and other imported goods. To carry their goods, traders brought with them groups of Banyarwanda porters, who stayed at their destination for a number of weeks to work for local farmers, returning home with valuable textiles, which they could exchange for cattle on favourable terms.<sup>282</sup>

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<sup>278</sup> Indeed, the import prices almost perfectly followed the value of the franc relative to the shilling. Uganda, *Blue Books* and *Ministre Des Colonies, Rapport sur l'Administration Belge du Ruanda-Urundi pendant l'Année 1927-1959*. Perhaps triggered by unfavourable import prices, from the mid-1930s onwards, the Belgian Congo began to manufacture its own version of the popular 'Americani' textiles for the local market in Congo (the *Utexléo* and *Filtisaf* brands), which after the Second World War were competing with imported cloth.

<sup>279</sup> De Haas, 'Measuring rural welfare', p. 620 (chapter 1, figure 3).

<sup>280</sup> Ruanda-Urundi, *Rapport 1921*, p. 9.

<sup>281</sup> AAB RWA 352 Letters from the Résidents of Gatsibu, Rukira, Kigali, Shangugu, Kisenyi, and Lubengera, dated May – Aug. 1925.

<sup>282</sup> AAB RWA 352 Resident of Shangugu to Resident of Ruanda, undated (estimated May 1925); Resident of Gabsibu to Resident of Ruanda, 20 May 1925.

Soon, however, migration took on a different character. The famine of 1927-31 occasioned a marked acceleration of outmigration of impoverished men and families.<sup>283</sup> Even though food prices recovered to normal levels after the famine, numerous people continued to struggle to eke out even a subsistence income.<sup>284</sup> It is telling that the regions that were hardest hit by the famine, continued to supply most migrants to Uganda in the period up until the Second World War.<sup>285</sup> It is also illustrative that the far majority of migrants were relegated to a journey on foot, over 300 miles, and easily requiring 6 weeks. In 1937, a Catholic missionary stressed in a confidential circular that migrants were ‘poor and defenceless, rather than entrepreneurial’.<sup>286</sup> In that same year, a Ugandan labour report commented upon the ‘emaciated condition’ of migrants entering Uganda, noting that ‘their need must be very great for them to undertake the hazards of the present journeys’.<sup>287</sup> Often upon arrival migrants were so weak because of the food scarcity in Ruanda-Urundi and the long journey to Buganda on foot, that they could hardly fulfil their labour tasks and struggled to survive.<sup>288</sup> Ruanda-Urundi migrants were strongly overrepresented in Buganda’s hospitals,<sup>289</sup> and their poor health was reflected in high mortality rates, which in 1941 were estimated to exceed those of other migrant labourers by four times.<sup>290</sup> During the late 1930s and early 1940s, the situation was so dire that perished migrants could be found abandoned along dry stretches of the migration route.<sup>291</sup>

That migrants were not deterred by Buganda’s declining wages during the 1930s and 1940s, and continued to pour in in large numbers, testifies to the role of economic ‘push factors’ in Ruanda-Urundi. Telling is the assessment of Major Granvill Orde-Browne, author of *The African Labourer* (1933) and longstanding colonial administrator and labour consultant of the

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<sup>283</sup> Powesland, ‘History’, p. 36; KDA LAB 1 10i Survey of Banyaruanda Complex 1950, section II, TNA UK CO 895 Uganda, *Labour Report 1930*.

<sup>284</sup> On endemic famine in Ruanda-Urundi, see Botte, ‘Slow assassination, Part I’; Botte, ‘Slow assassination, Part II’.

<sup>285</sup> Author’s analysis of district-level prices (n=16) in 1928 (at the height of the famine) and numbers of migrants to Uganda annually (1930-50), both reported in Ministre Des Colonies, *Rapport sur l’Administration Belge du Ruanda-Urundi pendant l’Année 1927-1959*. The relationship is also noted in Chrétien and Mworoha, ‘Sédentaires devenus migrants’.

<sup>286</sup> AAB RWA 352 ‘Retraite des Chefs’ Entre-Nous, May 1937.

<sup>287</sup> Elliot, *Investigation*, pp. 31, 33.

<sup>288</sup> Rutubajuka, ‘Migrant labour’, p. 38-40; Ahluwalia, *Plantations*, pp. 110-20; Powesland, *Economic policy and labour*, p. 11; Uganda, *Organisation*, p. 30.

<sup>289</sup> In 1938, for example, half of the out-patients treated at the hospital of Masaka were Banyarwanda, and large numbers were admitted monthly at the hospital as in-patients, ‘mostly suffering from under-nourishment and the rigours of the journey.’ Elliot, *Investigation*, p. 32; also see Lyons, ‘Foreign bodies’, p. 136.

<sup>290</sup> Uganda, *Organisation*, pp. 20-1, 25.

<sup>291</sup> *Ibid.*, p. 38.



British empire.<sup>292</sup> Orde-Browne was flown in during the Second World War to investigate the labour situation in East Africa. In private conversation, he described his early impressions of the Banyarwanda as ‘an unattractive people [who] fail to get much sympathy from the other African tribes’ and ‘far less able to look after themselves and one another than any other African tribe that I have met’.<sup>293</sup> When we look beyond the obvious racist prejudice, his descriptions clearly convey that the conditions of the Ruanda-Urundi migrants was highly precarious, compared to any of the many other labour migrants studied by Orde-Browne in his long career.<sup>294</sup>

In Uganda’s labour market, the migrants from Ruanda-Urundi filled the bottom rungs. Their physique and health contrasted sharply with those of migrants from other regions. Migrants from West Nile in northern Uganda, for example, were considered to be stronger and healthier than those from Ruanda-Urundi, and they earned considerably higher wages.<sup>295</sup> In 1935, the provincial report of the Eastern Province noted that

the greater portion of [sugar plantation] labour comes from the West Nile: owing to recruiting difficulties and the expense involved, a certain number of Banyaruanda are obtained in Masaka and Mbarara, but their physique is poor and they are not satisfactory.<sup>296</sup>

There can be little doubt that the ample supply of migrants from Ruanda-Urundi itself contributed to the development of a ‘subsistence wage economy’ in Buganda from the late 1920s to the late 1940s.<sup>297</sup> Indeed, in 1944, a report found labour conditions to be ‘unsatisfactory’, pointing out that labour was ‘cheap and easily replaceable’, ‘transient’, and of ‘unsatisfactory quality’.<sup>298</sup>

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<sup>292</sup> ‘His experience with native carriers [during World War I] aroused the interest in native labour which dominated the rest of his life.’ Mair, ‘Obituary’.

<sup>293</sup> TNA CO 536/209/6 Orde Browne 14 Dec. 1942.

<sup>294</sup> For his published verdict, Orde-Browne, *Labour conditions in East Africa*, p. 48.

<sup>295</sup> Powesland, ‘History’, p. 32; Uganda, *Organisation*, pp. 20-1, 25. It is interesting to note that, while the agricultural calendars in Buganda and Ruanda-Urundi were largely synchronized (and migrants had to forego contributing to important agricultural tasks at home), the driest months in West Nile (Dec. to Feb.) coincided perfectly with the cotton picking and ginning season in Buganda. Richards compares the West Nile immigrants in Buganda to seasonal migrants in Senegal. Richards, ‘Problem for Buganda’, p. 220.

<sup>296</sup> Uganda, *Annual Provincial Report 1935*.

<sup>297</sup> See for further discussion De Haas, ‘Measuring rural welfare’.

<sup>298</sup> Uganda, *Supervision*.

As shown in figure 3, during the years 1936-43, departures were concentrated in the months December to March, and returns in May to August.<sup>299</sup> This suggests that the circular trips, which lasted approximately half a year,<sup>300</sup> were curiously timed: migrants arriving in Buganda in February or March would have come in too late to participate fully in the cotton picking and ginning season.<sup>301</sup> It is likely, therefore, that this pattern signifies a ‘push’ from Ruanda-Urundi towards the end of the dry season when food supplies were running low, and a disappointing ‘second rains’ harvest from December to February, indicating that the food situation was precarious.<sup>302</sup>

Some of the ‘push’ conditions feeding into outmigration in the first decades subsided after the Second World War: food shortages were no longer as acute as they had been in the years before, nominal wages converged to Ugandan levels (repercussions for purchasing power are indicated in figure 2) and, eventually, some of the extractive powers of chiefs were curbed.<sup>303</sup> Indeed, Audrey Richards’ elaborate study of the migrants during the early 1950s does not convey a picture of poverty driven migration, but instead a continuous ‘need of money to satisfy ... social obligations and aspirations’.<sup>304</sup> That the nature of migration changed after the Second World War is also reflected in the markedly different seasonal distribution of migrants at that time. As can be seen in figure 3, departures were now concentrated in April and May, and returns in March and April, suggesting typical absences of just under a year.<sup>305</sup> The concentration of departures indicates that post-dry season food shortages were no longer an important push factor. Instead, departures now coincided with the onset of the cotton growing season, and returns peaked just after the picking season for cotton and Robusta coffee, which suggests a ‘traveling schedule’ much more in tune with labour market opportunities in

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<sup>299</sup> This corresponds well with an estimate of Governor Jungers in 1938 of a typical absence of 4 to 7 months. For the years 1945-50, the pattern changed significantly, and departures were no longer concentrated in the post-dry season months.

<sup>300</sup> Cf. AAB RWA 352 Letters from the Résidents of Gatsibu, Rukira, Kigali, Shangugu, Kisenyi, and Lubengera, dated May – Aug. 1925, Uganda, *Enquiry*.

<sup>301</sup> Uganda, *Enquiry*, p. 11; African Studies Centre Archive, 676.1 ‘Buganda Kingdom: A crop and soil conservation calendar’.

<sup>302</sup> Leurquin, *Agricultural change in Ruanda-Urundi*. Using migration as a strategy to deal with harvest failures is more commonly observed. See De Haan, ‘Livelihoods and poverty’, p. 29; Ellis, ‘Rural livelihood diversification’, p. 293.

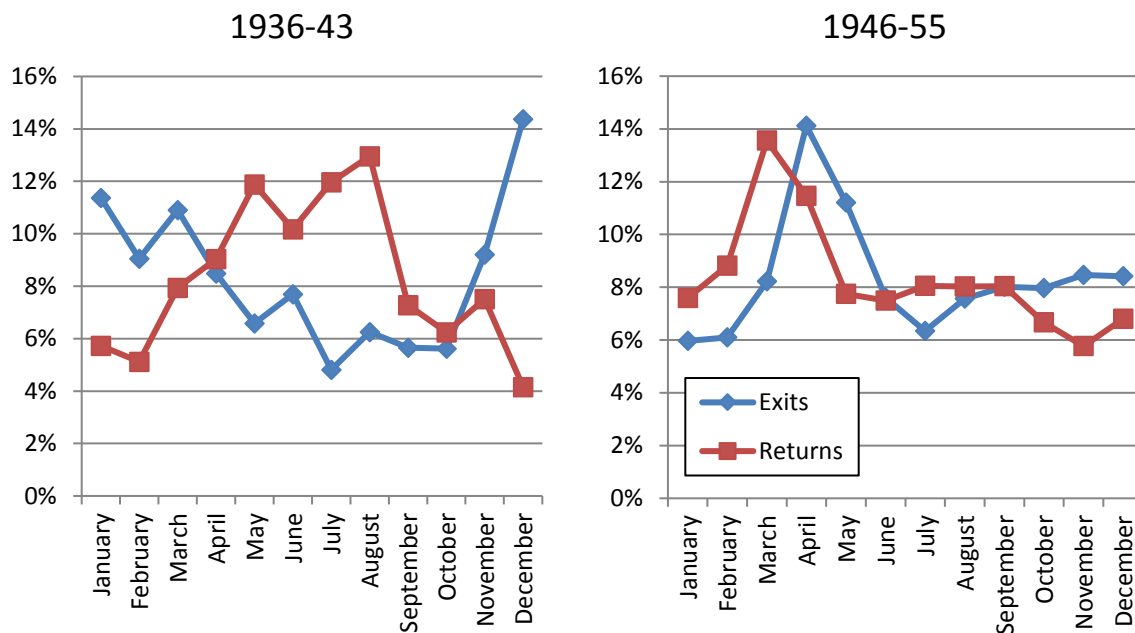
<sup>303</sup> Chrétien and Mworoha, ‘Sédentaires devenus migrants’.

<sup>304</sup> Richards, ‘Travel routes’, p. 68.

<sup>305</sup> This fits with Richards’ finding that the length of migrant trips averaged 11 months, although some made trips lasting over five years. Richards, ‘Methods’, p. 135; idem, ‘Labour’, p. 265.

Buganda.<sup>306</sup> Moreover, increasingly migrants travelled by bus rather than on foot, which indicates that their situation upon departure was better than before. Interestingly, most migrants now also left just before the onset of forced swamp cultivation and the harvesting and mulching of coffee trees, which may indicate that people strategically timed migration to evade compulsory labour demands.<sup>307</sup>

**Figure 3.** Seasonal distribution of border crossings from Rwanda into Uganda



*Notes:* I exclude the years 1944 and 1945 because of incomplete records and exceptional conditions. The percentages express the *unweighted* average per month for the period stated. Taking the *weighted* average yields very similar results (i.e. the figures are not driven by outlier years or months). The intra-annual fluctuations are expressed as the deviation from the expected number of monthly migrants if border crossings would have been distributed perfectly equally throughout the year (i.e. one twelfth of all migrants per month). For example, during the period 1936-42, the number of border crossings into Ruanda-Urundi (returns) in August was, on average, 157% of the number of migrants that would have migrated if there was no intra-annual fluctuation, suggesting that in August a relatively large share of circular migrants returned to Ruanda-Urundi. In contrast, the number of returnees in January was only 57% of the ‘expected’ number.

*Sources:* For the years 1936-50 I use statistics collected by the Belgian administration at the ‘Kakitumba bridge’ border post. AAB RWA 352 ‘Etat des mouvements des indigènes du Ruanda a l’Uganda, enregistrés à Kakitumba’ For the years 1951-5 I use statistics collected by the British administration at ‘Kabale labour camp’. KDA LAB.1 files 3i, 3ii and 3iii ‘Emigrant & Immigrant Kabale Labour Camp 1949-1957’

<sup>306</sup> This pattern fits perfectly with a typical absence of 11 months, found by Richards in her labour camp survey in the early 1950s. Richards, ‘Labour’, p. 265.

<sup>307</sup> Leurquin, *Agricultural change*.

#### IV. Migrants and their Ganda employers

Buganda proved able to absorb very large numbers of poor labour migrants, and even though similar amounts of cash crops were cultivated in neighbouring areas, such as Busoga, Buganda was by far the most important destination of labour migrants. In this section, I argue that this capacity should be attributed to the compatibility of poor labour migrants and Ganda employers.

When the colonial authorities began to recruit labour in the early 1920s, they had not anticipated that the 'labour problem' in Buganda extended far beyond their own labour demands and those of expatriate employers. Indeed, it was Baganda farmers and landlords, and not the colonial government, who became the largest recipients of migrant labour. As early as 1924, Uganda's governor wrote to the Secretary of State for the Colonies that 'Baganda land-holders employ large numbers of immigrant labour on the cultivation of cotton, under conditions and inducements with which the private employers cannot compete'.<sup>308</sup> By 1938, only one quarter of all non-settled male migrants employed was estimated to earn a wage with an expatriate employer. Another quarter was engaged as seasonal tenant, sharecropper or hired labourer on Ganda-operated holdings, and the remaining half performed casual labour on such holdings.<sup>309</sup> Uganda's governor estimated in 1949 that 8 per cent of all migrant labourers in Buganda engaged on a six-month contract on Indian-run sugar plantations, another 17 per cent signed contracts of a month or less with other 'known employers', while the remaining 75 per cent worked for Ganda farmers.<sup>310</sup>

The Ganda not only employed migrant workers, but also proactively recruited labour. It is likely that some of the earlier labourers from Rwanda and Burundi had their first encounters with prospective Ganda employers in Karagwe, across the border in Tanganyika. That the Baganda were effective labour recruiters emerges from their activities in Kigezi. Here, Ganda 'agents', who had been installed during the 1920s by the colonial government to pacify and administer the local population,<sup>311</sup> convinced the local population to work on their estates in Buganda.<sup>312</sup> Throughout the colonial period, Ganda employers made efforts to recruit labour along the migration routes.<sup>313</sup>

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<sup>308</sup> Powesland, 'History', p. 29.

<sup>309</sup> Uganda, *Enquiry*, p. 20.

<sup>310</sup> TNA FO 371 File 1016 Governor of Uganda to Secretary of State for the Colonies, 17 Jan. 1949

<sup>311</sup> Turyahikayo-Rugyema, 'The Baganda Agents in Kigezi'.

<sup>312</sup> KDA Purseglove and Wright, 'Kitozho Mutala Survey' (scanned typescript kindly shared by Grace Carswell)

<sup>313</sup> Fortt, 'Distribution', p. 88; Richards, 'Problem', p. 195.

What explains the propensity of the Baganda to absorb large numbers of migrant labourers? Firstly, the use of labour from outside the household originated directly from Buganda's pre-colonial solutions to the 'labour problem'. Women, who had provided the bulk of Buganda's domestic and agricultural labour in the pre-colonial and early colonial period, were increasingly unable and unwilling to sustain the rapid expansion of export crop cultivation.<sup>314</sup> The role played by migrant labourers in the Ganda economy suggests that they came to complement the female labour force. Audrey Richards recorded in the early 1950s that Ganda employers often spoke about the 'feminine' labour qualities of migrants: 'when he has done his garden work, he washes up our tea cups like a woman. He does not want a wife'. Male migrants who were unwilling to commit to a single employer were sometimes referred to as '*malaya*', a term also commonly used for prostitutes.<sup>315</sup> Whereas cotton cultivation had previously been accounted for primarily by female and forced labour, in 1934, it was estimated that migrants cultivated more than half of the cotton cultivated in Buganda.<sup>316</sup> Secondly, Buganda's unique land institutions, discussed in section II, were conducive to the attraction of labour migrants. Even smallholders employed migrant labour. Village surveys from the 1930s show, for example, that at least a third of tenants in the selected villages were employers. Some had even built special quarters to house labour migrants, although most migrants lived in provisional grass huts.<sup>317</sup>

Even though cash wages and returns to cotton cultivation in the Buganda countryside were by no means spectacular, the arrangements made between migrants and their Ganda employers were mutually beneficial. Migrants were paid partly or wholly in kind. The migrants, impoverished and hungry, were happy to provide menial work in return for food and shelter. A colonial report in 1937 pointed out that travellers 'work their way down country, once they get into Buganda, by doing a few days of work for Baganda farmers for food and shelter only'.<sup>318</sup> One migrant, recalling his experiences, noted that 'in Uganda, I worked for natives who fed me when I finished my work. Food there was like a free gift of nature'.<sup>319</sup> Scattered information suggests that while Ganda employers paid low wages, they required fewer working hours and involved tasks that were less strenuous than, for example, on the sugar

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<sup>314</sup> Hanson, *Landed obligation*, pp. 177-9; Powesland, 'History of migration', pp. 20, 37-8.

<sup>315</sup> Richards, 'Assimilation', p. 163; idem, 'Methods', p. 139; idem, 'Case Material', p. 238.

<sup>316</sup> Cited in Lyons, 'Foreign Bodies', p. 138.

<sup>317</sup> Tothill, *Report on Nineteen Surveys*, p. 33, cf. Uganda, *Supervision*, p. 7.

<sup>318</sup> Elliot, *Investigation*, 31; cf. Uganda, *Organisation*, 16; Richards, 'Routes', p. 55; AAB AEII/3301 Vice-Gouverneur Général Ruanda-Urundi, 1 March 1943.

<sup>319</sup> Codère, *Biography of an African society*, pp. 221-2.

plantations. Such conditions allowed migrants to recover from undernourishment, and, after they had gathered sufficient strength, enabled them to take up multiple jobs and work a few hours in the afternoon to earn their food.<sup>320</sup> During the late 1930s, task-workers on Ganda farms, by taking on multiple jobs, reportedly were able to earn up to 30 shillings per month. This compared favourably to the meagre 12 to 17 shillings typically paid for a month's full-time unskilled labour by a migrant in and around Kampala.<sup>321</sup> Indeed, in the early 1940s, it was found that, rather than to work for expatriates, '[men] would rather work for the Baganda where the work is not heavy, where by *lejaleja* [=casual work] they can often earn Shs. 15 per month and [since] they prefer a diet of sweet potatoes and *matoke* [=green banana] to maize flour'.<sup>322</sup> The improvement of economic conditions in Ruanda-Urundi during the late 1940s, in particular the income that could be generated from Arabica coffee, reduced the willingness of migrants to offer their labour as cheaply as they had done previously. At the same time, however, Ganda farmers in the same period shifted from cotton to Robusta coffee, which provided higher returns to labour, and they were therefore able to continue to pay higher wages.<sup>323</sup>

Migrants were not only absorbed into the countryside as labourers, but also as tenants. After the introduction of the *Busulu & Envujo Law* in 1928, owners of *Mailo* land also had an additional incentive to attract new tenants. To compensate for the loss of some of their extractive powers over tenants, they tried to attract additional tenants, and charge 'entrance fees', which were not subject to legislation.<sup>324</sup> Migrant tenants were particularly attractive, as they were more willing than Ganda tenants to provide labour services to their landlord.<sup>325</sup> By the mid-1930s, numerous migrants from Ruanda-Urundi had settled in Ganda villages as tenants, and cultivated cotton and coffee like their Ganda counterparts.<sup>326</sup> Increasingly, and often after several circular trips, migrants decided to bring their families and settle in Buganda (see table 1). As shown by Richards, and more recently Doyle, these migrants were not only attracted by the availability of land and economic opportunity in Buganda, but also aspired to

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<sup>320</sup> Elliot, *Investigation*; Richards, 'Methods of settlement'.

<sup>321</sup> Uganda, *Enquiry*, p. 25.

<sup>322</sup> Idem, *Organisation*, p. 17.

<sup>323</sup> De Haas, 'Measuring rural welfare'; In the early 1960s, 62% of hired labour was used to weed and pick coffee, and only 18% to weed and pick cotton. Uganda, *Census of Agriculture, Vol. 1*.

<sup>324</sup> Richards, 'Methods', pp. 128-31.

<sup>325</sup> Idem, 'Assimilation', p. 172.

<sup>326</sup> Masefield, 'Mutala survey of Kawoko'; idem, 'Mutala survey of Kayuji', Richards, 'Case material', pp. 268-85. The fact that cotton was sustained for such a long time in Buganda, even though Robusta coffee provided much higher returns to labour, is largely attributable to migrant sharecroppers and seasonal tenants. Young, Sherman and Rose, *Cooperatives & development*, p. 45.

'become Ganda'. They integrated in Ganda society, intermarried locally and adopted local names and dressing styles.<sup>327</sup> Even when 'push' factors in Ruanda-Urundi began to subside, and economic arguments for circular migration became less obvious, aspirational motives and the prospect of settling continued to exert a strong 'pull' toward Buganda, which translated to a strong increase of the numbers of settler Banyarwanda and Rundi in Buganda after the Second World War (figure 1).<sup>328</sup>

An important additional attraction of the Buganda countryside for Ruanda-Urundi migrants was that it relieved them from the closely monitored and excessive labour demands at home.<sup>329</sup> Travelling Banyarwanda and Rundi were routinely described as 'extremely suspicious of Government control', and said to object to 'being shepherded and controlled in any way'.<sup>330</sup> A Catholic missionary pointed out that 'all Christian fathers in Ruanda-Urundi know that migration to Uganda can be led back to a single motive: *Kuruhuka*, to rest from *corvée* labour and from exploitation by minor chiefs'.<sup>331</sup> In the early 1940s, Ruanda-Urundi's Vice-Governor admitted that migrants sought employment in Uganda because work in Uganda was 'easier' and not subject to 'discipline', while forced work in Ruanda-Urundi at low wages was 'unpopular' and 'arduous'.<sup>332</sup> Rwanda's colonial administrator wrote in 1948 that the great majority of migrants was motivated by 'a desire for almost complete freedom', adding that work in Uganda happens 'without pressure, no coercion, no punishment'. To illustrate his view, he pointed out that '[there is] no disciplinary regime (the most notable punishment in [the migrants'] eyes would be imprisonment resulting from tax default)' and that there are no rules for maintaining coffee farms '(no mulching...)'.<sup>333</sup>

Ganda employers developed a reputation for being 'fair' and 'kind' among labour migrants, who tended to avoid expatriate and other African employers, and were willing to forego earning opportunities much closer to home just to work in Buganda.<sup>334</sup> It is illustrative for the

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<sup>327</sup> Doyle, 'Parish baptisms registers'; Richards, 'Assimilation'.

<sup>328</sup> Although the postcolonial period falls outside the scope of this paper, it is worthwhile to note that from the 1950s onwards, with increasing land scarcity in Buganda, and considering migrants' increasing propensity to settle, the Baganda began to resist labour migration. Richards, 'Methods', p. 122; idem, 'Problem', pp. 195-7.

<sup>329</sup> Although not the primary motive of migration in this case, migration to British territories can be seen as a form of protest against Belgian colonial policies, analogous to movements from French to British territory in West Africa. Cf. Asiwaju, 'Migrations as revolt'.

<sup>330</sup> Uganda, *Enquiry*, p. 49, Orde Browne, *Labour*, p. 50, TNA CO 536/209/6 Scott to Watherston, 1942.

<sup>331</sup> AAB RWA 352 'Retraite des Chefs', *Entre-Nous*, May 1937, cf. Chrétien, 'Sédentaires devenus migrants'; Codère, *Biography of an African society*, p. 257.

<sup>332</sup> Uganda, *Organisation*.

<sup>333</sup> AAB RWA 352 Administrateur Territorial Ruanda a Preud'Homme, 6 Aug. 1948

<sup>334</sup> Richards, 'Methods', p. 123, cf. Codère, *Biography of an African society*, pp. 240-2.

appeal of the Ganda countryside that migrants avoided being recruited for expatriate employment. In the late 1940s, for example, Tanganyika's labour commissioner stressed that recruitment for expatriate sisal plantations along the routes to Uganda 'had not met with much success',<sup>335</sup> while Uganda's labour commissioner pointed out that, 'unfortunately, immigrants do not offer themselves spontaneously for [employment on the sugar estates] in any large numbers, unless they have worked for the Sugar Estates previously, and active recruiting is necessary on these immigrant labour routes to obtain more recruits'.<sup>336</sup> Migrants also used the recruitment system to acquire a free trip to Buganda.<sup>337</sup> About half of the workers recruited from Ruanda-Urundi on six-month contracts deserted soon upon arrival in Buganda.<sup>338</sup>

## **V. Belgian colonial responses to migration**

In this section, I discuss Belgian colonial responses to migration. By showing that emigration was not orchestrated by the colonial government, I substantiate the overall argument of this study that, in the labour-abundant conditions of Ruanda-Urundi, migrants hardly needed a 'push' to offer their labour cheaply.

In theory, emigration had the potential of alleviating demographic pressure and rural poverty in Ruanda-Urundi. Still, the Belgian colonial administration considered migration to British territories undesirable. Firstly, an uncontrolled outflow of labour was feared to drain the labour capacity required for local development efforts. Secondly, if migrants would find out about better living conditions elsewhere, the precarious, unequal social order could collapse. Thirdly, large scale circular migration into the Shilling currency zone could push prices in Ruanda-Urundi upwards, and undermine the low-wage policy.<sup>339</sup> Colonial administrators made concerted efforts to stop migrants from leaving.<sup>340</sup> One administrator, for example, noted in 1925 how he had forbidden a 'Swahili trader' to take porters across the border, to prevent people in his district from finding out about more favourable living conditions in

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<sup>335</sup> AAB AEII/3301 Minutes of a meeting between a mission from Ruanda-Urundi and representatives of the governments of Tanganyika and Uganda, 14 Nov. 1949.

<sup>336</sup> TNA FO 371 File 1016 Minutes of a meeting held at Kisenyi, 24/25 Nov. 1948.

<sup>337</sup> TNA CO 536/213/4 Unknown author on 24 May 1946.

<sup>338</sup> TNA FO 371 File 1016 Governor of Uganda to Secretary of State for the Colonies, 17 Jan. 1949; CO 822/1631 Minutes of the Ninth interterritorial conference on migrant labour from Ruanda-Urundi, 16-17 March 1959.

<sup>339</sup> Desforges, *Defeat*, p. 204; Pedersen, *Guardians*.

<sup>340</sup> AAB RWA 352 Resident of Gatsibu to the Resident of Ruanda, 20 May 1925.



Uganda.<sup>341</sup> Catholic missionaries, in their turn, regularly decried migration for destroying family life, noting that ‘without control, without education, some [migrants] are on their way to lose their Christian sense’.<sup>342</sup>

However, attempts by the colonial administration to stop voluntary emigration were of little avail. In 1925, one Rwandan administrator noted – with unconcealed disapproval – that, as a result of migration, ‘unfortunately, the black man has taken note of the depreciation of our money’.<sup>343</sup> Whenever administrators tried to stop them, migrants began to travel clandestinely, during the night and often in groups.<sup>344</sup> When administrators tried to punish the returnees with fines and imprisonment, they soon had to admit that these measures only served to stimulate migrants to depart permanently.<sup>345</sup> Closing the border altogether was far beyond the administration’s administrative or financial capacities.

Since it became increasingly obvious that the ‘exodus’ was too strong to halt altogether, the administration attempted to divert the flow towards the Congo, particularly the mines in Katanga and settler areas in Kivu.<sup>346</sup> In 1926, mining companies were allowed to recruit in Ruanda-Urundi, and chiefs were encouraged to collaborate in their efforts.<sup>347</sup> Belgian recruitment was briefly successful. In 1927, the Governor-General of Ruanda-Urundi proclaimed that Belgium controlled ‘the finest reservoir of labour in central Africa’.<sup>348</sup> By 1930, approximately a quarter of the labour force of the *Union Minière du Haute Katanga* originated from Ruanda-Urundi. Increasing numbers of Banyarwanda labourers were also employed in the expanding expatriate settler farming sector in Kivu, and a full-blown

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<sup>341</sup> AAB RWA 352 Resident of Kisenyi to Resident of Ruanda, 29 May 1925. In subsequent decades, Belgian officials continued to express fears that Indians, Swahili or Baganda were clandestinely recruiting labour in Ruanda-Urundi. AAB RWA 352 Resident of Ruanda to Governor of Ruanda-Urundi, 20 April 1925; Letter No 2225/A.I.9, Kigali 26 July 1949.

<sup>342</sup> AAB RWA 352 Cabinet du Commissaire Royal to Sa Grandeur Monseigneur Classe, Vicaire Apostolique du Ruanda, 30 April 1926.

<sup>343</sup> AAB RWA 352 Resident of Rukiga to Resident of Ruanda, 26 May 1925. Dorsey cites evidence ‘that currency speculation was so profitable to some Africans that [in the late 1920s] the *Union Minière* had difficulty recruiting workers in eastern Ruanda.’ Dorsey, ‘Rwandan colonial economy’, pp. 92-3. In 1943 it was argued that currency exchange was in the hands of Indians, who charged a commission of 10 to 15%. CO 536/209/6 Morgan to British Consulate, Costermansville 2 April 1943.

<sup>344</sup> AAB RWA 352 Administrateur Territorial Biumba, 14 June 1938; Resident of Gatsibu to Resident of Ruanda, 20 May 1925; Resident of Rukiga to Resident of Ruanda, 26 May 1925; AEII/3301 Vice-Gouverneur Général Ruanda-Urundi, 1 March 1943.

<sup>345</sup> AAB RWA 352 Resident of Shangugu to Resident of Ruanda, undated (estimated May 1925).

<sup>346</sup> AAB RWA 352 Commissaire Royal to Ministre des Colonies, 24 April 192X; Cabinet du Commissaire Royal to Sa Grandeur Monseigneur Classe, Vicaire Apostolique du Ruanda, 30 April 1926.

<sup>347</sup> Higginson, ‘African working class’.

<sup>348</sup> Cited in Lyons, ‘Foreign bodies’, p. 134.

resettlement scheme was designed with the aim to relocate families to a sparsely populated area in Kivu.<sup>349</sup> During the early 1930s, however, recruitment efforts were scaled back and eventually aborted, for a variety of reasons. The need for labour in the mines declined during the depression years, and remained low subsequently as a result of successful labour stabilization policies.<sup>350</sup> Decisive for the abandonment in Ruanda-Urundi, however, was the fear of political repercussions.<sup>351</sup> International observers, particularly in Germany and the United Kingdom, had reported unfavourably on the Belgian response to the 1928-29 famine, describing Ruanda-Urundi as a 'land of living and dead skeletons'. The long-standing idea that Banyarwanda and Barundi were particularly weak and prone to disease, and therefore unsuitable as labour migrants, was widely invoked.<sup>352</sup>

After this crisis, the Belgian administration was acutely aware that an active policy of preventing emigration would push beyond its League of Nations Mandate.<sup>353</sup> In 1938, Governor Jungers pointed out that

the Belgian administration can do nothing to forbid or stop this emigration. ... Politically our hands are tied: our British neighbours have a great need for labour, and if we try to restrain it, we will be accused of trying to monopolize the labour for the profit of the Belgian Congo, which goes against our Mandatory powers.<sup>354</sup>

Realizing that migration to Uganda could not be stopped and that the plan to divert labour towards the Congo had been largely unsuccessful, the colonial administration accepted the movement as inevitable, and its official policy became 'neither to prevent nor to increase' it.<sup>355</sup> Policies were instituted to benefit from seasonal emigration. For example, the Belgian authorities began to levy import duties over the textiles that were brought back from British territory.<sup>356</sup> This policy was not very successful, however, as migrants began to circumvent

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<sup>349</sup> On Kivu, see Van Melkebeke, 'More continuity than change'; Mathys, 'People on the move', p. 223. On Katanga, see Higginson, 'The making of an African working class'; Frankema and Juif, 'From coercion to compensation'.

<sup>350</sup> Frankema and Juif, 'From coercion to compensation'.

<sup>351</sup> Newbury, *Cohesion*, p. 279.

<sup>352</sup> AAB AE/II 3300 Moulart à Hymans, Octobre 1929; Pedersen *Guardians*, pp. 248-49.

<sup>353</sup> Pedersen, *Guardians*, pp. 237-60.

<sup>354</sup> AAB RWA 352 'Emigration saisonnière vers l'Uganda et le Tanganyika Territory', 13 Oct. 1938.

<sup>355</sup> Uganda, *Organisation*, p. 13; AAB RWA 352 'Emigration saisonnière vers l'Uganda et le Tanganyika Territory', 13 Oct. 1938. Still, as late as 1937, when migration was in full swing, colonial administrators in Burundi, asked chiefs to impress upon their people that 'the British also levy taxes', in order to limit migration. RWA 352 'Emigration vers l'Uganda', April 1937.

<sup>356</sup> AAB RWA 352 Governor of Ruanda, 19 March 1931.

official border posts.<sup>357</sup> Still, migrants' remittances increased the circulation of taxable income, and between the early 1920s and late 1930s head taxes indeed increased significantly, eventually to converge with rates in Uganda.<sup>358</sup> At the same time, migrants who were absent for more than 9 months were granted a tax break, perhaps to stimulate longer absences with an eye on decreasing population pressure.<sup>359</sup>

Still, migration was only accepted reluctantly by the colonial government. Belgian administrators continued to regularly lament the 'exodus' of a large contingent of young men to British territories, for example arguing that 'far from helping to reduce demographic pressure, this movement of seasonal workers has only made the problem more acute in certain areas, by depriving them of the labour necessary for anti-erosion measures and road maintenance'.<sup>360</sup> After the Second World War, efforts were made to formalize and regulate labour recruitment for expatriate enterprise and public works, particularly in British territory.<sup>361</sup> Clearly defined labour contracts and family migration were encouraged to 'stabilize' labour and diminish the burden of migration on the sending area.<sup>362</sup> Labourers from Ruanda-Urundi were recruited on a considerable scale to work on sisal plantations in coastal Tanganyika, and were also found on the Kenyan highlands.<sup>363</sup> With new recruitment efforts in place, Ruanda-Urundi labourers also re-entered Katanga's labour force, even though their relative contribution to the mining labour force never surpassed its early-1930s peak.<sup>364</sup>

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<sup>357</sup> AAB RWA 352 Resident of Gatsibu to Resident of Ruanda, 20 May 1925; 'Repatriement des émigrés Banyarwanda de l'Uganda', 21 Nov. 1930; Orde-Browne 'Labour', 89; KDA (ADM) 112 'Native Affairs Repatriation', Provincial Commissioner, Western Province, Masindi, 04/04/1949; KDA LAB.1 10i 'Survey of Banyaruanda Complex 1950', section I.

<sup>358</sup> Looking at tax rates in Muhinga as a share of wages in Usumbura, the tax burden increased over fourfold between 1923 and 1938, and consolidated at the high level afterwards. Taxes and wages from *Ministre des Colonies, Rapport sur l'Administration Belge du Ruanda-Urundi 1927-1959*. The comparison with Uganda wages is made in Richards, 'Travel routes', pp. 67-8. From the migrants' perspective, payment of taxes became an increasingly important reason to seek temporary employment in British territory. Gravel, *Remera*, pp. 111-7; Richards, *Economic development and tribal change*, p. 266.

<sup>359</sup> Uganda, *Organisation*.

<sup>360</sup> UN Trusteeship Council *Study of population, land utilization and land system in Ruanda-Urundi*, 26 March 1957. Apparently, the Catholic missionaries went one step further, farming family migration 'stealing juveniles' and 'stealing women and young girls for immoral purposes.' TNA CO 536/213/4 Labour Commissioner to Chief Secretary, 29 Dec. 1945.

<sup>361</sup> TNA CO 536/213/4 Labour Commissioner to Chief Secretary, 29 Dec. 1945.

<sup>362</sup> Orde-Browne, *Labour*, AAB AEII/3301 'Minutes of a meeting between a mission from Ruanda-Urundi and representatives of the governments of Tanganyika and Uganda, 14 Nov. 1949.'

<sup>363</sup> Paton *Labour export policy*, pp. 188-197; Hurst 'Survey', pp. 75-6; AAB AEII/3301 'Minutes of a meeting held between a mission from Ruanda-Urundi and representatives of the governments of Tanganyika and Uganda', 14 Nov. 1949

<sup>364</sup> Frankema and Juif, 'From coercion to compensation'.

## VI. British colonial responses to migration

In this final section of the paper, I show that, because migrants were ‘pushed’ by poverty and actively ‘pulled’ into the Buganda countryside by native employers and landlords, the British colonial authorities made practically no effort to sustain the supply of cheap labour.

The government’s own recruitment efforts in southwestern Uganda had brought people from Ruanda-Urundi to Buganda, as ‘it was impossible for recruiters to distinguish between natives of ‘British Ruanda ... and those of the main territory of Ruanda administered by the Belgians’.<sup>365</sup> During the first years of Ruanda-Urundi migration, there were firm objections in Ugandan colonial circles about the arrival of impoverished migrants.<sup>366</sup> In 1926, the Medical Department spoke out strongly against the presence of impoverished and diseased Banyarwanda in Uganda, and advocated that ‘any further recruiting of Ruanda should be prohibited and ... any settlers of this tribe should be repatriated’.<sup>367</sup> However, from a labour perspective, the arrival of poor migrants in a labour-scarce context was timely, and the warnings from the Medical Department were not heeded. Instead, the colonial government adopted a pragmatic ‘laissez faire’ attitude towards the migrants, who were permitted to cross the border, move about and work freely, but were not extensively accommodated on their journey.<sup>368</sup> It is illustrative that in 1931 the Labour Department was disbanded, less than 10 years after its founding.<sup>369</sup>

The government’s passive attitude sprung primarily from its unwillingness to allocate financial resources to provide food, shelter and medical services to destitute migrants. This reluctance stemmed directly from the character of the migration flow. While much of the cost of labour migration to mines and plantations elsewhere in colonial Africa was borne by European employers, the migrants from Ruanda-Urundi were not recruited, and mostly worked for dispersed Ganda employers. No private employer could be made financially accountable for the migrants. Ganda farmers already bore ‘a considerable export tax’ on cash crops, and the colonial state reasoned that the institution of additional taxes to establish more elaborate labour migration facilities would face opposition.<sup>370</sup> The laissez faire attitude

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<sup>365</sup> Uganda, ‘History’, p. 30.

<sup>366</sup> Powesland, *Economic policy and labour*, p. 44.

<sup>367</sup> Uganda’s Director of Medical and Sanitary Services, cited in Dak, *Geographical Analysis*, p. 7.

<sup>368</sup> Powesland, *Economic policy and labour*, p. 49; TNA CO 822/1631 Minutes of the Ninth-interterritorial conference on migrant labour from Ruanda-Urundi, 16/17 March 1959; This applied to the entire colonial era, except for a brief interval in 1944 when the border was closed.

<sup>369</sup> Powesland, *Economic policy*, p. 54.

<sup>370</sup> Uganda, *Organisation*, p. 7.

stretched remarkably far. During the 1930s, large numbers of Banyarwanda and Barundi stayed in Uganda without paying taxes.<sup>371</sup> Ganda chiefs, eager to attract new settlers, gave migrants a tax break of ‘at least two or three years’.<sup>372</sup> That the migrants hardly interacted with colonial officials was clearly articulated by a Labour Committee in 1938:

It is remarkable how great is the ignorance in Uganda of these strangers in their midst. Few people know their language. They appear to bring with them no leaders or headmen. No one on the Uganda side seems to know what they are thinking or what is their simple philosophy.<sup>373</sup>

The negligent attitude of the British colonial government, however, became untenable during the Second World War, which coincided with a widespread famine in Ruanda-Urundi:

the hardships which these migrants endure from the lack of any adequate protection on their long journeys for safeguarding them against exposure, highway robbery, disease, wild animals and the shortage of food is a matter of common observation.<sup>374</sup>

In 1942, a medical doctor stationed in Uganda during the war pointed out in an intercepted letter that migrants were ‘brought in off the road to us when they can no longer move – being nothing but skin and bone. We can do nothing except dig graves for them. I have written letters, talked and begged the great men, but nothing is ever attempted’.<sup>375</sup> External experts were called in by the Ugandan government to investigate how to improve the situation, ‘if only to silence criticism’<sup>376</sup> By 1943, the outrage had risen up to the ranks of the British parliament.<sup>377</sup> These developments forced the colonial authorities to assert greater control over the migration flow. Towards the end of 1943, the Uganda government temporarily closed the border with Ruanda-Urundi – ‘with great reluctance’ – to diminish the inflow of ‘unfit’ migrants, particularly famished women and children.<sup>378</sup> Two committees were established to

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<sup>371</sup> KDA (ADM) 112 Native Affairs Repatriation Labour Commissioner to the Provincial Commissioners, Buganda, East and West, 5 Dec. 1930. Also AAB RWA 352 Administrateur Territorial Ruanda, 17 June 1938; AAB BUR 261 Administrateur Territorial Ruyigi, 16 March 1933.

<sup>372</sup> Tothill, *Nineteen Surveys*, p. 33.

<sup>373</sup> Uganda, *Enquiry*, p. 49. Cf. Richards ‘Routes’, p. 63.

<sup>374</sup> Uganda, *Organisation*, p. 2.

<sup>375</sup> TNA CO 536/209/6 Letter from Laballe, stationed in ‘Masaku, Tanganyika’ (should be: Masaka, Uganda) to Mr. and Mrs. Lawson in Dublin 7 Sep. 1942.

<sup>376</sup> TNA CO 536/209/6 Orde Browne to Scott 30 Sep. 1942; Parliamentary question.

<sup>377</sup> TNA CO 536/209/6 The Anti-Slavery and Aborigines Protection Society to The Under-Secretary of State for the Colonies, 1 Feb. 1943.

<sup>378</sup> TNA CO 536/213/4 Author unknown, 13 Jan. 1944; Governor of Uganda to Secretary of State for the Colonies, 14 Dec. 1943.

investigate the situation. One concluded that the improvement of the migration routes should be an immediate priority, 'both on economic and humanitarian grounds',<sup>379</sup> while the other argued that 'the improvement of [labour] conditions' should be 'a primary objective of Government policy', despite war conditions.<sup>380</sup>

One outcome of the war-time crisis was the establishment of a tighter coordination between the Belgian and British authorities.<sup>381</sup> On both sides, new labour camps were constructed,<sup>382</sup> and agencies erected to formalize recruitment. Rather than colonial policies, the improvement of conditions in Ruanda-Urundi, however, was probably the most important driver of the improved wellbeing of migrants.

## VII. Conclusion

To what extent did the labour market in the colonial Great Lakes region fit into the broader conceptualization of colonial Africa as labour scarce? For Ruanda-Urundi, I have argued that high population densities, economic isolation, and a heavy focus on cattle produced an environment where labour was abundant, poorly remunerated, and working conditions poor. This situation persisted during the early colonial period and was further amplified by Belgian colonial policies and the devaluation of the Belgian franc. Rwanda and Burundi, therefore, can be classified as *labour abundant*, and conducive to voluntary 'push' migration. The situation in Buganda was more 'typical'. Here, land abundance and economic dynamism resulted in labour shortage. In the pre-colonial period, the 'labour problem' was solved by resorting to slavery, as well as a system of 'reciprocal obligation'. In the early colonial period, a supply of cheap labour was generated through using coercion. However, forced labour was phased out after the First World War, resulting in an unprecedented degree of labour scarcity. This is when labour migrants entered the scene.

In the 1920s, migrants benefitted from high wages in Buganda. However, during the late 1930s and 1940s, wages in Buganda declined substantially. The fact that migration continued unabated nevertheless, without active 'push' policies or labour recruitment arrangements, reflects the poverty and limited opportunity existing in the sending area. Rural Buganda proved particularly capable of absorbing large numbers of poor labour migrants. The large

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<sup>379</sup> Uganda, *Organisation*, p. 2.

<sup>380</sup> *Idem*, *Supervision*.

<sup>381</sup> TNA CO 536/213/4 Visit to the Belgian Mandated Territory at Ruanda-Urundi, 6 – 8 Jan. 1945.

<sup>382</sup> AAB RWA 352 Migration des indigènes Banyarwanda vers les Colonies Britanniques, 23 May 1947.

inflow of migrants from Ruanda-Urundi 'solved' Buganda's labour scarcity problem, and had a depressing effect on wages. After the Second World War, economic conditions in Ruanda-Urundi improved, and the role of 'push' factors in migration became less pronounced. At the same time, migrants asserted themselves more strongly in Buganda by settling and profiting from the abundance of fertile soils and commercial opportunities. One could argue, therefore, that, only during this period, the labour market in Buganda assumed a shape much more akin to the kind of 'pull' migration seen, for example, in the cocoa regions in the West African forest.

### Chapter 3.

*Gender, ethnicity and unequal opportunity in colonial Uganda: European influences, African realities and the pitfalls of parish register data.*<sup>383</sup>

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<sup>383</sup> This chapter is co-authored with Ewout Frankema, and has been accepted for publication by the *Economic History Review*. A previous version was published as De Haas, M. and E. Frankema, 'Tracing the uneven diffusion of missionary education in colonial Uganda: European influences, African realities and the pitfalls of church record data' African Economic History Working Paper Series, No 25 (2016). We thank Jutta Bolt, Selin Dilli, Dácil Juif, Leigh Gardner, Doreen Kembabazi, Elise van Nederveen, Pieter Woltjer, three anonymous referees, and participants of the 'Workshop on Gender, household labour relations and (post)colonialism' (Yogyakarta, July 2016) for valuable input. We also thank Felix Meier zu Selhausen for sharing his perspective on our paper and for detailed comments on the contents.



## Introduction

The *renaissance* of African economic history over the past decade has been truly impressive. Not only have a growing number of scholars engaged with questions of long-term African economic development, the ‘new’ economic history of Africa has also opened up fresh research venues. It benefits from substantial input by economists, anthropologists and political scientists, includes new theoretical perspectives and innovative quantitative methods, and is stimulated by a revolution in the collection and use of quantitative data.<sup>384</sup>

A critical approach towards new sources, concepts and methods is fundamental to African economic history. Much of the data that is being used has been produced by foreigners, such as European missionaries, merchants, travellers or colonial officials. Thus, the sources reflect the implicit, and sometimes very outspoken, pre-occupations, preconceptions and priorities of people who are alien to the societies on which they collected information. Moreover, many of the analytical concepts and empirical methods used to produce narratives on long-term development have been originally designed for the study of European economic history. To reduce the risk of conceptual Eurocentrism, it is imperative to scrutinize and debate the applicability of concepts such as national income, real wages, human capital, social mobility or gender inequality to an African context.<sup>385</sup>

In the present study, we engage in ongoing academic debates on the variegated legacies of European colonial rule and missionary education in Africa,<sup>386</sup> as well as the deep roots and

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<sup>384</sup> Austin and Broadberry, ‘Renaissance’ and Akyeampong et al., *Africa’s Development*. For discussion, Hopkins, ‘New Economic History’, Fenske, ‘Causal history’. For a review of the data revolution, Fourie, ‘Data Revolution’.

<sup>385</sup> On conceptual Eurocentrism, Austin, ‘Reciprocal comparisons’. For discussion on GDP, Jerven, *Poor numbers*; for real wages, Frankema and Van Waijenburg, ‘Structural impediments’ and De Haas, ‘Measuring rural welfare’.

<sup>386</sup> In the late nineteenth and early twentieth centuries Africa south of the Sahara experienced a genuine schooling revolution. Recent studies have contributed to our understanding of the effects of variegated colonial policies on the establishment of mission schools across French, British and Belgian Africa, e.g. Dupraz, ‘British and French’; Frankema, ‘Colonial education’; Cogneau and Moradi, ‘Borders that divide’. They have revealed significant differences between Protestant and Catholic missions in terms of literacy development and educational gender inequality, e.g. Woodberry and Shah, ‘The pioneering protestants’; Gallego and Woodberry, ‘Christian Missionaries’; Nunn, ‘Religious conversion’; They have tested the long-term implications of missionary and public schooling for a wide range of development outcomes, e.g. Bertocchi and Canova, ‘Did Colonization Matter’; Bolt and Bezemer, ‘Understanding Long-Run African Growth’; Brown, ‘Democracy, colonization’; Fenske, ‘African polygamy’; Lloyd et al., ‘The spread of primary schooling’. They have also shown the persistent development effects of geographically and temporally uneven investments in mission schools, e.g. Huillery, ‘History matters’; Grier, ‘Colonial legacies’; Feldmann, ‘The long shadows’.

historical determinants of African gender inequality.<sup>387</sup> We develop our argument in response to a recent contribution in this journal by Felix Meier zu Selhausen and Jacob Weisdorf, *A colonial legacy of African gender inequality? Evidence from Christian Kampala, 1895-2011* (February 2016). In their study, Meier zu Selhausen and Weisdorf (MzSW henceforth) explore the marriage registers of the Anglican ‘St Paul’s Cathedral’ on Namirembe Hill in Kampala, Uganda to investigate the development of literacy, numeracy and occupational status among men and women. MzSW claim to find a ‘gender Kuznets curve’ during the colonial era, arguing that Europeans contributed to *a gender-balanced accumulation of human capital* by breaking with ‘traditional’ indigenous norms of female disempowerment and transplanting the virtues of ‘modernity’ onto Ugandan society.

Based on painstakingly collected data from Africa’s scattered missionary parish registers – preserved *in situ* – their work opens up a new research avenue in the social and economic history of Sub-Saharan Africa.<sup>388</sup> Missionary sources cast light on human development back into a time when colonial bureaucracies were still absent or insufficiently equipped to collect fine-grained data. A prime treasure are the marriage registers. The brides’ and grooms’ capacity to sign provides an indicator of literacy development; their capacity to report their exact age sheds light on the development of numeracy; and recorded occupations of spouses and their fathers contain valuable information on skills, occupations and social mobility. While most colonial records are heavily male biased, these marriage registers include information on African men *and* women, providing new scope for the study of gender inequality.

MzSW deserve ample credit for their innovative use of locally-sourced microdata and their empirical contribution to debates on the historical development of gender inequality. Still, we are concerned that the use of biased data in combination with an insufficiently contextualized application of analytical concepts has generated a questionable narrative of long-term African development. In particular, we take issue with their revisionist conclusion – purportedly supporting Ester Boserup’s seminal contribution *Women’s Role in Economic Development*

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<sup>387</sup> Recent empirical contributions include Alesina, Brioschi and La Ferrara, ‘Violence against women’; Alesina, Giuliano and Nunn, ‘Origin of gender roles’; Ashraf et al., ‘Bride price’; Fenske, ‘African polygamy’; Henderson and Whatley, ‘Pacification and gender’.

<sup>388</sup> For related work by Meier zu Selhausen and co-authors, Meier zu Selhausen ‘Missionaries’; idem, *Women’s empowerment*; Meier zu Selhausen and Weisdorf, ‘Colonial legacy’; Meier zu Selhausen, Weisdorf and Van Leeuwen, ‘Social mobility’. Also their project website: ‘The economic history of Christian Africa’ at <http://ehca.info/>. Other recent work using Ugandan parish register data include Doyle *Before HIV*; Doyle, ‘Parish baptism registers’; Peterson, ‘Politics’. Further references in Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 233 fn. 21.

(1970) – that exposure to Europeans contributed to a gender-balanced pattern of human capital development by instilling ‘modern’ norms of gender equality in a society inherently prone to discriminate women, and their suggestion that

African discrimination against a modernized (European-style) economy could be key for understanding contemporary women’s lack of access to education and formal employment, and hence one reason for the persistence of poverty in Africa.<sup>389</sup>

We re-evaluate the link between colonial rule and gendered educational and occupational opportunities in Uganda along five lines. In section I of this paper, we demonstrate how data biases particular to the African context can result in doubtful conclusions. To make this point, we discuss *selection biases* in the parish register data used by MsZW, and re-chart literacy and numeracy trends using microdata from the 1991 population census. A representative selection of persons from birth cohorts in the census data demonstrates a much slower accumulation of literacy and numeracy than the population of individuals who married in Kampala’s Anglican Namirembe Cathedral. Our data, moreover, does not conform with the idea that gender gaps closed during the colonial period.

Next, we scrutinize the impact of Europeans on *educational outcomes* of African men and women. Section II challenges the idea that the diffusion of missionary education in Uganda should be attributed to Europeans at all. We outline how elites in the Buganda Kingdom pragmatically sought out a political coalition with European missionaries, and used this coalition to further their local and regional power. We also discuss how indigenous teacher-converts played a prime role in the diffusion of literacy and schooling. In section III, we present a panel regression analysis to quantitatively explore the role of gender, ethnicity and place of birth in schooling attainment among six consecutive birth cohorts across Uganda (1913-72), using micro data from the 1991 census. The analysis shows that the diffusion of schooling in Uganda was highly uneven, and that substantial schooling attainment gaps opened up between men and women, and between the Baganda and other ethnic groups during the colonial era.

Subsequently, we focus on *economic opportunities* for African men and women in colonial Uganda. In section IV, we discuss the labour market in colonial Kampala. Instead of the *diffusive* nature of European influences, we point to the unequal occupational opportunities generated by the colonial economy. In section V, we return to the key issue of gender

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<sup>389</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 255.

emancipation. We revisit Ester Boserup's views on gender inequality in Africa and note, contrary to MzSW, that she gives primacy to *economic* rather than *cultural* explanations for female labour market marginalization, and was sceptical about emancipatory impact of European cultural influence in Africa. In line with Boserup, we argue that missionaries and colonial officials in Uganda often coalesced with indigenous patriarchal interests to domesticize women.

## **I. Recharting literacy and numeracy in colonial Uganda**

Based on various indicators of human capital and occupational activity among brides and grooms in the Namirembe Cathedral (henceforth Namirembe Dataset), MzSW argue that 'the arrival of Europeans in Uganda ignited a century-long transformation of Kampala involving a gender Kuznets curve'.<sup>390</sup> Their data suggests that Kampala men acquired almost full literacy in the early twentieth century and quickly found their way into the formal wage economy, while women took a bit longer but followed suit. Upon independence, virtually all of the observed brides and grooms were literate and numerate, while the gap in terms of employment (working skills, white-collar work, waged work) was still substantial, but closed rapidly in the early post-colonial era. A composite indicator of marital gender inequality shows a widening gap during the early decades of colonial rule, peaking among newlyweds in the 1910s. Subsequently the gap narrowed, and in 1962 it wasn't much larger than it had been at the onset of colonial rule. MzSW then refer to Ester Boserup to argue that African gender norms discriminated against women. They argue that European influence contributed to a gender-balanced pattern of human capital development in Kampala, observing that daughters of African men working in the 'traditional, informal economy ... were more often subjected to marital gender inequality than daughters of men employed in the modernized, formal economy created by the Europeans'.<sup>391</sup>

Setting aside the question of whether a general invocation of 'pre-colonial times' serves as a proper counterfactual for the evaluation of colonial influences,<sup>392</sup> our principle concern here is whether a study of selective marriage registers can ever justify such far-reaching claims. Close reading reveals that MzSW themselves struggle with the issue of data

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<sup>390</sup> Ibid, p. 229.

<sup>391</sup> Ibid, p. 229.

<sup>392</sup> Numerous scholars have pointed out that late nineteenth century Uganda was far from 'pristine'. See for example Doyle, *Before HIV*, chapter 2; Hanson, *Landed obligation*, chapter 4; Read, 'Political power', also section II of this paper

representativeness. On the one hand, they consider the Namirembe Dataset ‘a fairly good representation of Kampala individuals (regardless of religious affiliation)’.<sup>393</sup> On the other hand, they admit 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’.<sup>394</sup> To accommodate this concern, MzSW replicate the analysis for sub-samples, excluding people with presumed elite backgrounds. They find ‘identical’ results and conclude that ‘this builds confidence that our conclusion regarding the evolution of gender inequality is robust to a possible sample selection bias driven by an uneven process of conversion to Christianity’.<sup>395</sup>

However, there is ample reason to believe that the problem of sample selection bias is far more serious than the authors have been willing to admit. First, as will become clear in section II, the process of conversion to Christianity was indeed uneven.<sup>396</sup> Second, only a *minority* of Christian Ugandans – mostly the wealthy and well-connected – opted for a ‘ring marriage’ rather than customary or more informal unions.<sup>397</sup> This reality was not confined to the early colonial period. A study from the 1950s, for example, specifies that Christian church marriages were ‘rare’ because of ‘the considerable cost of such marriages, although they confer social status’, and because they ‘can, in the case of breakdown, only be dissolved in a Protectorate court’.<sup>398</sup> A study from the 1960s observed that ‘those who contract ring marriages tend to be members of the wealthy or upper class’.<sup>399</sup> Third, the Namirembe Cathedral itself emerged as the elite-church of early colonial Uganda. The cathedral was erected in the vicinity of Buganda’s royal court, and attracted relatively well-off people, some of whom travelled far to marry in the most prestigious Anglican Cathedral of the country.<sup>400</sup> The Cathedral retains its status up until today, even though its membership has probably become more diverse over time.

Finally, even though MzSW argue that polygamy does not bias their sample, ‘supplementary’ wives, concubines and domestic servants are – by definition – excluded from the marriage

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<sup>393</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 238, also p. 234.

<sup>394</sup> Ibid, p. 251.

<sup>395</sup> Ibid, p. 251.

<sup>396</sup> On uneven conversion and the representativeness of parish registers also Doyle, *Before HIV*, pp. 134-5; Walters ‘Counting souls’.

<sup>397</sup> Uganda, *1931 census*. More evidence in Perlman, ‘Law’; Doyle, *Before HIV*, chapter 4; Obbo, *African women*, pp. 33-53.

<sup>398</sup> Gutkind, ‘Town life’, p. 43. Also Richards, *Economic development*, pp. 176-7.

<sup>399</sup> Perlman, ‘Law’, cf. Southall and Gutkind, *Townsmen*, p. 74.

<sup>400</sup> On the role of Namirembe Cathedral in early colonial Ganda society, Kodesh, ‘Renovating tradition’.

registers.<sup>401</sup> Polygyny and female domestic servitude were common in pre-colonial Buganda. The church, however, expected Christian men to free slaves and dissolve customary marriages with ‘surplus wives.’ Contracting an additional wife after a Christian marriage was made illegal.<sup>402</sup> Still, polygamy continued to be widely practiced.<sup>403</sup> Since ‘supplementary’ wives and other female dependants tended to have lower status in African polygamous households’,<sup>404</sup> chosen Christian wives undoubtedly outperformed their unofficial counterparts on most indicators of gender equality.

In other work based on the Ugandan Anglican marriage registers, Meier zu Selhausen and co-authors provide a more balanced discussion on how selection may have given rise to biases in the marriage registers.<sup>405</sup> Still, inconsistent treatment of biases in church records, and the absence of a systematic investigation, leaves much uncertainty about the degree of bias and the validity of conclusions about human capital and occupational mobility among Christian Africans.

We compare literacy and numeracy trends among Namirembe brides and grooms with a sample of 1.5 million individuals (10 per cent of the population), drawn from the 1991 Uganda Population Census and made publicly available through IPUMS.<sup>406</sup> We project literacy trends backwards in time using the age of the enumerated individuals. To smooth fluctuations resulting from heaping at ages ending with 0 and 5, we group the census data by age cohorts. We report results for individuals born in Kampala and also show the trend for the Ugandan population as a whole. We also derive a numeracy estimate from a census of the Baganda (the largest ethnic group) in Kampala in 1959. Before presenting our results, we discuss some limitations of backward extrapolation of post-colonial census data.

First, our sample for the earliest birth cohorts observed in Kampala is small (table 1). Moreover, the elderly, who comprise the earliest birth cohorts, are known to deliberately

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<sup>401</sup> Bantebya Kyomuhendo and McIntosh, *Women*, p. 69; Musisi, ‘Elite Polygyny’; Taylor, *Growth of the Church*, p. 175.

<sup>402</sup> Southall and Gutkind, *Townsmen*, p. 74; Doyle, *Before HIV*, p.109.

<sup>403</sup> Taylor, *Growth of the church*, p. 184; Doyle, *Before HIV*, p. 148; Peterson, ‘Politics’, pp. 207-8; Tuck, ‘Women’s experiences’, p. 176.

<sup>404</sup> Boserup, *Women’s role*, pp. 41-7; Musisi, ‘Elite polygyny’; Stephens, ‘Whether they promised’.

<sup>405</sup> Meier zu Selhausen, ‘Missionaries’, pp. 84-7; idem, *Women’s empowerment*, pp. 46-8 and 53-4; Meier zu Selhausen, Weisdorf and van Leeuwen ‘Social mobility’, pp. 15-8.

<sup>406</sup> Minnesota Population Center, *Integrated Public Use Microdata Series*. Original data from Uganda Bureau of Statistics, *1991 Population and Housing Census*. We thank Rebecca Simson for bringing this source to our attention. For her use of the IPUMS data, Simson, ‘Patronage or meritocracy?’.

exaggerate their age.<sup>407</sup> Thus, we need to interpret the early cohorts with care. The size and reliability of our sample improves over time, as indicated by narrowing confidence intervals for later birth cohorts.

**Table 1.** *Sample size of the 1991 Population Census, per birth cohort*

Year of birth	Men			Women		
	Uganda	Kampala	Kampala Share	Uganda	Kampala	Kampala Share
1895-1902	1704	12	0.7%	1427	22	1.5%
1903-1912	4902	46	0.9%	4664	59	1.3%
1913-1922	11692	102	0.9%	11785	120	1.0%
1923-1932	20886	157	0.8%	22330	178	0.8%
1933-1942	32606	237	0.7%	33383	306	0.9%
1943-1952	46966	402	0.9%	49786	416	0.8%
1953-1962	79395	1108	1.4%	82920	1236	1.5%
1963-1972	128440	3017	2.3%	146527	3248	2.2%

*Notes:* As a result of conflict and internal displacement in (northern and eastern) Uganda at the time of the census, the sample in these regions is not entirely balanced, an issue that the enumerators corrected by giving a weight to each enumerated individual. The male surplus for the early birth cohorts in Uganda at large, results from an undercounting of women, particularly in northern and eastern Uganda. In figures 1 and 2, we use *unweighted* shares, which eases the use of confidence intervals. Using weighted shares produces practically *identical* results.

*Source:* Uganda, 1991 Census.

Second, backward extrapolation of census data by birth cohorts may *overstate* literacy rates in earlier times. Extrapolating literacy trends backward using birth cohorts leads us to assume that people obtained literacy and numeracy early in life, whereas, in fact, some individuals mastered such skills later in life.<sup>408</sup> Moreover, in particular for the early cohorts, we may expect a ‘survivorship bias’ towards literate individuals.<sup>409</sup> Indeed, school attainment was higher for the cohort born between 1914 and 1943 as recorded in the 1991 census, compared to the same cohort in the 1959 census, suggesting that our method of backward extrapolation *overstates* schooling for the early period.<sup>410</sup> Note that correcting for this bias in the census

<sup>407</sup> Cf, A’Hearn, Baten and Crayen, ‘Quantifying’, p. 791.

<sup>408</sup> Particularly during the initial diffusion of literacy. Peterson, ‘Politics’, p. 205-6.

<sup>409</sup> Idi Amin’s regime in the 1970s, which was notorious for targeting highly educated persons such as doctors, may have had the opposite effect, causing a survivorship bias skewed towards uneducated persons. Still, we do not expect the loss of educated Ugandans was sufficiently large to affect the representativeness of the literacy or numeracy shares among the pre-Amin cohorts. Idi Amin’s expulsion of South Asians in 1972 does not affect *African* literacy in the 1991 census.

<sup>410</sup> Reported in Appendix A.

data would widen the gap between the census data and the Namirembe Dataset, thus strengthening the point we aim to make here.

Third, our Kampala data only pertains to individuals who were *born* in the area which was the administrative district of Kampala in 1991 (irrespective of their whereabouts at the time of the census). In the colonial period, Kampala included both ‘Kampala Township’, the expatriate enclave, and the ‘Kibuga’, the native capital of Buganda which included the royal court and missionary cathedrals (cf. section II).<sup>411</sup> Twentieth century Kampala (like most African cities) was characterized by large scale immigration of employment-seeking adults.<sup>412</sup> Our data captures most of those who spent their *early lives* in and around Kampala.<sup>413</sup> This criterion benefits our analysis, since individuals exposed to educational facilities in and around the city are at stake in MzSW’s argument about European-driven human capital accumulation.<sup>414</sup> Since our sample excludes immigrants, our results should not be interpreted to signify evolving literacy levels of the past resident population of the actual city of Kampala. Since immigrants tended to have less education than Kampala-born individuals (cf. section III), the literacy levels of the general population were likely considerably below those born in and around the city.

Figure 1 compares the development of literacy in the census and signature literacy in the Namirembe Dataset.<sup>415</sup> The differences are striking. The cohorts of Namirembe Cathedral grooms born after 1890 came close to full literacy, while brides lagged by just one decade. The census data for Kampala shows that similar literacy rates were only first reached among men born in the 1930s, and women in the 1950s; a difference of half a century! For Uganda as a whole, the development of literacy progressed at an even much more modest pace. Only by the end of the colonial period in 1962 did the majority of young men attain literacy, while female literacy was just beginning to rise from its very low level.

The 1991 census also sheds light on the development of numeracy in Kampala. Additionally, we exploit the 1959 Population Census Report, which contains an age distribution of the

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<sup>411</sup> Terreni Brown, ‘Planning Kampala’; Gutkind, *Royal capital*; Omolo-Okalebo et al., ‘Planning of Kampala’; Vorlauffer, *Physiognomie*. We use ‘Kampala’ to refer to the area containing the Township and the *Kibuga*.

<sup>412</sup> Elkan, *Migrants and proletarians*.

<sup>413</sup> As a result of urban population growth (cf. section IV), many areas that had become part of urban Kampala by 1991, and are included in our Kampala catchment area, would have been peri-urban or rural earlier in the twentieth century.

<sup>414</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 244.

<sup>415</sup> The census defines literacy as self-reported ability to read and write. We concur with MzSW that signature literacy provides ‘a reasonably good proxy’ of literacy. Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 233.



Ganda population of 'Greater Kampala' (n=118,965).<sup>416</sup> Figure 2 reports ABCC indices, an oft-used proxy for numeracy,<sup>417</sup> going back to the birth cohort 1870-79. The parish register data suggests almost perfect literacy among women from the 1880s onwards. The census data, instead, show a gradual increase in correct age reporting (except for the eldest male cohort in 1991), with men performing better than women (except for the eldest cohort in 1959).

MzSW acknowledge that 'the fast improvement in literacy admittedly raises suspicion that the marriage registers are not an entirely representative sub-set of the population living in (and around) Kampala in this period', but are quick to add that '[t]his does not detract from the fact that the sampled men and women performed very differently in terms of educational progress', reiterating their conclusion that 'gender inequality in literacy had practically disappeared by the mid-twentieth century'.<sup>418</sup> The census data present a different picture. The peak in the Kampala male-female literacy gap was far less dramatic, and occurred among men and women born in the 1920s – about forty years later than among the Namirembe brides and grooms. For Uganda as a whole, the literacy gap peaked for those born in the 1940s and educated around the time of independence.

The large discrepancies between the church record data and the census data – even for such very basic indicators of human capital – are easily explained: these sources capture different layers of Ugandan society. The church records reveal an early 'literacy explosion'<sup>419</sup> among a *highly selective* population of Christian brides and grooms in central Buganda, while the census data reveal a still substantial but much slower diffusion of literacy and numeracy among a *random* sample of people born in Kampala. While this comparison demonstrates that a biased sample cannot be used to infer broader trends, it does not address the mechanisms of human capital diffusion in colonial Uganda. It may be tempting to ascribe the exceptional performance of the Namirembe grooms and brides to their exposure to 'European' missionary education. However, as we discuss in the following sections, the rapid but uneven diffusion of education in Uganda was driven primarily by African demand and a profound Africanization of the mission.

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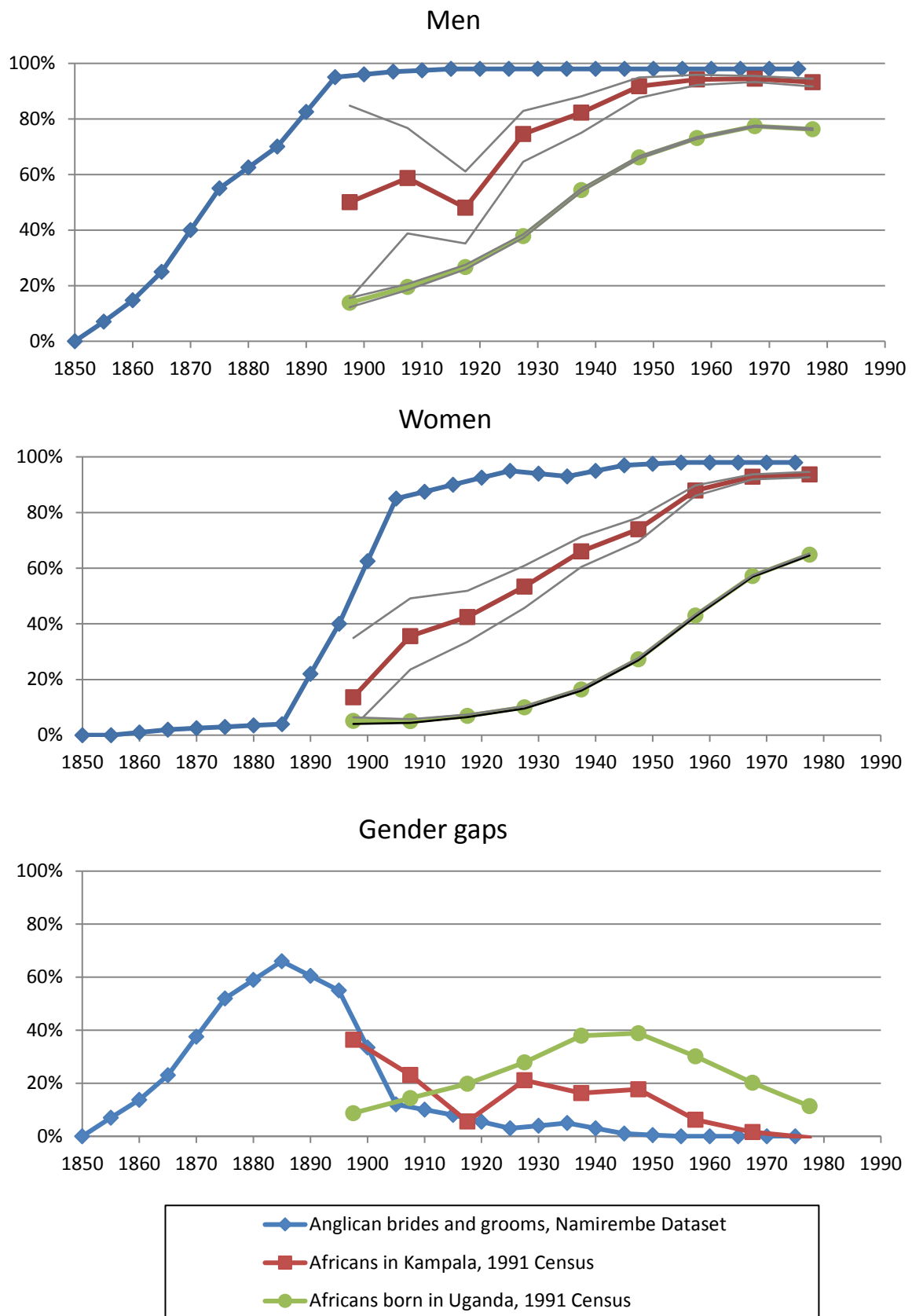
<sup>416</sup> We use the term 'Greater Kampala' to refer to Kyad(d)ondo County which encompassed Kampala and adjacent peri-urban and rural areas.

<sup>417</sup> A'Hearn, Baten and Crayen, 'Quantifying quantitative literacy'; Baten and Fourie, 'Numeracy of Africans'; Cappelli and Baten, 'European trade'.

<sup>418</sup> Meier zu Selhausen and Weisdorf, 'Colonial legacy', p. 239.

<sup>419</sup> Twaddle, 'Ganda receptivity', p. 311.

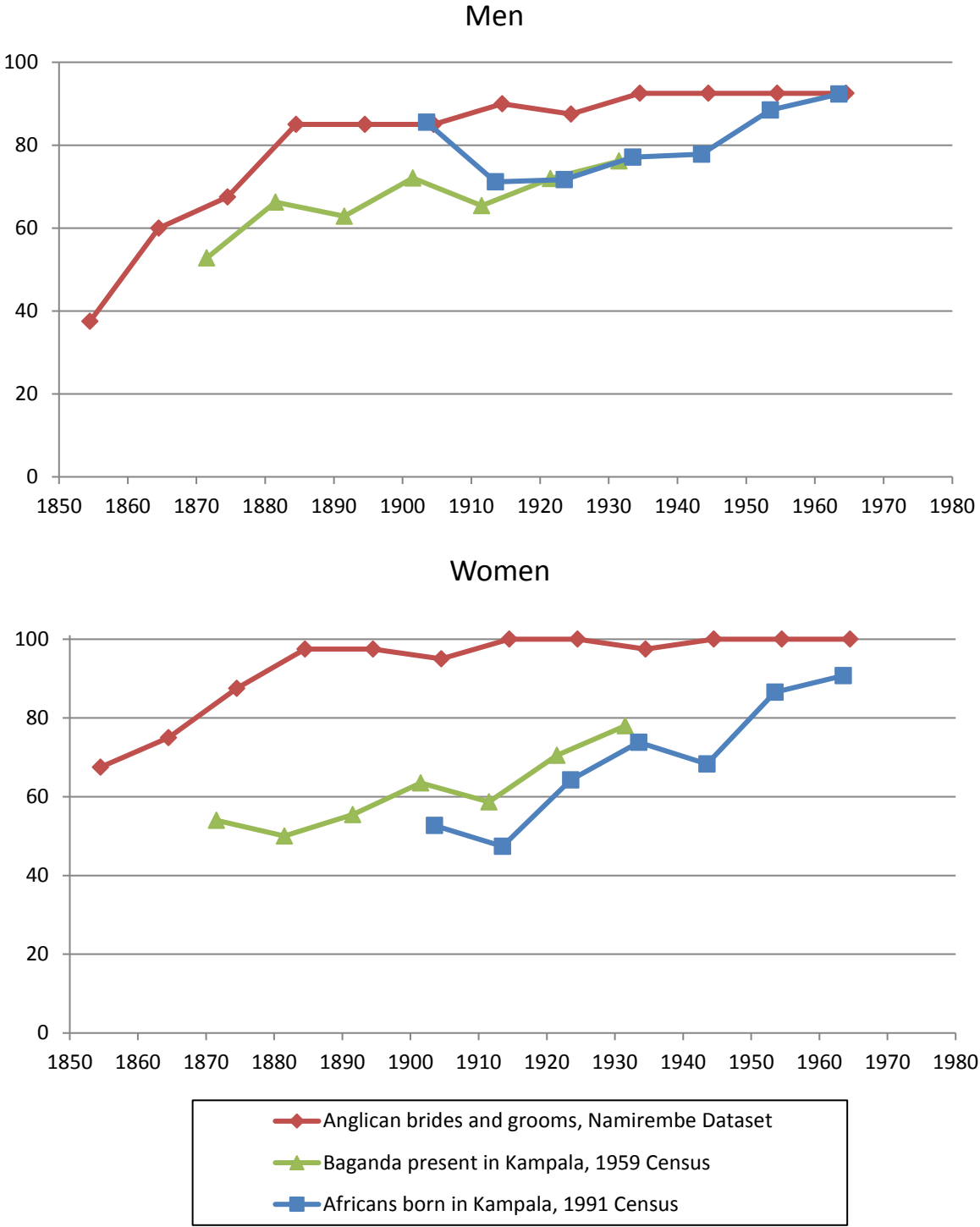
**Figure 1.** Literacy rates and literacy gaps, per birth cohort



*Notes:* For the census estimates of male and female literacy, 95% confidence intervals are shown.

*Sources:* Meier zu Selhausen and Weisdorf, 'Colonial legacy', p. 238. Uganda, *Census 1991*.

**Figure 2.** *ABCC Indices for Kampala, per birth cohort*



*Notes:* Age cohorts (10 years) are centred around heaping years (ages ending with 0 and 5). An ABCC index of 100 means that all ages are equally represented in the birth cohort. In the case that everyone reports rounded ages (ending on 5 or 10), the ABCC will be 0. The higher the ABCC index, the lower the incidence of age heaping, and the higher we may expect the numeracy of the population to be. See A’Hearn, Baten and Crayen for more information.

*Sources:* Uganda, *Census 1959: African population*; idem, *Census 1959: non-African Population*; idem, *Census 1991*.

## II. African demand for missionary education: The Buganda case

MzSW's study of human capital formation among Christians in Kampala provides a new angle to an expanding literature that attributes a plethora of present-day development outcomes to the supposedly benign effects of (Protestant) missionary activity. This literature emphasizes the importance of European or Western *supply* in the spread of the gospel and education.<sup>420</sup> In this section, instead, we use the case of Christian conversion in Buganda to show the importance of African *demand* for Christian religion and education – not only to find salvation, but also to obtain access to power, knowledge and status. We show that rapid *Christianization* in Buganda and its subsequent diffusion was predicated on an alliance between British missionary and colonial interests and Ganda elite factions, and stress the crucial role of native converts. On a more general level, we emphasize the importance of indigenous social structures to explain the uneven diffusion of missionary education, a point we further substantiate in a regression framework in section III.

The Buganda Kingdom was the most powerful of a number of pre-colonial kingdoms in the Great Lakes region, drawing admiration from early explorers because of its receptivity to external influences and its sophisticated bureaucratic structures. In the words of one historian,

[The Kingdom] was equipped with an administrative apparatus as centralized and efficient as could conceivably have been erected without either writing or any means of transport other than the human head.<sup>421</sup>

When Europeans first arrived, Buganda was embroiled in intense regional military and political conflict, in particular with the neighbouring kingdom of Bunyoro. Buganda's *Kabaka* (king) soon realized the potential gains from an alliance with Europeans. Islam had already taken hold in Buganda and introduced reading and writing,<sup>422</sup> but when Morton Stanley suggested that Christian missionaries should come to Buganda, King Muteesa is quoted to have responded pragmatically: 'I say that the white men are greatly superior to the Arabs, and I think that their book must be a better book than Mohammad's'.<sup>423</sup>

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<sup>420</sup> Johnson and more recently Nunn (and many others), maintain that the supply of mission stations was driven by Europeans, who looked for benign geographical conditions, and sought to maximize their expected returns in terms of conversion. Johnson, 'Location of Christian missions', Nunn, 'Religious conversion' Cf. Frankema, 'Origins', p. 348.

<sup>421</sup> Wrigley, 'Buganda'.

<sup>422</sup> Ranger 'African attempts', p.57.

<sup>423</sup> Low, *Fabrication*, p. 61. Cf. Brierly and Spear, 'Muteesa'; Wrigley, 'Christian revolution'.

British Anglicans (the *Church Missionary Society*) arrived in 1877, quickly followed by French Catholics (the *White Fathers*) in 1879, both departing from their policy of incrementally extending missionary activities from the Indian Ocean coast.<sup>424</sup> Soon, the Christian missionaries found themselves contesting for power in a complicated internal conflict.<sup>425</sup> In a cutthroat scramble, several coalitions identifying with the different religious groups emerged and dissolved. Eventually – after the intervention of captain Frederick Lugard and his maxim guns – a powerful faction of Anglican chiefs gained the upper hand, and Anglicanism became the *de facto* state religion of Uganda. Anglicans, Catholics and Muslims were each assigned geographical spheres of influence, but freedom of worship and missionary activity was maintained.<sup>426</sup> St Paul’s Cathedral, the Anglican centre of worship and evangelization was erected on Namirembe Hill, close to the royal court on Mengo Hill. The Catholics established their headquarters on an adjacent hill.<sup>427</sup>

The conflation of missionary influence and local politics made a critical and long-lasting impact. When the British Protectorate was established in 1894, it was named after the Buganda Kingdom, even though the territory included a great diversity of – often antagonistic – polities and kingdoms. To establish hegemony over its newly acquired colonial territory, the British relied heavily on Ganda ‘sub-imperialism’.<sup>428</sup> A Ganda military expedition defeated the defiant Bunyoro Kingdom, and Semei Kakungulu, a powerful chief and Anglican convert, conquered and ruled ‘the land of the naked peoples’ – north and east of Buganda.<sup>429</sup> Factions of Buganda’s elites codified their privileges within their own Kingdom, most notably through the ‘Buganda Agreement of 1900’ which allocated property rights of the Kingdom’s most fertile lands among a few thousand influential individuals.<sup>430</sup>

Early Ganda converts not only sought out European missionaries to further their own ends, they were soon at the forefront of evangelization and education. MzSW stress ‘the role of Europeans’ in the diffusion of literacy among the first generation of Ganda converts.<sup>431</sup> Indeed, a small number of European missionaries – spurred on by eager Ganda elites – played

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<sup>424</sup> Curtin, *The world*, p. 120.

<sup>425</sup> There is extensive literature on this episode of Buganda history. E.g. Hanson, *Landed Obligation*, Low, *Fabrication*.

<sup>426</sup> The religious settlement ‘gave rise to the basic patterns which characterize the distribution of religious communities in Buganda from the nineteenth <sic> century to the present day.’ Langlands and Namirembe, ‘Historical background’, p. 6.

<sup>427</sup> Later on, the Catholic *Mill Hill* and *Verona* Fathers also obtained a sizeable foothold in Uganda

<sup>428</sup> Roberts, ‘Sub-imperialism’.

<sup>429</sup> Twaddle, *Kakungulu*.

<sup>430</sup> Mukwaya, *Land tenure*.

<sup>431</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 254.

a crucial role in setting up schools for the education of a new generation of leaders. Boarding schools were established, in the words of Alfred Tucker (Uganda's first Anglican Bishop from 1899 to 1908), to 'instil a sense of responsibility' among the children of 'the ruling classes'.<sup>432</sup> Mengo High School, established on Namirembe Hill in 1895 and Uganda's first Anglican high school, had two British head teachers before the first African headmaster took office in 1912.

Yet, an equation of the diffusion of missionary education with the role of Europeans greatly understates the crucial role of African, and particularly Ganda, converts. The spread of the gospel was first and foremost carried by African evangelists.<sup>433</sup> Roland Oliver describes Buganda's late nineteenth century intellectual climate as 'one of the most remarkable and *spontaneous movements* for literacy and new knowledge that the world has ever seen' [italics added].<sup>434</sup> Tellingly, as noted by Hanson, 'African Christians insisted on the expansion of education more rapidly than [European] missionaries wanted, and seized the initiative in carrying it out'.<sup>435</sup> Frankema has shown that the remarkable schooling revolution in colonial Uganda was indeed predicated on the *Africanization of the mission*.<sup>436</sup> Due to the chronic lack of European missionaries and financial resources, the spread of mission schools beyond the confines of a handful of local centres depended crucially on the capacity of local African communities to mobilize resources for teaching materials, school buildings and recruitment of teachers. Of the reported 8,456 teachers in primary schools in Uganda in 1938, only ca. 3 per cent (285) were of European origin.<sup>437</sup>

While the impressive diffusion of education in Uganda should not be attributed to European missionaries, it should certainly not be associated with British colonial policy. The successful *Africanization* of the mission in fact delayed the British colonial government in taking responsibility for mass education in Uganda. Sir Henry Hesketh Bell, Uganda's governor (1905-1909), remarked that this success story, 'relieved [the administration] of making the provision for education which in any other dependency would have been a serious call upon the government's finances'.<sup>438</sup> This reality is borne out by some basic figures: in 1920 the

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<sup>432</sup> Tucker, *Eighteen Years*. Also Ssekamwa, *History and Development*, pp. 59-70.

<sup>433</sup> Pirouet, *Black evangelists*.

<sup>434</sup> Oliver, *Missionary Factor*, p. 184, cf. Hanson, 'Indigenous adaptation', p. 159.

<sup>435</sup> Hanson, 'Indigenous adaptation', p. 157. Cf. Langlands and Bazirake, 'Expansion of missionary activity', p. 41. Note the repercussions this dynamic has for studies attributing mission expansion to conditions suitable for Europeans. E.g. Nunn, 'Religious conversion'.

<sup>436</sup> Frankema, 'Origins', p. 335, also Meier zu Selhausen, 'Missionaries', pp. 78-9.

<sup>437</sup> Frankema, 'Origins', p. 340.

<sup>438</sup> Ssekamwa, *History and Development*, p. 48.

colonial government spent a meagre £0.03 (constant prices 1910) per person enrolled in primary missionary education, which set Uganda at the bottom of a larger British African sample. For comparison: in Sierra Leone, the colonial government spent ca. £0.98 per student in 1920, about thirty times as much.<sup>439</sup>

The indigenous drive to conversion and education were as uneven as it was impressive. Among the Baganda, 32 per cent identified as Catholic and 30 per cent as Anglican by 1931. Increasingly, people from a wide range of backgrounds had access to education, and ‘self-made men’ were able to achieve social, economic and political success.<sup>440</sup> Using the weapons of literacy and religion, several groups began to question ‘the legal and social procedures that the Protestant establishment had erected’, and to challenge the British-Ganda coalition.<sup>441</sup> Their efforts were at least partly successful, and some of the privileges and powers of the early colonial Ganda elites began to erode from the 1920s onwards.<sup>442</sup>

Christianity made much less headway in other parts of the Uganda. Among non-Ganda Ugandans, only 5 per cent identified as Catholic, 6 per cent as Anglican and 2 per cent as Muslim by 1931.<sup>443</sup> Only during the late colonial period, conversion rates began to converge, as Christianity – Catholicism in particular – spread rapidly to Uganda’s outlying regions. In 1959, 76 per cent of the population in Buganda identified as Christian, against 56 per cent in the rest of Uganda.<sup>444</sup> Due to the close link between Christianity and education, Buganda also built up a clear lead in terms of human capital formation.<sup>445</sup> As shown in table 2, by the end of the colonial period, Buganda significantly outperformed the rest of Uganda in terms of school attendance. Interestingly, the table also shows that Christians in Buganda performed better than their counterparts elsewhere. Only by the mid-1950s did the colonial state begin to take greater responsibility for the education of Africans across Uganda, but by this time large disparities had already built up.<sup>446</sup>

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<sup>439</sup> Frankema, ‘Origins’, p. 342.

<sup>440</sup> Meier zu Selhausen, Weisdorf and Van Leeuwen, ‘Social mobility’.

<sup>441</sup> Peterson, ‘Politics’, p. 210.

<sup>442</sup> Hanson, *Landed Obligation*; Meier zu Selhausen, Weisdorf and Van Leeuwen, ‘Social mobility’.

<sup>443</sup> Uganda, *Census 1931*. Conversion rates among the Batooro (26 % Christians) and Banyoro (25 % Christians) were also significantly higher than average, but much lower than among the Baganda.

<sup>444</sup> Idem, *Census 1959*.

<sup>445</sup> Also Goldthorpe, *African elite*, p. 28.

<sup>446</sup> Lury, ‘Dayspring mishandled?’, p. 241.

**Table 2.** *Share of population aged 6-45 that has ever been to school by 1959, per province*

	Buganda	Western	Eastern	Northern	TOTAL
Anglicans	67%	55%	36%	42%	46%
Catholics	51%	40%	34%	35%	39%
Muslims	41%	19%	10%	17%	23%
Other religion	7%	8%	8%	7%	7%
Male	55%	35%	30%	42%	42%
Female	40%	11%	8%	10%	18%
TOTAL	48%	29%	25%	26%	27%

Sources: Uganda, *Census 1959 African Population*.

### III. Determinants of unequal educational outcomes

A major advantage of using census data in place of the marriage registers of a specific group of church adherents, is that they can cast a wider light on the uneven diffusion of education across colonial Uganda. In this section we explore the role of gender and ethnicity in a multivariate regression framework. We run two specifications. First, we regress a number of variables on years of schooling, adding variables of interest one by one while controlling for time and place of birth. Second, we regress an identical set of variables on years of schooling for each birth cohort separately, reporting *standardized beta-coefficients* to explore the changing explanatory weights of our variables of interest over time. We deliberately confine our sample to the birth cohorts of 1903-72, leaving out all people born before 1903 (to avoid survivorship bias and small samples, see section I) and after 1972 (to exclude the age group 0-18). We also exclude persons who were born outside Uganda. This leaves us with a sample of ca. 645,000 men and women.

The ordinary least square (OLS) regression on years of schooling includes the following independent variables: FEMALE (capturing the effect of gender), KAMPALA (capturing the effect of being born in or around the capital), GANDA (capturing the effect of belonging to the dominant ethnic group) and ANGLICAN (capturing the effect of adhering to Protestant christianity and the dominant denomination in colonial Uganda). We also include interactions of these variables to explore heterogeneous effects for Ganda women (capturing differences in gender inequality between the Baganda and other ethnic groups), Anglican women (capturing differences in gender inequality between Anglicans and adherents to other religions) and Ganda Anglicans (capturing the heterogeneous impact of Anglicanism among the Baganda and other ethnic groups).



**Table 3A.** OLS regression on years of schooling, birth cohorts 1902-1962

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	yrschool	yrschool	yrschool	yrschool	yrschool	yrschool	yrschool	yrschool
Female	-2.13*** (0.009)	-2.13*** (0.009)	-2.16*** (0.009)	-2.13*** (0.009)	-2.16*** (0.009)	-2.35*** (0.010)	-2.10*** (0.011)	-2.36*** (0.011)
Kampala		3.03*** (0.039)						2.51*** (0.038)
Ganda			2.77*** (0.019)		2.69*** (0.021)	2.16*** (0.023)		2.08*** (0.024)
Anglican				0.62*** (0.009)	0.61*** (0.010)		0.67*** (0.014)	0.61*** (0.015)
Ganda*Anglican					0.246*** (0.025)			0.16*** (0.024)
Ganda*Female						1.16*** (0.023)		1.16*** (0.023)
Anglican*Female							-0.089*** (0.018)	0.00 (0.018)
Constant	6.90*** (0.012)	6.70*** (0.012)	5.25*** (0.018)	6.70*** (0.012)	5.04*** (0.018)	5.34*** (0.018)	6.69*** (0.012)	4.97*** (0.018)
Cohort control	Y	Y	Y	Y	Y	Y	Y	Y
Province control	Y	Y	Y	Y	Y	Y	Y	Y
Observations	645,976	645,976	611,590	645,976	611,590	611,590	645,976	611,590
Adjusted R <sup>2</sup>	0.21	0.22	0.25	0.22	0.26	0.25	0.22	0.27

Notes: Robust standard errors between parentheses. \*\*\* indicates significance at the 1% level, \*\* at the 5% levels and \* at the 10% level.

Sources: IPUMS; Uganda, 1991 Census.

The regression results confirm that the educational attainment gap between men and women was substantial and significant. Table 3B shows that this gap widened up to the birth cohort of 1943-1952, where it was close to 3 years of schooling, and only started to decline substantially for children born after independence (1963-72). Table 3A also shows that the Baganda enjoyed a considerable advantage in access to schooling, and table 3B reveals that this advantage increased in absolute terms throughout the colonial era. The GANDA variable is consistently positive and highly significant for all birth cohorts. The standardized beta-coefficients reported in table 3B indicate that GANDA together with FEMALE explain most of the variation that is picked up by our model. Place of birth mattered too. Kampala-born individuals benefitted from growing up in the country's economic, political and missionary centre, but the beta-coefficients reveal a consistently larger weight for Ganda ethnicity than for being born in Kampala. The effect of adhering to the Anglican church is also positive, but weighs in less heavily.

**Table 3B.** OLS regression on years of schooling per birth cohort, including standardized beta-coefficients (in bold), 1903-1972

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	BC03-12	BC13-22	BC23-32	BC33-42	BC43-52	BC53-62	BC63-72
Female	-0.488*** (0.0424)	-0.854*** (0.0312)	-1.430*** (0.0286)	-2.456*** (0.0286)	-2.985*** (0.0277)	-2.777*** (0.0238)	-2.120*** (0.0203)
<i>beta</i>	<b>-0.139</b>	<b>-0.213</b>	<b>-0.293</b>	<b>-0.393</b>	<b>-0.406</b>	<b>-0.352</b>	<b>-0.273</b>
Kampala	1.471*** (0.328)	1.186*** (0.254)	1.501*** (0.188)	1.758*** (0.160)	2.221*** (0.133)	2.487*** (0.0753)	2.805*** (0.0511)
<i>beta</i>	<b>0.089</b>	<b>0.059</b>	<b>0.056</b>	<b>0.052</b>	<b>0.057</b>	<b>0.076</b>	<b>0.107</b>
Ganda	1.308*** (0.139)	1.508*** (0.0884)	1.782*** (0.0788)	2.276*** (0.0712)	2.642*** (0.0669)	2.503*** (0.0482)	1.785*** (0.0383)
<i>beta</i>	<b>0.289</b>	<b>0.284</b>	<b>0.267</b>	<b>0.261</b>	<b>0.249</b>	<b>0.233</b>	<b>0.178</b>
Anglican	0.293*** (0.0596)	0.319*** (0.0455)	0.436*** (0.0424)	0.596*** (0.0424)	0.763*** (0.0388)	0.684*** (0.0306)	0.595*** (0.0248)
<i>beta</i>	<b>0.083</b>	<b>0.079</b>	<b>0.088</b>	<b>0.093</b>	<b>0.101</b>	<b>0.085</b>	<b>0.075</b>
Ganda*Anglican	0.704*** (0.141)	0.844*** (0.0998)	0.826*** (0.0803)	0.574*** (0.0743)	0.243*** (0.0695)	0.0542 (0.0492)	-0.0574 (0.0381)
<i>beta</i>	<b>0.097</b>	<b>0.099</b>	<b>0.077</b>	<b>0.039</b>	<b>0.014</b>	<b>0.003</b>	<b>-0.003</b>
Ganda*Female	-0.868*** (0.135)	-0.688*** (0.0913)	-0.425*** (0.0756)	0.199*** (0.0703)	0.664*** (0.0656)	1.447*** (0.0462)	1.734*** (0.0354)
<i>beta</i>	<b>-0.151</b>	<b>-0.098</b>	<b>-0.048</b>	<b>0.017</b>	<b>0.048</b>	<b>0.100</b>	<b>0.131</b>
Anglican*Female	-0.235*** (0.0722)	-0.196*** (0.0519)	-0.246*** (0.0462)	-0.348*** (0.0468)	-0.223*** (0.0454)	0.106*** (0.0375)	0.0897*** (0.0309)
<i>beta</i>	<b>-0.055</b>	<b>-0.04</b>	<b>-0.042</b>	<b>-0.045</b>	<b>-0.024</b>	<b>0.011</b>	<b>0.009</b>
Constant	0.585*** (0.0739)	0.974*** (0.0516)	1.637*** (0.0501)	2.532*** (0.0454)	3.644*** (0.0441)	4.474*** (0.0362)	4.791*** (0.0300)
Province controls	Y	Y	Y	Y	Y	Y	Y
Observations	8,791	21,756	40,111	61,203	90,185	153,827	235,717
Adjusted R <sup>2</sup>	0.133	0.167	0.204	0.240	0.244	0.210	0.149

Notes: Robust standard errors between parentheses. \*\*\* indicates significance at the 1% level, \*\* at the 5% levels and \* at the 10% level.

Sources: IPUMS; Uganda, 1991 Census.

The interaction effect of GANDA and FEMALE is of particular interest. The effect is positive for the full sample (table 3A), but the sign of the coefficient changes from negative to positive over the course of the colonial era, while remaining significant at the 99 per cent confidence level throughout (table 3B). This finding indicates that the educational gender gap was large among the Baganda (compared to other ethnic groups) for the early birth cohorts (1903-1932), but smaller for later birth cohorts (1933-72). The most plausible explanation is that Ganda boys first benefitted from the new schooling opportunities, while Ganda girls benefitted from these new infrastructures with a time lag. This process was repeated elsewhere at a later date. As a result, the educational gender gap opened up and closed *sooner* among the Baganda than among other ethnic group.<sup>447</sup>

The positive effect of being Anglican on educational outcomes is of a smaller magnitude than the premium of being Ganda and male. It should also be noted that the direction of causality between religion and education is ambiguous. While gender and ethnicity are mostly fixed at birth, religion is not. The census provides information about religious affiliation in 1991, but does not specify at what point in their lives the enumerated individuals converted to their stated religion. Especially those in the earlier birth cohorts may have converted after school-going age, in which case education outcomes potentially affected choice of religion rather than the other way around. The religion variable, therefore, provides a poor proxy of religious education, even when we set aside the issue of unobserved selection effects arising from uneven conversion (section I).

Still, we find some interesting interaction effects with the ANGLICAN variable. For the overall sample, Anglican Ganda performed better than their non-Ganda counterparts (cf. table 2), probably reflecting the special position of Anglicanism in Buganda as a result of the historical dynamics discussed in section II. This finding is further corroborated by the fact that the GANDA\*ANGLICAN interaction effect is strongest for the early birth cohorts and loses its statistical significance for those educated after independence (birth cohorts 1953-72), suggesting that the benefits associated with Anglicanism in Buganda eroded over time. For the full sample, the FEMALE\*ANGLICAN interaction effect does not point to an effect of religion on the educational gender gap. However, when we zoom in on the individual birth cohorts, we observe, contrary to expectation, that among the birth cohorts educated during the colonial era (birth cohort's 1903-52), Anglicans had a (slightly) *larger* gender gap than other religions, suggesting that Anglican educational resources were particularly skewed towards

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<sup>447</sup> Consistent with the literacy trends observed in Kampala and Uganda (section I, figure 1)

boys (cf. section V). The effect flipped only for cohorts educated after independence (birth cohorts 1952-72).

The bottom-line of this section is that the regression results are consistent with our overarching argument on the crucial importance of gender and ethnicity in the uneven spread of education in colonial Uganda. Additionally, we find that the interaction of these two variables mattered, and that Anglicanism was associated with educational attainment in particular among the Baganda, which is consistent with the historical narrative of African demand for education developed in section II. Taking literacy as the dependent variable instead of attainment levels confirms these results.<sup>448</sup>

#### **IV. Occupational opportunities in colonial Uganda**

MzSW observe a striking occupational transformation among the Namirembe grooms during the colonial era. They take this as proof of an impressive expansion of occupational opportunity, taking the spectacular rise in the share of ‘white-collar’ workers from a mere 1 per cent at the start of the colonial era to almost 80 per cent at independence in 1962, as evidence of a ‘century-long transformation of Kampala from an entirely rural economy to one of urban modernity’.<sup>449</sup> It is beyond doubt that the imposition of a new governance structure and the coinciding development of an urban economy in Kampala created new labour market opportunities that had not previously existed.<sup>450</sup> But was the occupational transformation in Kampala itself really so spectacular? And what does it tell us about broader employment trends in colonial Uganda?

Unfortunately, we do not have a full enumeration of the occupations of Kampala employees to compare with the Namirembe Dataset. However, an anthropological survey conducted between 1953 and 1955 provides us with a glance into the occupational structure of two African neighbourhoods, Mulago and Kisenyi. Like the Namirembe Dataset, these surveys reveal considerable occupational diversity and a sizeable share of Africans in skilled positions. The occupational composition of Mulago, a relatively prosperous African suburb and home to Uganda’s largest referral hospital, is reported in table 4. The (presumably male) occupational structure of Kisenyi is rather similar, with 27 per cent in unskilled waged, 31 per

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<sup>448</sup> Logit regressions of literacy are presented in Appendix table B1.

<sup>449</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 241.

<sup>450</sup> See for example Elkan *Migrants*; Southall and Gutkind *Townsmen*; Vorlaufer, *Physiognomie*.

cent unskilled independent, 11 per cent skilled independent and 31 per cent unspecified (presumably mostly skilled employed and property owners).<sup>451</sup>

**Table 4.** *Occupations of sampled men and women in Mulago, Kampala (1953-55)*

Type of occupation	Sampled individuals		Share of the total sample		Average monthly income (shs)		
	M	F	M	F	M	F	F/M
Not working	36	286	5%	68%	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Working	621	135	95%	32%	92	59	0.64
Unskilled waged	263	24	40%	6%	58	44	0.76
Unskilled independent	58	59	9%	14%	88	60	0.69
Skilled waged	225	33	34%	8%	126	72	0.57
Skilled independent	75	19	11%	5%	113	50	0.44
TOTAL	657	421	100%	100%	87	19	0.22

*Notes:* Southall and Gutkind interviewed households in a particular area of Mulago. They observed 64 different occupations, which they classify as (1) 'unskilled employed', (2) 'unskilled self-employed', (3) 'skilled employed', (4) 'supervisory', 'professional & managerial', (5) 'professional & managerial self-employed', (6) 'domestic service', (7) 'property ownership' and (8) 'clerical work'. I recode these into waged (1,3,4,5,6,8), independent (2,5,7), skilled (3,4,5,7,8) and unskilled (1,2,6). Note that they classify 'shop assistants' and 'shop boys' as unskilled and waged, 'food sellers' as unskilled and independent and 'shopkeeper' and 'cattle seller' as skilled and independent. 'tailor', 'seamstress' and 'matmaker' are classified skilled independent. 'Prostitutes' are classified as unskilled independent. 'Cotton and coffee growers' are classified skilled and independent. Since the bar chosen by Southall and Gutkind to classify someone as skilled seems fairly low (i.e. not conditional on primary education), any comparisons with other classifications of skilled shares should be made cautiously.

*Sources:* Southall and Gutkind, *Townsmen*, p. 262.

The 45 per cent *skilled* male labourers in the Mulago sample compares to just under 60 per cent skilled labourers in the Namirembe Dataset for the same period. If migrant labourers were excluded from the Mulago sample, the share of skilled labourers may well converge with, or even surpass, the share of skilled workers found among the Anglican grooms in Namirembe Cathedral.<sup>452</sup> However, while similar on the surface, a further decomposition of the occupations ultimately reveals the biases in the Namirembe Dataset. Particularly notable is the overrepresentation of clerks in the latter: 17 per cent of grooms (1950-59) compared to only 3 per cent of the males in the Mulago sample (1953). Conversely, there is a pronounced

<sup>451</sup> Southall and Gutkind, *Townsmen*, p. 55. The larger share of wage labourers in Mulago may be due to the presence of the hospital.

<sup>452</sup> Cf. Meier zu Selhausen and Weisdorf, 'Colonial legacy', p. 237.

underrepresentation of traders: Only 8 per cent of Namirembe grooms compared to 31 per cent (mostly petty food traders) of the surveyed men in Kisenyi.<sup>453</sup>

To assess the evolution of occupational opportunities in colonial Uganda, we should also see the relatively small trading, service and administrative centre of Kampala as part of a wider colonial economy. Indeed, Kampala's clerks and traders would not have had a job without Uganda's rural majorities producing the cash crops underpinning the formal sector and state finances.<sup>454</sup> At independence, Uganda was still overwhelmingly rural and agrarian, with only 3.8 per cent of the entire population living in cities, towns or trading centres, an estimated 11.5 per cent of the adult population was employed at all, and a mere 7.9 per cent outside of agriculture.<sup>455</sup> Characteristic for Uganda's agrarian economy, Kampala – while by far the largest urban centre – harboured only a fraction of the total population, which still remains true to this day (table 5).

Another constraint to African occupational opportunity in Uganda was the fact that a large share of the lucrative (semi-)skilled jobs was taken up by expatriates, especially South Asians.<sup>456</sup> According to census estimates, the South Asian population grew steadily from 2,216 individuals in 1911 to 71,933 in 1959.<sup>457</sup> While many South Asians initially arrived as labourers, those who chose to stay in Uganda tended to be skilled and entrepreneurial, taking up roles as commercial middlemen, cotton ginner, plantation owners and clerks, often employing unskilled Africans–labour. Illustrating their infusion of human capital into the Ugandan economy, figure 3 shows the high numeracy skills of the South Asian population in Uganda (the closest we were able to get to a comparable indicator of working skills), compared to the indigenous Baganda of 'Greater Kampala'.

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<sup>453</sup> This difference does not result from the inclusion of migrants in the Kisenyi survey. Baganda men made up a large share of beer, charcoal or banana sellers. Southall and Gutkind, *Townsmen*, p. 260.

<sup>454</sup> De Haas, 'Measuring rural welfare'; Jamal, 'Taxation'.

<sup>455</sup> Based on population estimates from the *1959 Census*, p.1, and employment estimates from the *Annual Report of the Labour Department*, p. 65 in the same year.

<sup>456</sup> We use the term 'South Asians' to refer to residents from British Indian and subsequently Bangladeshi, Indian and Pakistani descent.

<sup>457</sup> Uganda, *Census 1911*; idem, *Census 1959*.

**Table 5. Official Population Census estimates of Uganda and Kampala, 1921-2002**

Census year	Uganda (x1000)	Kyadondo (x1000)	Kampala (x1000)	Kampala/ Uganda	Urban sex ratio
1904	<i>n/a</i>	66	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
1911	2840	105	<i>n/a</i>	<i>n/a</i>	103
1921	3065	105	<i>n/a</i>	<i>n/a</i>	87
1931	3554	94	<i>n/a</i>	<i>n/a</i>	112
1948	4918	133	48	1.0 %	143
1959	6450	237	92	1.4 %	137
1969	9535	450	331	3.5 %	124
1980	12636	<i>n/a</i>	459	3.6 %	103
1991	16672	<i>n/a</i>	774	4.6 %	95
2002	24442	<i>n/a</i>	1189	4.9 %	92

*Notes:* The population figures of Kampala include peri-urban areas. Sex ratios for 1911, 1921, 1931, 1948 and 1959 are for Kyadondo County.

*Sources:* Uganda, *Census 1911*; idem, *Census 1921*; idem, *Census 1931*; East African Statistical Department, *African population 1948*; Uganda, *Census 1959*; idem, *Census 1969*; idem, *Census 1980*; idem, *1991 Census*; idem, *2002 Census*; Southall and Gutkind, *Townsmen*, p. 6.

South Asians absorbed a large portion of the limited demand for (semi-)skilled labour in the colonial export economy. Without a doubt, the infusion of South Asian skills, capital and entrepreneurship accelerated Uganda's economic growth. At the same time, however, their presence also cut off avenues for occupational mobility to African men and women, and diminished incentives for the colonial state to allocate resources to develop working skills and encourage African business activity.<sup>458</sup> An investigation into trade in Uganda from the early 1950s found that Kampala Township harboured only 27 (!) officially licensed African traders, compared to 50 Europeans and 1,014 South Asians.<sup>459</sup> Although some Africans built thriving businesses, most were self-employed petty traders, or hired by larger South Asian traders, 'scrap[ing] by with rather a miserable existence'.<sup>460</sup> The exclusion of Africans within trade and industry played an important role in the grievances that developed towards South Asians, which eventually culminated in their expulsion by Idi Amin in 1972.<sup>461</sup>

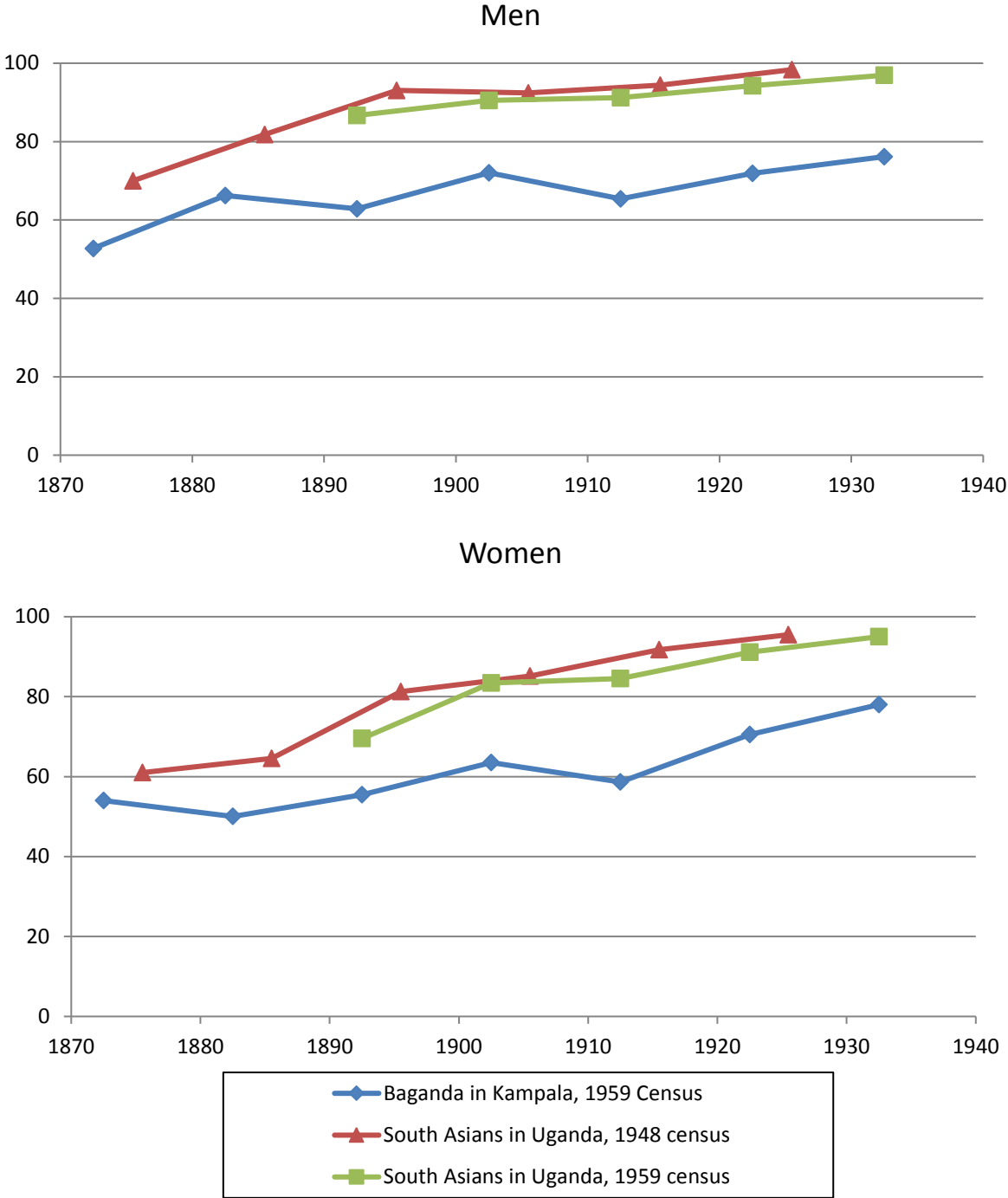
<sup>458</sup> Ehrlich, 'Paternalism', Jamal, 'Asians'.

<sup>459</sup> Uganda, *Advancement*, p. 15.

<sup>460</sup> Gutkind, 'Town life', p. 43, cf. Southall and Gutkind, *Townsmen*, pp. 155-9.

<sup>461</sup> Jamal, 'Asians'.

**Figure 3.** *ABCC Indices for Baganda in Kampala and South Asians in Uganda, per birth cohort.*



*Notes:* See figure 2 for more information on the ABCC index. Note that a large share of South Asians, especially in the earlier cohorts, migrated to Uganda as adults.

*Sources:* East African Statistical Department, *Non-native Census 1948*; Uganda, *Census 1959*.



While African occupational opportunity in Uganda was constrained, it was also distributed very unevenly. Buganda was not only far ahead of the other provinces in terms of education (cf. section II), it also had the most diversified occupational structure. In 1959, Buganda harboured 28 per cent of Uganda's total population, 43 per cent of all enumerated African wage labourers and 48 per cent of all wage income earned.<sup>462</sup> In terms of gross domestic income per head of the population, Buganda was also well ahead of the rest of the Protectorate, with an estimated £26 annual income per capita, versus £15 in the Eastern Province, and £12 in the Northern and Western Provinces.<sup>463</sup>

Buganda's occupational opportunities, in turn, were concentrated in Kampala. Even though Kampala harboured only 5 per cent of Buganda's population in 1959, 31 per cent of all wage labourers in Buganda were employed in Kampala, earning 39 per cent of Buganda's total wage bill.<sup>464</sup> The cost of living in Kampala was much higher than in the countryside and most migrant labourers could not afford to bring their families, resulting in a transient population and work force.<sup>465</sup> The unskilled labour market was dominated by circular migrant labourers from Uganda's rural peripheries, as well as neighbouring colonial territories, who worked for subsistence wages.<sup>466</sup> The Baganda themselves stood at the 'apex of the [African] occupational and wage structure'.<sup>467</sup> Only a small class of relatively well-paid skilled workers could afford to settle permanently in Kampala. In other words, the share of skilled workers in colonial Kampala may seem impressive, but these workers signify a strong migration selection effect into a small, service-oriented urban centre in an otherwise overwhelmingly rural economy.<sup>468</sup>

In conclusion, the importance of small scale family farming and the presence of expatriates meant that the demand for African skilled workers was limited. As a result, the colonial government lacked the incentives to invest heavily in the training of a large non-agricultural African labour force, let alone promote white-collar work among broad sections of the population. The lack of well-paid skilled jobs and limited opportunities in the commercial sector meant that one of the few ways to obtain a lucrative waged position was to rub

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<sup>462</sup> Uganda, *Census 1959*; idem, *Enumeration of employees*.

<sup>463</sup> Jameson, *Agriculture*, p. 117.

<sup>464</sup> Uganda, *Census 1959*; idem, *Enumeration of employees*.

<sup>465</sup> De Haas, 'Measuring rural welfare', Appendix Figure A, Table C; Elkan, *Migrants*, Southall and Gutkind, *Townsmen*.

<sup>466</sup> Frankema and Van Waijenburg, 'Structural impediments'; De Haas, 'Measuring rural welfare'.

<sup>467</sup> Elkan, *Migrants*, p. 44.

<sup>468</sup> *Ibid.*

shoulders with the Ganda missionaries and the mission-educated local government and merchant elites, concentrated in and around Kampala. The ‘happy few’ who managed to attain such a position show up as ‘clerks’ (984 individuals, 17 per cent of the sample) and ‘teachers’ (505 individuals, 8 per cent of the sample) among the grooms in the Namirembe Dataset during the period 1895-1959.

## **V. Did women benefit from colonial influences?**

We now return to the central issue of the changing position of women in colonial Uganda. We have already shown in sections I and III that, for the Ugandan population at large, gender inequalities in terms of literacy and educational attainment persisted throughout the colonial era. Can we attribute these persistent inequalities to African hostility towards ‘benign’ European influences, as suggested by MzSW? And how useful is the dichotomy of ‘European modernity’ versus ‘African tradition’ in exploring African gender inequality?

Because gender norms varied substantially between different ethnic groups, we confine the discussion to Buganda. Scholars have already pointed out that women in pre-colonial Buganda probably had more freedom, and marital gender relations were less exploitative than in neighbouring polities.<sup>469</sup> Still, MzSW rightly note that traditional Ganda gender norms were patriarchal. Women primarily had a domestic role, and their agency was constrained by fathers and husbands.<sup>470</sup> It is also notable that the far majority of slaves in pre-colonial Buganda was female.<sup>471</sup> Moreover, the position of women probably deteriorated in the tumultuous decades leading up to the arrival of expatriate missionaries and subsequent colonization.<sup>472</sup>

To test the effect of exposure to European norms on gender inequality, MzSW exploit the variation among the brides observed in the Namirembe Dataset. They observe that daughters from fathers working in what they classify as the ‘traditional sectors’ performed worse on a composite marital equality indicator than daughters from fathers involved in ‘activities directly linked to Europeans’. These differences in terms of marital inequality between different categories of fathers’ occupations are interesting, but, in our view, certainly don’t warrant a spectacular leap to the conclusion that African gender inequality persisted because

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<sup>469</sup> Doyle, *Before HIV*; Perlman ‘Law and the status of women’.

<sup>470</sup> Hanson, *Landed Obligation*; Musisi, ‘Elite Polygyny’; idem, ‘Environment’.

<sup>471</sup> Tuck, ‘Women’s experiences’.

<sup>472</sup> Hanson, ‘Queen mothers’.

of ‘African discrimination <sic> against a modernized (European-style) economy’.<sup>473</sup> To substantiate our critique, it is helpful to revisit Boserup.

To begin with, while Boserup makes several cursory remarks about the *cultural* causes of gender discrimination in Africa (as emphasized by MzSW), she develops a much more elaborate argument about its *economic* causes. Boserup’s first line of argumentation revolves around the importance of female agricultural labour input in the ‘traditional’ rural African household, compared to many other world regions.<sup>474</sup> While the value of their labour provided African women with responsibility and bargaining power in the household, their large contribution to domestic income also implies that the *opportunity costs* of girls’ education and off-farm labour were high.<sup>475</sup> Hence, in a colonial context where labour market opportunities for women were limited, and economic returns to female education were low, one does not need to invoke cultural norms to understand why many fathers did not choose to educate their daughters.

Opportunity costs of women’s education were particularly high for households relying on ‘traditional occupations’ (such as peasant farmers, basket makers or bark cloth makers). Such households were typically situated in rural areas with greater access to fertile farmland to cultivate food and cash crops.<sup>476</sup> Additionally, their incomes were probably lower than those of mission workers, clerks or medical assistants, implying that they were more dependent on female (agricultural and domestic) labour input. According to Bantebya Kyomuhendo and McIntosh, formal labour market participation in Uganda was

limited to those women whose parents had been able to pay for their education and whose labor was not needed at home. No one argued that peasant women too should be free to earn their own incomes. Furthermore, the ability of educated women to work relied upon cheap, unskilled female workers to take their place within the household.<sup>477</sup>

Next, Boserup points out that gender discriminatory attitudes of African men resulted not only from ‘loathing the idea of their wives and daughters working under the authority of a foreign man’, but primarily from ‘the desire, shared with men in other continents, to reserve for themselves the much-desired jobs in the modern sector, [which] keeps the women out of that

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<sup>473</sup> Meier zu Selhausen and Weisdorf, ‘Colonial legacy’, p. 257.

<sup>474</sup> For support in recent empirical literature, Alesina, Giuliano and Nunn, ‘Origin of gender roles’.

<sup>475</sup> Boserup, *Woman’s role*, p. 34.

<sup>476</sup> Cf. Elkan, *Migrants*, pp. 43-4.

<sup>477</sup> Bantebya Kyomuhendo and McIntosh, *Women*, p. 83, cf. Elkan, ‘Employment’, pp. 17-8.

sector'.<sup>478</sup> Rather than beneficial for women, Boserup sees 'training in crafts and home industries as a deliberate method of reducing the number of women competing with men for employment in the modern sector'.<sup>479</sup> She also argues that this fear of female competition was aggravated by the presence of a 'favoured minority' (South Asians, in this case), which limited occupational opportunities for African men (as argued in section IV).<sup>480</sup> Relatedly, Boserup points out that the large numbers of female nurses and teachers should not be equated with a development towards overall occupational gender equality, but instead indicates that women remained confined to a few specific – and relatively unthreatening – 'feminine' occupations.<sup>481</sup> This fear of female competition certainly operated in the Ugandan context as well. Economist Walter Elkan noted in 1955 that 'despite full employment men are obsessed with fear of being edged out by women workers',<sup>482</sup> and that 'men object to the employment of women in occupations which they have come to regard as men's. From these occupations only teaching, nursing and child care are excluded'.<sup>483</sup>

Lastly, Boserup stresses that the key European legacy on gender inequality in Africa has been to reinforce and reshape – rather than eliminate – discrimination of women and to cut off women's participation in new lucrative economic activities, both in the village (cash-crop cultivation) and the towns (factory work). She points out that (i) agricultural extension services in colonial Africa were primarily geared towards men (explicitly invoking the example of cotton in Uganda),<sup>484</sup> (ii) '[colonial fear of female prostitution] served as a barrier to women's emancipation from tribal and family authority, and to their efforts to obtain genuine urban employment',<sup>485</sup> (iii) 'Europeans, with predominantly female clerical staffs in their home country stick to local traditional sex patterns in office recruitment overseas',<sup>486</sup> (iv) 'foreign economies and cultural pressures' in East Africa limited female participation in the market place,<sup>487</sup> and (v) 'missionaries, Catholic as well as Protestant', 'encouraged a stay-at-home policy of the urban women on moral grounds'.<sup>488</sup>

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<sup>478</sup> Boserup, *Woman's role*, p. 190.

<sup>479</sup> *Ibid.*, p. 221.

<sup>480</sup> *Ibid.*, pp. 153, 205.

<sup>481</sup> *Ibid.*, p. 153.

<sup>482</sup> Elkan, 'Employment', p. 15.

<sup>483</sup> *Ibid.*, p. 16.

<sup>484</sup> Boserup, *Woman's role*, pp. 56-7.

<sup>485</sup> *Ibid.*, pp. 100-1.

<sup>486</sup> *Ibid.*, p. 132.

<sup>487</sup> *Ibid.*, p. 182.

<sup>488</sup> *Ibid.*, p. 219, also p. 60.

A rich and recent historical literature has debated the extent to which such dynamics operated in Uganda as well.<sup>489</sup> One issue that stands out is that European missionaries actively discouraged mixed schools, and that girls' education was primarily aimed at training women to be 'good Christian wives'. This meant inculcating an attitude of moral purity and 'domestic virtues', which included industrious activities such as the production of household crafts.<sup>490</sup> One particular petition to open an Anglican school for girls in 1911 summarizes the spirit of the time:

'it is absolutely necessary for the welfare of the country that the girls should also be educated to a degree suitable for their conditions in life. To teach the girls to lead pure, clean lives, and become industrious. To shew <sic> them the best methods for cultivating their gardens, and keeping their homes clean, and to teach them what I may call 'Home Industries' e.g., mat making, basket making, sewing etc'.<sup>491</sup>

The shares of tailors (29 per cent), weavers (21 per cent), mat makers (16 per cent) and basket makers (4 per cent) among the Anglican brides in the Namirembe Dataset is very large.<sup>492</sup> We take the high prevalence of domestic craft 'occupations' in the Namirembe Dataset as an indication that 'respectable' Ganda Anglicans had embraced the missionary model of 'domestic virtue'.<sup>493</sup>

While 'home industries' undoubtedly contributed to the welfare of the household, they probably did not bring in much cash income and contributed little to women's economic independence: the missionaries encouraged women to learn handicrafts 'mainly to improve their own homes', and 'craftware made by some women in a community could be made by others too, so there was little demand'.<sup>494</sup> The Baganda were fully aware of the low economic returns to women's education. When in 1937 a Ganda civil servant testified to a committee about African men refusing to pay school fees for girls, he pointed out that 'they think education the girls are receiving today is not as good as that of boys; and they are not willing

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<sup>489</sup> A discussion on gendered colonial policies see Bantebya Kyomuhendo and McIntosh, *Women*; Musisi, 'Morality'; Doyle, *Before HIV*; Tripp 'A new look'. On the gendered impact of cash crops and missionaries in Eastern Uganda see Summers, 'Force'.

<sup>490</sup> Hanson, 'Indigenous adaptation', p. 161.

<sup>491</sup> Quoted in Bantebya Kyomuhendo and McIntosh, *Women*, p. 54.

<sup>492</sup> These numbers contrast with the Mulago sample, in which only 5 % of the women reported 'matmaker', 'seamstress' or 'tailor' as their occupations, and two out of three women reported to have no (cash) earnings at all (cf. table 4).

<sup>493</sup> Our emphasis differs from Meier zu Selhausen, who argues that the predominance of domestic work among Christian women signifies 'the presence of deeper pre-colonial roots of female labour segregation in Uganda.' Meier zu Selhausen, 'Missionaries', p. 91.

<sup>494</sup> Bantebya Kyomuhendo and McIntosh, *Women*, pp. 103-4.

to pay for anything for which they do not receive proportionate value'.<sup>495</sup> This was no incidental remark, as, in the same year, the Anglican Missionary Council itself acknowledged that 'in Uganda many Africans are feeling that the Church has failed in the adequate education of girls'.<sup>496</sup> One statistic sums up the meagre professional skill attainment among women in Uganda quite well: in 1959, only 295 African girls (compared to 2,819 boys) were enrolled in senior secondary schools, all of which were Christian.<sup>497</sup>

Meier zu Selhausen and others have rightly pointed out that missionary schools did provide pathways for a limited number of women into a small number of occupations outside the domestic sphere.<sup>498</sup> The relatively high number of 'teachers' (7 per cent) and 'nurses' (2 per cent) among the brides in the Namirembe Dataset testifies to the existence of such possibilities. Some factions within the missionary movement – particularly female Anglicans<sup>499</sup> – encouraged and facilitated 'service careers' for women. However, the demand for such jobs was small, and – as stressed by Boserup – their potential to provide a 'stepping stone' to widespread female labour market participation was limited.

Still, women managed to increase their economic independence, slowly but progressively. They migrated to towns and participated in the informal urban economy as traders, beer brewers and sex workers,<sup>500</sup> and they made their voices heard in the public sphere.<sup>501</sup> There is no empirical basis, however, to attribute this development to the modern values introduced by European colonial and missionary agents. Instead, the issue of gender inequality in education and the labour market exemplifies the complex interactions of African realities and European influences in the colonial era. Even though women exposed to missionary education may have indeed have attained literacy and accumulated schooling more quickly than their rural, unexposed counterparts, their education was primarily supposed to benefit them and their families in the domestic sphere. 'Traditional' Ganda gender norms restricted female opportunity, but it was their interaction with late-Victorian Anglican values and changing economic realities that produced new forms of institutionalized gender inequality.<sup>502</sup>

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<sup>495</sup> Quoted in Hanson, 'Indigenous adaptation', p. 162.

<sup>496</sup> Letter dated 16 June, 1937, Archives of the Church of Uganda, file 'Statistics 1937'.

<sup>497</sup> Bantebya Kyomuhendo and McIntosh, *Women*, p. 83.

<sup>498</sup> *Ibid.*, p. 58; Meier zu Selhausen, 'Missionaries'.

<sup>499</sup> Tripp, 'A new look'.

<sup>500</sup> Davis, 'Sexuality'; Obbo, *African women*; Southall and Gutkind, *Townsmen*.

<sup>501</sup> Tripp and Ntiro, 'Women's Activism'.

<sup>502</sup> Bantebya Kyomuhendo and McIntosh, *Women*; Musisi, 'Morality'. Compare Hansen, ed., 'African encounters'; Levine, ed., *Gender and empire*.

## VI. Conclusion

The use of missionary parish registers to enhance our knowledge of African human capital formation, occupational opportunity and gender inequality is both promising and problematic. In this study, we have demonstrated how selection biases in parish record data have provoked an overly optimistic account of European influences on educational and occupational opportunities, and gender emancipation in an African colonial context. Using a birth cohort approach, we have projected post-colonial census data back in time to show how literacy rates, numeracy rates and school attainment in colonial Kampala and Uganda increased, but at a pace more modest than that suggested by the marriage registers of Namirembe Cathedral.

We have also called into question a narrative that stresses the benign effects of European missionary and colonial influences. The arrival of a limited number of European missionaries set in motion, and this may indeed be called a legacy, the widespread diffusion of literacy and formal education in Uganda. However, we show that it is equally true that this development was as much an outcome of African *demand* as it was of European *supply*, and that without deep involvement and commitment of Ganda converts and teachers, who profited politically and economically from their connection to British colonizers, European influence would have remained very limited. Moreover, we have demonstrated how education spread unevenly, along lines of gender, ethnicity and region, with inequalities of educational opportunity widening until the end of the colonial era. In terms of economic opportunity for African men and women, we have shown that colonial policies were not geared towards opening up opportunities for a broad section of Uganda's African population, and that occupational change was limited. Finally, we have revisited Boserup and challenged the claim that European influence emancipated Ugandan women from discriminatory indigenous social norms.

The crux of our argument relates to the way in which colonial influences and legacies are to be conceptualized. Firstly, to further our understanding of processes of transformation during the era of colonial rule in Africa, it is crucial for (empirical) studies to properly acknowledge and incorporate the initiative of Africans and the impact of their agency on development outcomes. Colonial states were not capable of defining, organizing and financing their activities without the active involvement of certain sections of the indigenous populations, and this interaction determined subsequent paths of (uneven) development. Secondly, our study has reiterated that European influences were not just *diffusive*, they also tended to be *divisive* along lines of ethnicity, race and gender. Evaluations of colonial legacies become

much more constructive and balanced when dynamics of inclusion and exclusion – which in the case of Uganda contributed to a violent and tragic post-colonial history<sup>503</sup> – are properly addressed.

Finally, we have argued that a dichotomy between ‘African tradition’ and ‘European modernity’ is of questionable value in understanding developments in the colonial era, whether they pertain to gender equality or any indicator of social, economic or political development. Colonial and missionary agents brought different, ambiguous and sometimes conflicting new ideas into their colonies, and these ideas interacted with those of African agents in similar variegated fashion. It is exactly these complex dynamics between European influences and African realities which innovative research approaches and new historical datasets can help to unravel.

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<sup>503</sup> Among others, Kasozi, *Social origins*; Mamdani, *Citizen and subject*; Wrigley ‘Four steps’.



## Chapter 4.

*Resource endowments and agricultural commercialization in colonial Africa: did labour seasonality and food security drive Uganda's cotton revolution?*<sup>504</sup>

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<sup>504</sup> This chapter is co-authored with Kostadis Papaioannou and has been published online as De Haas, M. and K.J. Papaioannou, 'Resource endowments and agricultural commercialization in colonial Africa: did labour seasonality and food security drive Uganda's cotton revolution?' European Historical Economics Society Working Paper Series, 111 (2017). We are grateful to Gareth Austin, Ewout Frankema and Niek Koning for detailed feedback on earlier drafts of this paper, and participants of the New Frontiers in African Economic History Workshop (Wageningen, October 2015), and the History Graduate Workshop of the London School of Economics (London, May 2016) for valuable suggestions.

## Introduction

Commercialization of smallholder agriculture has long been an important stepping stone for rural households in developing countries towards greater market participation and income enhancement, and remains so today.<sup>505</sup> The adoption and expansion of cash crops for export was also a key determinant of economic development and agrarian change in tropical Africa during the colonial era (ca. 1880-1960).<sup>506</sup> Some African farmers voluntarily and proactively initiated new farming strategies to participate in the cultivation of cash crops when improved market access (e.g. railroads) enabled them to do so. In particular, farmers in the West African forest, and to a lesser extent elsewhere, proactively exploited a combination of market access and favourable ecological conditions to expand and benefit from the production of cocoa, coffee and palm oil.<sup>507</sup> However, in many other cases, African smallholders vehemently opposed cash crops,<sup>508</sup> or suffered from precariousness and food insecurity as a result of forced adoption of inedible crops such as tobacco or cotton.<sup>509</sup>

Why did *some* African smallholders adopt cash crops on a considerable scale, while *most others* were hesitant to do so? In an influential paper, John Tosh (1980) has argued that these different responses can be traced, to a considerable extent, to the distinction between ‘forest’ and ‘savanna’ areas, in which farmers *faced different resource endowments*. Forest areas have fertile soils and well-distributed rainfall patterns, and are suitable for crops that yield high caloric and financial returns, such as yam, banana, coffee and cocoa. However, such conditions, Tosh pointed out, are the ‘exception’ to the ‘rule’ of African ‘savanna’ conditions, which were characterized by brief and erratic rainy seasons, and relied on labour-intensive

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<sup>505</sup> Anderman et al., ‘Synergies and tradeoffs’; Collier and Dercon ‘African agriculture in 50 years’; Maxwell and Fernando, ‘Cash crops in developing countries’; Pingali and Rosegrant, ‘Agricultural commercialization and diversification’; Von Braun and Kennedy, *Agricultural commercialization, economic development, and nutrition*.

<sup>506</sup> Austen, *African economic history*; Austin, ‘Explaining and evaluating the cash crop revolution’; Frankema, Williamson and Woltjer, ‘An economic rationale for the African scramble’; Tosh, ‘The cash crop revolution in tropical Africa’; Papaioannou and De Haas, ‘Weather shocks and agricultural commercialization in colonial tropical Africa’.

<sup>507</sup> Austin, *Labour, land and capital in Ghana*; Austin, ‘Vent for surplus or productivity breakthrough?’; Berry, *Cocoa, custom and socio-economic change*; Hill, *The migrant cocoa-farmers*; Hopkins, *An economic history of West Africa* Richards et al., *Subsistence to commercial farming*.

<sup>508</sup> Isaacman, ‘*Cotton is the mother of poverty*’; Isaacman and Roberts, *Cotton, colonialism and social history*; Likaka, *Rural society and cotton in colonial Zaire*; Maat and Hazareesingh, *Local subversions of colonial cultures*; Roberts, *Two worlds of cotton*.

<sup>509</sup> Bryceson, *Food insecurity and the social division of labour*; Mandala, *Work and control in a peasant economy*; Vaughan, ‘Food production and family labour’; Watts, *Silent violence*.

grain cultivation.<sup>510</sup> In the savanna areas, labour was abundant during the dry season, but was fully utilized during the brief agricultural season in securing sufficient food. Consequently, insufficient resources remained available to simultaneously branch out into cash-crop production.

Tosh did not advocate *monocausality*, and acknowledges upfront that the limiting nature of labour seasonality is conditional upon the absence of mitigating factors, such as reliable markets for credit and food (enabling households to smooth consumption), and access to capital-intensive farming technologies (increasing food yields and enhancing labour productivity).<sup>511</sup> Yet Tosh made a simple but powerful point that in Africa's labour-scarce savanna conditions, the adoption of cash crops was a tricky balancing act that could be detrimental to food security.<sup>512</sup>

While Tosh's explanation for the 'cash-crop revolution' is widely cited and reproduced, few scholars have ventured to explicitly confront, evaluate and test the impact of its key components – *seasonal labour scarcity* and *food security* – on African agricultural commercialization.<sup>513</sup> In this paper, we put Tosh's argument to the test, by zooming in on a case study of the 'cotton revolution' in colonial Uganda. We proceed as follows. In section I, we point out that the adoption of cotton among Uganda's smallholders was substantial, and exceptional in a comparative perspective. We refute two common explanations in the literature, namely (i) that the success of cotton in Uganda should be attributed to the benign characteristics of the perennial banana, and (ii) that cotton adoption was the outcome of particularly effective colonial coercion. Instead, we point out that previous literature has overlooked the environmental uniqueness of Uganda, namely its equatorial *bimodal rainfall patterns*, which enabled farmers to combine food crop and cash-crop cultivation. In section II, we provide an in-depth discussion on the link between rainfall patterns, food security and cotton. In section III, we proceed to test some of these links econometrically, using a newly constructed panel dataset of annual cotton acreages for 10 districts in Uganda over a 36 year

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<sup>510</sup> Tosh, 'Cash-crop revolution'; idem, 'Lango agriculture during the early colonial period'; Austin, 'Resources, techniques and strategies south of the Sahara'; Papaioannou and Frankema, 'Rainfall patterns and human settlement in tropical Africa and Asia.'

<sup>511</sup> Austin, 'Resources, techniques and strategies'; Binswanger and McIntyre, 'Behavioral and material determinants of production relations'; De Janvry, Fafchamps and Sadoulet, 'Peasant household behavior with missing markets'.

<sup>512</sup> Cf. De Janvry, Fafchamps and Sadoulet, 'Peasant household behavior'; Fafchamps, 'Cash crop production, food price volatility, and rural market integration'.

<sup>513</sup> The exception is Austin, 'Vent for surplus or productivity breakthrough?' for the cocoa revolution in early colonial Ghana.

period (1925-60). In section IV, we move even closer to the farm, presenting micro-data from 563 individual households, surveyed during the latter half of the colonial era in 7 villages in southern Uganda. We exploit variation between households in these villages to investigate the complementarity between cash crops and food crops. Section V concludes.

Our key findings are as follows. Firstly, we establish that *bimodal rainfall distribution* was a crucial factor in the process of cotton adoption among Uganda's banana *and* grain farmers. Farmers were able to smooth labour demands over two separate growing seasons, cultivate food crops during the first and most reliable rainy season while relegating cotton to the second rainy season. Furthermore, they were able to annually calibrate the allocation of resources to cotton depending on the success of the preceding food crop harvest. Food security remained at the heart of farming strategies. Secondly, our micro-level analysis reveals complementarity between food crops and cash crops at the household level. When we zoom in on specific crops, we find that cash crops were positively correlated with the cultivation of starchy staples, such as bananas, roots and tubers. These crops are relatively undemanding and more weather-resistant, thus serving well as 'famine reserve crops'. Such complementarity between food crops and cash crops at the household level is consistent with a 'food-security-first' strategy.

Overall, we conclude that the strongest explanation for Uganda's exceptional cotton revolution was its equatorial bimodal rainfall pattern, which provided it with a decisive advantage over other areas having a similar institutional setup and level of technology, but only one rainy season. While amending Tosh's distinction between 'forest' and 'savanna', and revising the interpretation of Uganda's 'cotton revolution, we reaffirm the importance of labour seasonality – and resource endowments more broadly – for understanding the uneven participation of farmers in the 'cash-crop revolution' of colonial tropical Africa.

## **I. Making sense of Uganda's cotton revolution**

Uganda is a particularly intriguing case of agricultural commercialization in colonial tropical Africa. Firstly, there is the simple fact that *cotton* became Uganda's prime cash crop. Cotton, being a labour-intensive, non-edible and poorly remunerating annual crop, is often held to have been a particularly disruptive cash crop.<sup>514</sup> While the European metropolises were keen to

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<sup>514</sup> Austen, *African economic history*, p. 140; Isaacman, 'Peasants and rural social protest'; Isaacman and Roberts, *Cotton, colonialism and social history*.

see cotton exported from the overseas empire, smallholders did not regard cotton as appealing, since it required substantial labour inputs and yielded low rewards. As a rule, cotton in colonial Africa either entirely failed or was sustained under compulsive regimes. According to Isaacman and Roberts, ‘cotton was not only the premier colonial crop in colonial Africa, it was the premier forced crop’.<sup>515</sup> Africans resisted colonial cotton schemes ‘by planting in poor soils, by neglecting tasks at crucial points in the cotton cycle, by permitting unwanted hybridization, and by refusing to sell their harvest to the export sector’.<sup>516</sup> They were also victimized, and, ‘the extent to which cotton impoverished rural Africans [is indicated by] the widespread malnutrition and hunger throughout colonial Africa. Cotton and food insecurity went hand in hand’.<sup>517</sup>

Uganda, clearly, was an exception. Ugandan smallholders adopted cotton on a massive scale, leading to one of the most successful ‘cash-crop revolutions’ in colonial tropical Africa, and ranking Uganda among the top-10 cotton exporters worldwide in per capita terms.<sup>518</sup> Why did Ugandan smallholders invest in the cultivation of cotton relatively more than their counterparts elsewhere in colonial Sub-Saharan Africa? Tosh, as well as other scholars grappling with this question from a resource endowment perspective, has conceptualized the Ugandan case as an ‘exception that proves the rule’, emphasizing the benign ecological conditions in the southern part of the country, and especially the highly productive perennial banana plantations, which could be maintained with relatively undemanding and seasonally well-distributed labour inputs, provided almost exclusively by women.<sup>519</sup> In these conditions, men – similar to their counterparts in the West African forest – were ‘underemployed’ and could respond quickly and spontaneously to the cash-earning opportunities provided by the

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<sup>515</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 29.

<sup>516</sup> *Ibid.*, p. 34.

<sup>517</sup> *Ibid.*, p. 37.

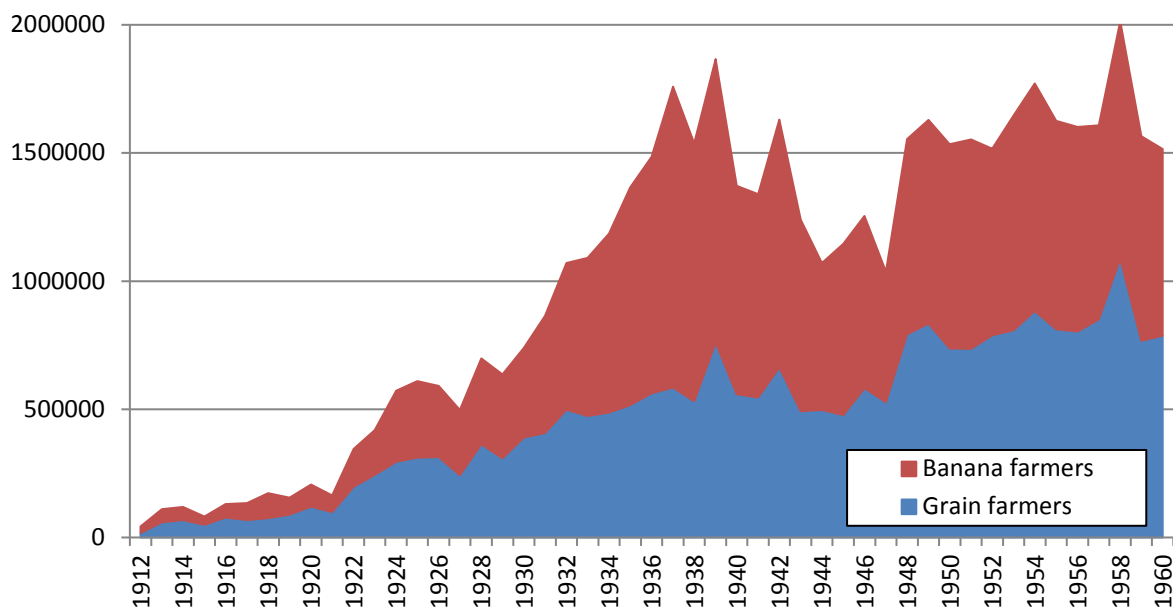
<sup>518</sup> Based on four benchmark years. In both 1927-8 and 1938-9, Uganda was the 11<sup>th</sup> cotton producer worldwide, and had the fourth highest per capita output. In 1951-2, Uganda was still the 11<sup>th</sup> cotton producer worldwide, and third in per capita terms. In 1960, Uganda was the 18<sup>th</sup> cotton producer worldwide, and ninth in per capita terms. Despite its third great involvement in cotton cultivation, Uganda remained on the margins of the world cotton market, which was dominated by the United States. In 1951-2, for example, the U.S.A. produced 42.6 % of all cotton grown worldwide, the U.S.S.R. (the second largest producer) produced 10.7 %, and Uganda only 0.9 %. 1927-8 based on a map in Porter, p. 45 ‘Note on cotton and climate’. Data for 1938-9 and 1951-2 from Atkinson, ‘Cotton: this season and the next’, p. 195. Data for 1960 from FAOSTAT Statistics Database.

<sup>519</sup> McMaster, *A subsistence crop geography*, p. 44; Tosh, ‘Cash-crop revolution in tropical Africa’, p. 92; Austin, ‘Resources, techniques, and strategies’, p. 597 and p. 601; *idem*, ‘Explaining and evaluating the cash crop revolution’; Elliot, ‘Agriculture and economic development in Africa’, pp. 136-37.

construction of the railway in 1901, which connected landlocked Uganda to the world market.<sup>520</sup>

However, there is a key problem with this version of the ‘resource endowments’ argument. A large share of Uganda’s cotton-growing smallholders did not cultivate bananas, but relied on grain-based crop rotations, involving the continuous and laborious cycles of field preparation, sowing, weeding, and harvesting which are typical of African savanna conditions.<sup>521</sup> Still, despite the labour-intensive characteristics of grain farming, cotton was adopted quickly and on a large scale by farmers in Uganda’s savanna.<sup>522</sup> In fact, as can be seen from figure 1, farmers in the banana and grain regions contributed more or less equally to Uganda’s cotton acreage. As indicated by figure 2, there was also no clear discernible difference in *per capita* involvement of farmers in cotton cultivation between the ‘banana’ and ‘grain’ region. Thus, the benign characteristics of the banana can hardly account for the success of cotton in Uganda.<sup>523</sup>

**Figure 1.** Cotton cultivation (acres) in colonial Uganda (1912-1960)



Sources: Cotton acreages from Uganda, *Bluebooks*; idem, *Report of the Department of Agriculture*.

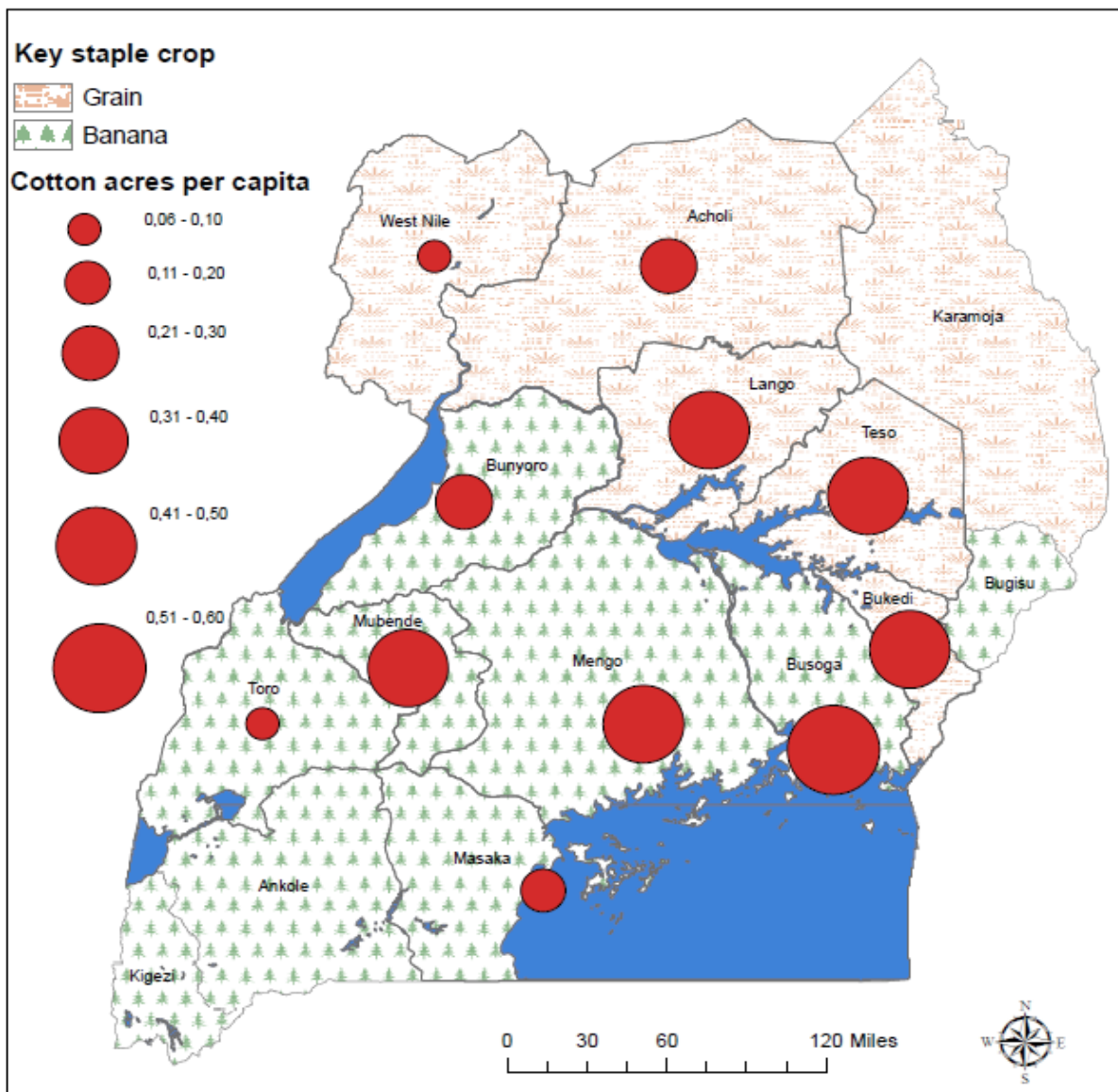
<sup>520</sup> Tosh, ‘The cash-crop revolution in tropical Africa’, p. 92.

<sup>521</sup> McMaster, *A subsistence crop geography*; Parsons, *Systems of agriculture: Introduction and Teso*; idem, *Systems of agriculture: Northern*; Vail, *Agricultural innovation in Teso District*.

<sup>522</sup> Vail, *Agricultural innovation in Teso District*.

<sup>523</sup> The link between bananas and ecology was already questioned by Wrigley who points out that transition from banana to millet was ‘more abrupt than was warranted by the natural conditions’, suggesting that ‘the distinction is in part a cultural, that is to say an historical, and not solely an ecological one.’ Wrigley, *Crops and wealth*, p. 6

**Figure 2.** Average annual cotton cultivation in Uganda's colonial districts (1925-1960)



*Notes:* Created by the authors using ArcGIS. *Sources:* See main text.

Was the cotton revolution in Uganda, perhaps, a case of exceptionally effective colonial coercion? Certainly, colonial coercion played a much more important role in Uganda's early colonial economy than Tosh's rendering of the 'cash-crop revolution' – a spontaneous response of previously idle men, acting 'without much prompting from the government' – suggests.<sup>524</sup> The initial adoption of cotton in Uganda did not occur in pristine pre-colonial economic conditions in which abundant land and labour lay idle, waiting for a railroad to be built. Instead, the cotton revolution took place after decades of tumultuous colonial intrusion,

<sup>524</sup> Tosh, 'Cash-crop revolution', p. 92.

civil conflict and disease epidemics. Moreover, the introduction of cotton followed upon the instigation of a new land ownership system and a colonial head tax, both in 1900. On top of this, men of working age were subjected to a range of new and extended labour obligations, which, by 1908, added up to 5 or 6 months per year. Expatriate planters had attempted to gain a foothold and pushed for coercion in order to obtain cheap labour, albeit with limited success.<sup>525</sup>

Cotton adoption was an African *response* to colonial policies in two ways. First, it was a way of avoiding some off-farm labour obligations, such as tax labour or forced labour for the colonial government.<sup>526</sup> Men were kept occupied by a significant amount of involuntary labour outside the household,<sup>527</sup> while *women* extended their agricultural work and took up most of the labour inputs in self-employed cotton cultivation.<sup>528</sup> Second, cotton cultivation itself was not without considerable government interference and compulsion. In 1908, for example, Uganda's governor claimed that the implementation of colonial rules concerning the cultivation of cotton were 'of a drastic nature' and could only be successful because 'the bare orders of the chiefs were expected to suffice to ensure effective obedience to the rules framed under the ordinance'.<sup>529</sup> In 1912, a Ugandan official proudly noted that the government had propagated the cultivation of cotton as 'the duty of every good citizen' and boasted that 'the increase is almost entirely due to Government influence'.<sup>530</sup> Outbreaks of widespread food insecurity in 1908-09 and 1918-19 testify to the disruptive and dramatic nature of economic change in the early colonial period.<sup>531</sup> One historian directly attributes population decline and repeated food shortages in early colonial Busoga – notably, a *banana* growing area - to its high per capita cultivation of cotton: 'although peasants could not eat cotton, ... cotton could devour peasants'.<sup>532</sup>

Still, it would be incorrect to attribute the cotton revolution in colonial Uganda purely or even primarily to coercive policy. The colonial government itself came to realize that the extractive nature of chief-peasant relations under early colonial rule, as well as the extensive labour demands outside the household, worked as a *disincentive* to cotton cultivation, and understood that smallholders would grow *more* cash crops if they were given the freedom and time to do

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<sup>525</sup> Wrigley, *Crops and wealth*.

<sup>526</sup> Hanson, *Landed obligation*, p. 169.

<sup>527</sup> Which included cotton cultivation for chiefs and landlords, and head-loading cotton to ginneries. Ehrlich, *The marketing of cotton in Uganda*, p. 91

<sup>528</sup> Hanson, *Landed obligation*, p. 178.

<sup>529</sup> Quoted in Nayenga, 'Commercial cotton growing in Busoga District', p. 181.

<sup>530</sup> Quoted in Robins, *Cotton and race across the Atlantic*, p. 120.

<sup>531</sup> Ehrlich, 'The economy of Buganda', p. 17.

<sup>532</sup> Jørgensen, *Uganda: A modern history*, p. 60.



so. In 1922, forced labour for the colonial government was abolished; in 1924, the Government issued a circular ‘deprecating the excessive zeal shown by chiefs in fining or imprisoning natives for failing to show sufficient activity in planting;’<sup>533</sup> in 1927, the extractive powers of chiefs were strongly reduced, and land tenure arrangements were made more secure; in 1930, labour demands for the native government were made commutable. These measures contributed considerably to the striking acceleration of Uganda’s cotton acreage production, as they resulted in greater amounts of male labour being available for cotton cultivation (figure 1).<sup>534</sup>

The colonial treasury benefitted considerably from this development by ratcheting up the poll tax and by instituting a cotton export tax.<sup>535</sup> Still, several studies from the heydays of Uganda’s cotton economy remark on the benefits of the cotton cultivation to growers. Christopher Wrigley (1959), an early economic historian of Uganda, for example notes that, although coercion did not disappear altogether, ‘from the middle 1920s onwards the cruder sanctions fell into disuse and the activities of the peasants began to reflect, much more straightforwardly than hitherto, their own economic needs and desires’.<sup>536</sup> Cyril Ehrlich (1958), another early economic historian of Uganda, similarly emphasizes that

The first few years of cotton production probably depended primarily on the administration’s hold over the chiefs and the chief’s power over the people. But there can be little doubt that the eventual success of the crop and the growth of the economy depended essentially on the peasant’s desire for cash beyond the immediate demands of taxation.<sup>537</sup>

Ehrlich also points out that ‘the parts of Uganda which are evidently the richest are those which have felt the impact of cotton’, while McMaster (1962) maintains that ‘the extension of cash crops has brought great and undoubted benefits to Uganda’, and Young (1971) describes cotton as the ‘lumbering oxen that draws Uganda’s chariot of development’.<sup>538</sup> Recently, De

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<sup>533</sup> Ehrlich, *The marketing of cotton in Uganda*, p. 217.

<sup>534</sup> Thus, instead of taking up cash crops immediately – as argued by Tosh – men belatedly became more involved in the cultivation of cash crops. Ester Boserup and others have argued that men turned to cash crops because they sought control over cash income, and because colonial states focused their extension efforts on men. However, some observers in Buganda interpreted the shift towards men quite differently, noting that women themselves increasingly *resisted* the expectation of their husbands to grow cotton. No matter how these mechanisms weighed into the shifting gendered distribution for labour, the involvement of men in agricultural production effectively increased household labour capacity, thus facilitating the expansion of cash crop cultivation. Boserup, *Woman’s role in economic development*, p. 19; Hanson, *Landed obligation*, pp. 178-9.

<sup>535</sup> For example, in Teso district, a major cotton growing region, the poll tax rose from five shillings in 1919 to 15 shillings in 1921, 21 shillings in 1929 and 28 shillings in 1931. Vail, *Agricultural innovation*, p. 146.

<sup>536</sup> Wrigley, *Crops and wealth in Uganda*, p. 49.

<sup>537</sup> Ehrlich, ‘Marketing of cotton in Uganda’, p.88.

<sup>538</sup> *Ibid.*, p. 112, McMaster, *Subsistence crop geography*, p. 93; Young, ‘Agricultural policy in Uganda’

Haas has shown that, from the 1920s onwards, ordinary cotton cultivators were certainly not spectacularly wealthy, but saw their incomes *exceed* subsistence level, and become *better off* than wage labourers, as the colonial taxes took up only a *portion* of their cotton income.<sup>539</sup>

The relatively benign characteristics of Uganda's cash-crop economy, in particular from the 1920s onwards, are also exemplified by the large influx of migrants into Buganda from Uganda's non-cash crop growing areas (those furthest removed from transportation facilities), and from the neighbouring territories of Kenya, Tanganyika and, in particular, Ruanda-Urundi. Migrants participated actively in the cash-crop economy as sharecroppers, labourers for local farmers, seasonal tenants and permanent tenants.<sup>540</sup> It is notable that food shortages still occurred in Uganda, for example in 1927-28, but that their repercussions were much more limited than during earlier episodes of shortage, partly because of several structural measures to improve food security (improved infrastructure, household and communal granaries, cultivation of cassava and sweet potato as famine reserve crops), and partly because of a coordinated government response to lift local food shortages.<sup>541</sup> Cotton continued to be widely grown into the 1960s, after independence, by both banana and grain farmers. In some parts of the banana region, smallholders also began to experiment with more lucrative cash crops, Robusta coffee in particular, which provided higher returns to labour. Towards the end of the colonial era, coffee cultivation was still mostly confined to Buganda, but because of its greater value had still supplanted cotton as Uganda's prime export crop.<sup>542</sup>

When summing up the evidence, we must conclude that neither a distinction between 'banana' and 'grain' areas, nor the presence of particularly effective colonial coercion, can explain the exceptional responsiveness of Uganda's smallholders to cotton. The key question, then, remains: how did Ugandan smallholders, unlike their counterparts elsewhere, make cotton work, even after the relaxation of the coercive measures that accompanied its introduction? To solve Uganda's 'cotton puzzle', we suggest a *modified* resource endowments perspective, in which we move away from a distinction between 'savanna and forest' or 'grain and banana', and instead focus on Uganda's *bimodal rainfall pattern*.<sup>543</sup>

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<sup>539</sup> Although this portion was high during the 1930s. De Haas, 'Measuring rural welfare'.

<sup>540</sup> Richards, *Economic development and tribal change*.

<sup>541</sup> Uganda, *Annual report of the department of agriculture* for the years 1927 and 1928. Also, McMaster, *Subsistence crop geography*; Vail, *Agricultural innovation in Teso District*.

<sup>542</sup> De Haas, 'Measuring rural welfare'; Wrigley, *Crops and wealth in Uganda*. According to Hogendorn, 'over the years since the First World War, cotton has slowly been overtaken in Uganda by other more profitable cash crops, especially coffee.' This, however, misrepresents the situation outside Buganda (cf. figures 1 and 2), and even in Buganda coffee overtook cotton after the *Second* World War. Hogendorn, 'Economic initiative', p. 315.

<sup>543</sup> Including the forest zones of West Africa and much of central Africa.

## II. Did bimodal rainfall enable Ugandan farmers to adopt cotton?

In this section, we outline our basic argument that Ugandan farmers were no different from their counterparts elsewhere in colonial Africa in prioritizing food security over cash-crop cultivation, but that bimodal rainfall facilitated their exceptional adoption of cotton, for two reasons: (i) they could relegate cotton to the second rainy season to smooth agricultural labour demands, and (ii) they had two opportunities per year to secure their food supply, and the option to reduce the allocation of resources to cotton in the second rainy season in case of a bad food crop harvest in the first rainy season.

Let us begin by providing a basic analysis of the distribution of rainfall across Uganda. For this purpose, we obtained monthly rainfall observations from meteorological stations throughout Uganda, reported annually in the colonial *Blue Books* (until 1945) and subsequently published by the *Meteorological Department*.<sup>544</sup> We choose one meteorological station per district, selecting the station for which most monthly observations are available. The average monthly rainfall for 13 districts are presented in figure 3 below. Some scholars have argued that generous rainfall, as well as its bimodal distribution, are exclusive advantages of the banana regions. However, as figure 3 clearly shows, rainfall actually tended to be more generous in the grain regions. Although the two rainfall peaks were further apart in the banana region, rainfall was distinctly bimodal throughout Uganda.<sup>545</sup>

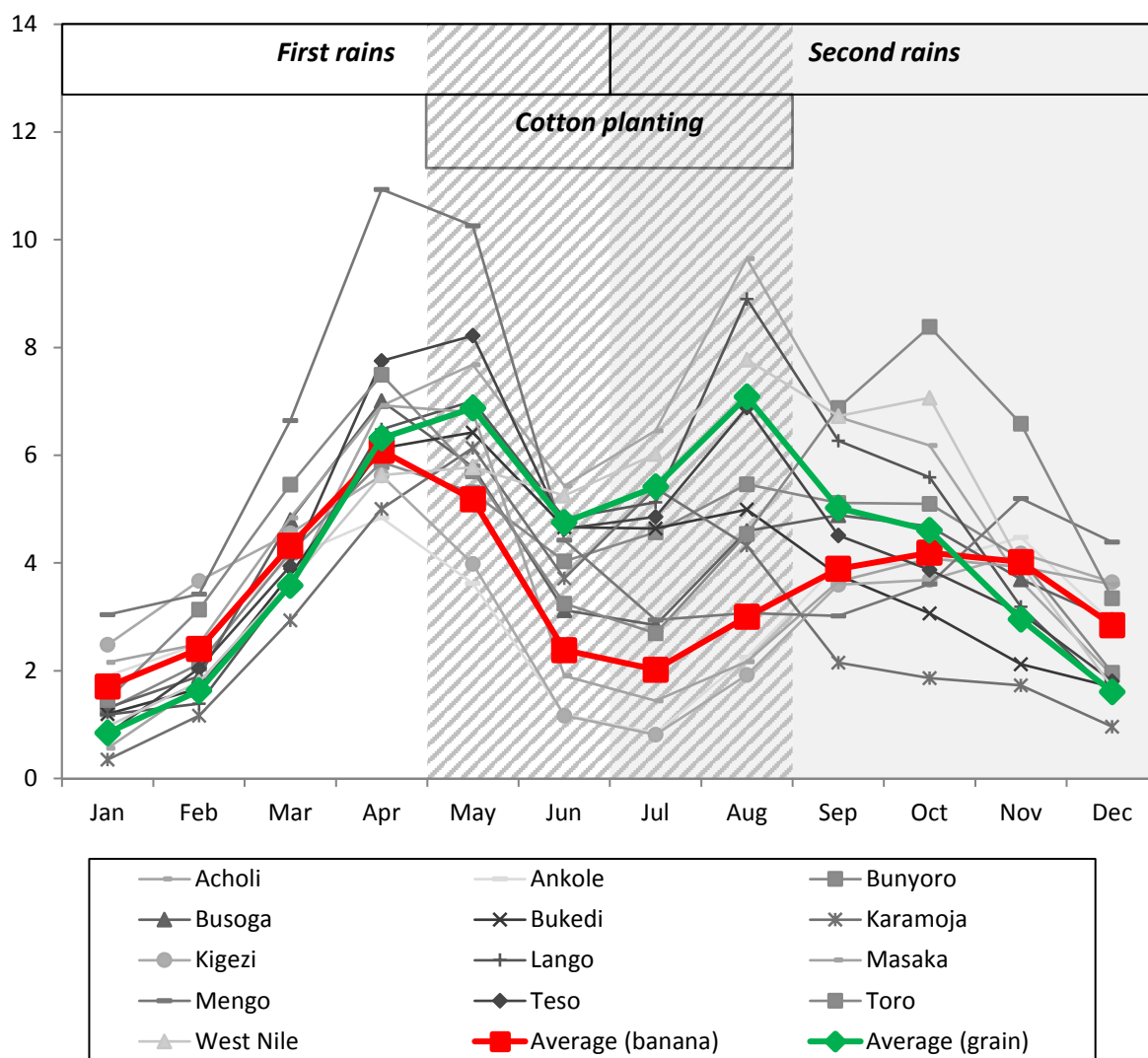
Next we assess how bimodal rainfall helped farmers to enhance their *agricultural production capacity*. The relationship between rainfall distribution and labour seasonality is clearly illustrated in figure 4, which shows the distribution of labour inputs by grain farmers in several cotton- growing districts in Uganda and one region in northern Côte d'Ivoire. The unimodal rainfall patterns in Côte d'Ivoire are quite representative for much of the African savanna north and south of the equator. As can be seen, the seasonal distribution of labour in the *unimodal* Ivoirian context is much more skewed. For the Ivorian farmer, cotton and food labour demands both peaked at the same time (July), while these same demands were more spread out for the Ugandan farmer, who was consequently able to focus on food crops in the first rainy season, and relegate cotton to the second rainy season.

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<sup>544</sup> Uganda, *Blue Books*, Meteorological Department, *Monthly and annual rainfall in Uganda*.

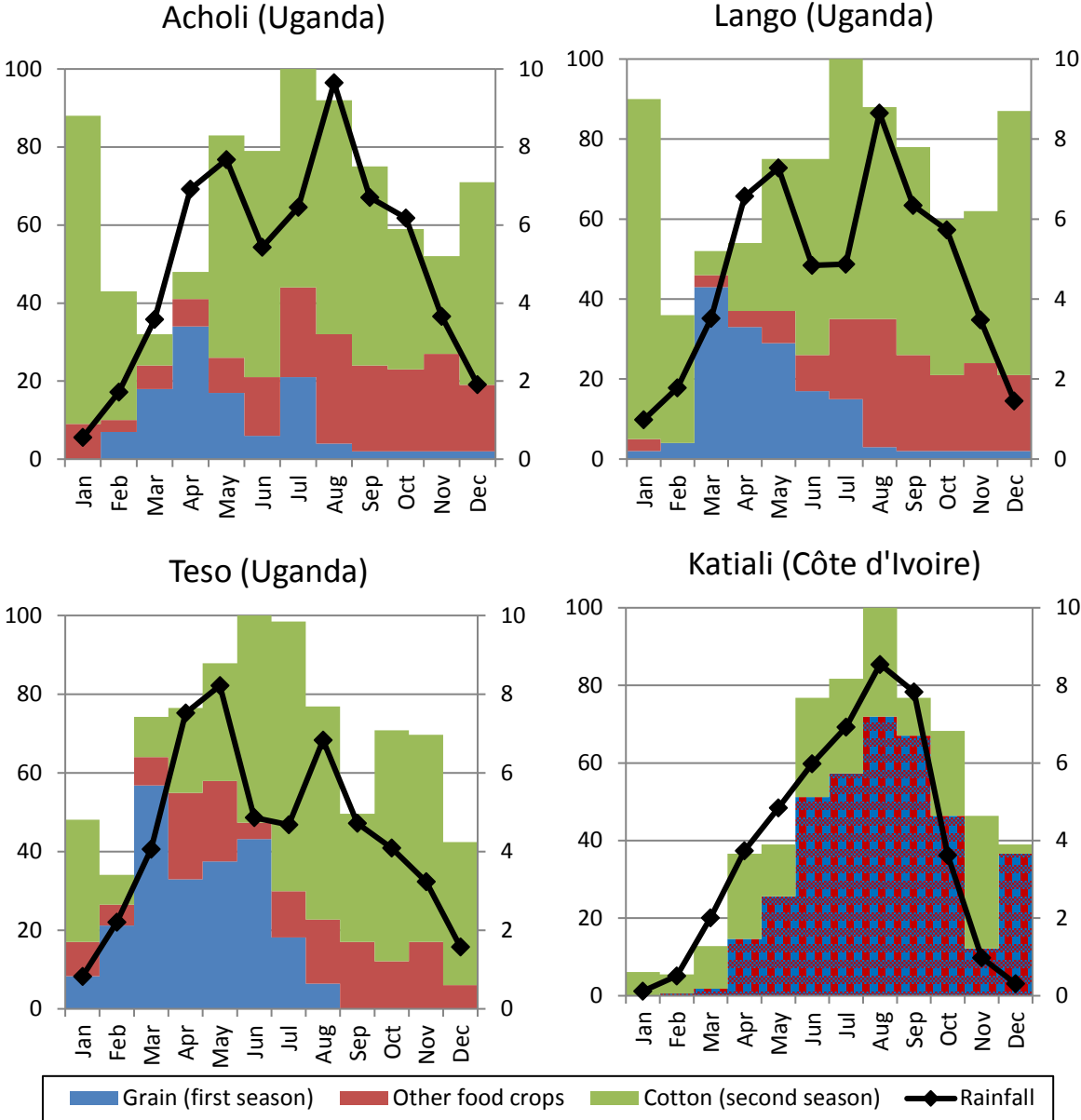
<sup>545</sup> Elliot, 'Agriculture and economic development in Africa', pp. 136-7; Hogendorn, 'Economic initiative', p. 312; Isaacman and Roberts, 'Cotton, colonialism and social history', p. 23, Reid, *A history of modern Uganda*, p. 9.

**Figure 3.** Average monthly rainfall (inches) in 13 districts of Uganda, 1925-1960



Sources: See text.

**Figure 4.** Intra-annual distribution of labour inputs (left axis) and rainfall (inches, right axis) of cotton farmers in the savanna. Bimodal (Uganda) versus unimodal (Côte d'Ivoire)



Notes: Labour inputs include all aspects of cultivation, from preparing the field, sowing, weeding, harvesting and sorting. Monthly labour inputs are expressed as share of the month with the greatest labour input (e.g. July in Lango).

Sources: Acholi and Lango from Cleave, *African farmers: labour use*, p. 87, Teso from Vail, *Agricultural innovation in Teso District*, p. 104, Katiali from Bassett, *Peasant cotton revolution*, p. 126.

If we assume that the month with the greatest labour input in figure 4 signifies *the potential maximum household labour capacity*, this would imply that, because of a more favourable seasonal distribution, farmers in the three Ugandan cases were able to use 69 and 71 per cent of their annual labour capacity in agriculture, while farmers in Côte d'Ivoire, could only

effectively exploit 49 per cent of their labour capacity to produce crops. This gap of just over 20 per cent may well account for the difference between cotton adoption and rejection. Indeed, according to Bassett,

[Ivorian] colonial officials observed as early as 1912 that it would be difficult to expand cotton cultivation ... without improving labor productivity. Otherwise, there simply was not enough time in the agricultural calendar if farmers gave priority to food security.<sup>546</sup>

Cotton was not cultivated on a substantial scale in Côte d'Ivoire until the 1960s, and after major investments in agricultural technology, inputs and high yielding crop varieties.<sup>547</sup>

Labour demands were thus comparatively smoothly distributed in the Ugandan savanna. Still, the adoption of cotton did require considerable recalibration of the farming calendar. Even when cash crops were relegated to the second rainy season, grain farmers faced some serious labour bottlenecks during the months *between* the two seasons, when food crops had to be weeded and harvested, and cotton sown – either in newly opened fields, or following the first season food crops.<sup>548</sup> Dealing with this labour bottleneck, farmers again prioritized their food crops, and postponed the planting of cotton, even if late planting meant that cotton yields would be lower. One agricultural economist, for example, noted that for grain farmers (in Uganda's Lango district),

the complementarity [between millet and cotton] appears to have been achieved through considerable reorganization by the farmers to avoid conflicts in labor use. These adjustments include a spread in the planting season for cotton and delay in planting after the optimum date for high yields.<sup>549</sup>

In one particular area (Teso district), farmers also used ox-ploughs to ease the labour requirements of land preparation for cotton during the labour-constrained months (May to July), thus enabling the development of a more labour-extensive farming strategy.<sup>550</sup> Even

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<sup>546</sup> Bassett, *Peasant cotton revolution*, p. 126.

<sup>547</sup> *Ibid.*, pp. 107-45; Lele, Van de Walle and Gbetibouo, *Cotton in Africa*. The data used for figure 4 dates from *after* this intensification of farming practices and the cotton take-off. We revisit the comparison between the Ugandan and West African savanna in the conclusion.

<sup>548</sup> Tothill, *Agriculture in Uganda*, p. 43.

<sup>549</sup> Cleave, *African farmers: labour use*, pp. 87-8. Also Tosh, 'Lango agriculture during the early colonial period'.

<sup>550</sup> Vail, *Agricultural innovation*. Even though yield figures need to be approached with considerable caution, it is interesting to note that yields in Teso district were the lowest in Uganda ((260 lbs/acre, compared to 370 lbs/acre in the neighbouring Lango district, and 600 lbs/acre in Mengo district). Low yields suggest that farmers used to plough to *extensify* farming practices and save labour during the critical period between the two rainy seasons. Yield estimates from Uganda, *Annual Report of the Department of Agriculture*, 1938, p. 8.

though ploughs had been unknown in the region before the arrival of cotton, they were universally adopted within a timeframe of merely twenty years.<sup>551</sup> The reconfiguration of farming patterns, and the adoption of the plough, suggest that farmers were willing and able to adopt a new cash crop, but not at the cost of their food security, and that they continued to prioritize the latter over extension of their cash-crop income, a risk-averse (and probably prudent) strategy in a context of thin markets and unpredictable climate.<sup>552</sup>

Secondly, let us look at how bimodal rainfall helped farmers to mitigate the *consequences of harvest failure* and resultant food insecurity. Before the adoption of cotton, farmers across Uganda devoted both rainy seasons to the cultivation of food crops. Cultivation practices were calibrated in such a way that, even in years of disappointing harvests, sufficient amounts of food were harvested. In good years, this ‘natural’ surplus of grains or bananas was converted into beer. Sometimes, a ‘planned’ surplus of food crops was produced and traded for manufactured goods, such as iron hoes, or to pay tax and tribute.<sup>553</sup> In order to adopt a non-edible cash crop, farmers had to forego (part) of their food surpluses. As Tosh has argued for the *Langi*, Ugandan grain farmers, in particular, were hesitant to do so, unless they were sufficiently reassured that serious harvest failures and resultant food shortages could be replenished from communal granaries and food relief provided by the colonial state.<sup>554</sup>

Even after the adoption of cotton, food self-sufficiency continued to be a key priority among Uganda’s cotton farmers. As noted before, food security informed smallholders’ reluctance to cultivate cotton in the most pronounced and predictable first rainy season and their choice, to the frustration of colonial administrators, to relegate it instead to the second rainy season.<sup>555</sup> Smallholders also dynamically calibrated their commitment to cotton to fluctuating weather conditions and food crop yields. Evidence from the *Annual Reports of the Department of Agriculture* suggests that when farmers faced a disappointing harvest in the first rainy season, they prioritized compensation of the food shortages incurred over cotton planting. To this end, they employed several strategies. If weather conditions during the first growing season were

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<sup>551</sup> Vail, *Agricultural innovation in Teso District*.

<sup>552</sup> Janvry, Fafchamps, Sadoulet, ‘Peasant household behavior’; Fafchamps, ‘Vulnerability, risk management, and agricultural development’.

<sup>553</sup> Cohen, ‘Food production and food exchange’; Hanson, *Landed obligation*; Tosh, ‘Lango agriculture’; idem, ‘The northern interlacustrine region’; Vail, *Agricultural innovation*.

<sup>554</sup> Tosh, ‘Lango agriculture’. The fact that the *Langi* were comparatively late to accept cotton, compared for example to their neighbours the *Iteso*, was related to their greater hostility towards colonial rule in general. Idem, ‘Small scale resistance in Lango’; Vail, *Agricultural innovation*.

<sup>555</sup> McMaster, *A subsistence crop geography*; Tohill, *Agriculture in Uganda*; Vail, *Agricultural innovation in Teso District*.

unfavourable, farmers prioritized late planting or re-sowing of food crops over timely cotton planting.<sup>556</sup> Sometimes the subsequent late cotton endangered timely planting of food crops the next spring season, in which case farmers uprooted, and thus sacrificed, cotton to maintain the optimal food crop cycle.<sup>557</sup> Farmers also compensated for their losses by cultivating more food crops during the second growing season, which adversely affected the cotton acreage.<sup>558</sup>

### **III. Cotton and harvest failure: a panel analysis**

The remainder of this section is devoted to a panel analysis, designed to empirically test if, as suggested by anecdotal evidence from the *Annual Reports*, farmers flexibly adapted their commitment to cotton cultivation in the second rainy season to food crop harvest outcomes in the first rainy season. If our analysis shows that farmers indeed followed such a strategy, then considerable empirical proof emerges, suggesting that food security was at the heart of smallholder's considerations, and that the two chances Ugandan farmers had during the year to achieve this aim gave them a significant advantage over their counterparts operating in areas with unimodal rainfall patterns. Further, we use our analysis to engage with the hypothesis that cotton planting in Uganda's grain regions responded more strongly to food crop harvest failures than cotton planting in the banana regions.

#### ***Data description***

**Cotton acreage.** In the absence of detailed information on actual seasonal labour inputs, the acreage of cotton planted is the best indicator of farmers' annual decision regarding allocation of (labour) resources to cash-crop cultivation. Acreage statistics are not 'confounded' with weather conditions during the growing season, which would affect fluctuations irrespective of

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<sup>556</sup> In 1921, 'the spring rains were badly distributed and caused failure of early food crops. This in turn necessitated re-sowing of food crops and consequent delay in preparation for cotton'. Uganda, *Report of Agriculture, 1921*, p. 38. In 1945, 'the early rains ... were delayed, as a result of which the spring food crops were planted later than usual with the further result of delay in planting the cotton crop'. Idem, *Report of Agriculture, 1944/45*, p. 1. In 1952, 'planting of the ... cotton crop was delayed on account of unfavourable weather earlier in the season and ... there was also some reduction in the total acreage'. Idem, *Report of Agriculture, 1952*, p. 34.

<sup>557</sup> In 1953, for example, mention is made of farmers who prematurely uprooted their late-planted cotton fields to make space for their spring food crops. Idem, *Report of Agriculture, 1953*, p. 38.

<sup>558</sup> Spring 1953 saw a 'confused and abnormal pattern of rainfall' and 'it was fortunate that good rains were received during the last quarter of the year as these enabled shortages in the spring food crops to be remedied.' Idem, *Report of Agriculture, 1953*, p. 1.



labour inputs, as would be the case with crop harvest statistics.<sup>559</sup> Moreover, at the moment of planting (typically in May, June, July or August), weather conditions during the *subsequent* growing season are not yet known. This means that the investment in cotton planting is not informed by the weather forecast, but by past trends, such as the development of cotton prices or the extent to which the previous harvest replenished the household's granary.

Since cotton played such a crucial role in Uganda's colonial economy, the administration devised a system to monitor the development of the annual cotton acreage. Native administrators were required to count the number of cotton 'fields' or 'gardens' in their area and then a standardized conversion, based on the typical field size, was used to turn fields into 'acres'. The figures were then accumulated at the district level and presented annually in the colonial *Blue Books* (until 1945), and the *Report of the Department of Agriculture*.<sup>560</sup> This system was not without its flaws and provides only a rough approximation of the true cultivated acreage. A key problem was that chiefs were known to inflate cotton acreages to impress their superiors. Moreover the conversion rates and measuring practices were altered a couple of times.<sup>561</sup> Still, the acreage statistics at least emerged from a *systematic* data collection effort, rather than guesstimates driven by the whims (or indifference) of colonial administrators. We confine our analysis to the years 1925-60 because (i) we have complete data for all districts, except for the war years 1940-43 (for which we interpolate based on province-level statistics), and (ii) because coercion had been scaled down by these years, so that we can plausibly link cultivation decisions to choices made by smallholders themselves (section II).

For our analysis, we divide the cotton acreage per district by the estimated population, derived from the population censuses of 1921, 1931, 1948 and 1959 (with interpolated values).<sup>562</sup> We then take the first difference of the cotton acreage per capita.<sup>563</sup> Inspection of the data shows that each district has distinct individual trends, and that estimates fluctuated annually without any clearly discernible 'suspicious' patterns. This raises our confidence that the data is free of any non-random biases, and that the recorded fluctuations we exploit in this analysis do

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<sup>559</sup> As harvest outcomes are composed of acreage and yield, the latter of which is affected by weather conditions during the growing season.

<sup>560</sup> A revision for the years 1945-58 was published in Uganda, *Revised crop acreage estimates*.

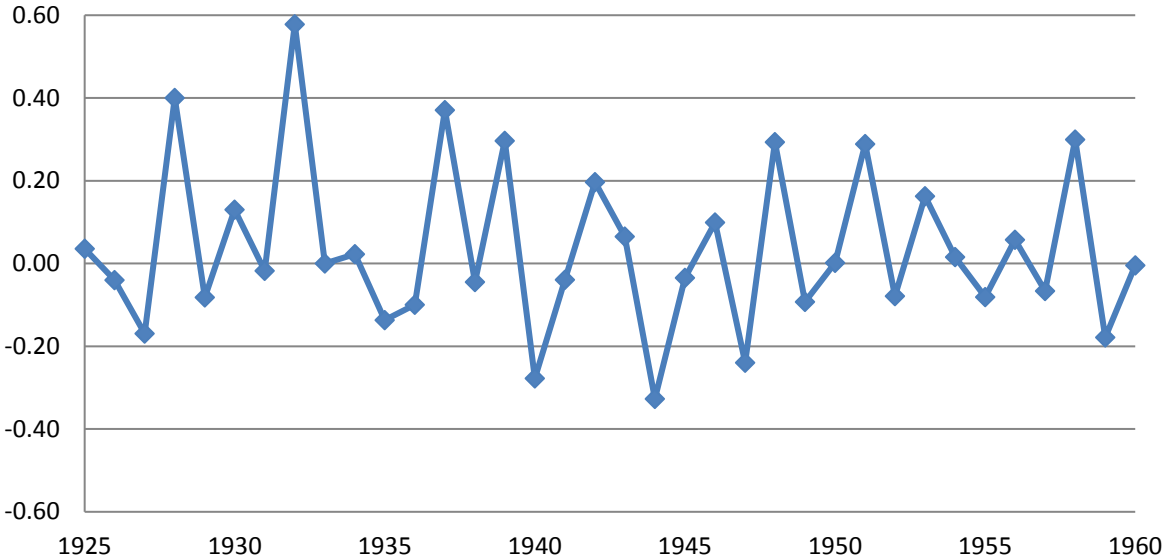
<sup>561</sup> Idem, *Annual Report of the Department of Agriculture*, 1930, pp. 8, 13; 1934, pp. 6 and 24; 1938, p. 8; Uganda, *Revised crop acreage estimates*.

<sup>562</sup> Idem, *Census Returns 1911*; idem, *Census Returns 1921*; idem, *Census Returns 1931*; idem, *Uganda Census 1959*; East African Statistical Department, *African population of Uganda (1948)*.

<sup>563</sup>  $\frac{\text{Acres } t - \text{Acres } (t-1)}{\text{Acres } (t-1)}$ .

indeed reflect real increases and decreases of the planted acreage. An example from Busoga district of the first differences of cotton acreages (1925-60) is provided in figure 5 below.

**Figure 5.** *First difference of cotton acreage per capita, Busoga district (1925-60)*



Sources and Notes: Authors’ calculation. See main text.

**Rainfall deviation as a proxy for harvest failure.** The colonial state did not have the resources required to measure actual food crops yields, but we know from an extensive body of previous research that both *negative rainfall shocks* (droughts) and *positive rainfall shocks* (excess precipitation) have strongly adverse effects on harvest outcomes in a tropical context.<sup>564</sup> We therefore take rainfall deviation during the first rains as a proxy for harvest outcomes. We have no rainfall observations for one small cotton-growing district (Mubende), which we drop from the analysis.

*Annual* rainfall is a widely used indicator of agricultural conditions in a tropical context. However, since we are dealing with two rainy seasons, and farmers cultivated most of their subsistence requirements during the first rains, we take rainfall for the months *January to June* as a proxy for food crop yields. As some cotton was planted during May and June (section II, figure 3), we alternatively run the analysis using rainfall during the months *January to April*, which provides an even cleaner proxy of growing conditions pertaining

<sup>564</sup> For evidence, discussion of mechanisms and further references Papaioannou, ‘Climate shocks and conflict’; idem, ‘Hunger makes a thief of any man’ and Papaioannou and De Haas, ‘Weather shocks and agricultural commercialization’.

purely to the first food crop season. Since we hypothesize that farmers pursued a ‘food first’ strategy, we expect abnormal rainfall (deviation) in the first six months of the year to have a negative effect on cotton planting (acreage) during the second rainy season. We standardize rainfall deviation using z-scores.<sup>565</sup>

**Cotton price.** The price of cotton is a key observable time-variant factor that we also expect to affect farmers’ cotton planting decisions. If farmers faced an upward price trend in year  $t-1$ , they may expect this trend to continue, hence having an incentive to plant more cotton in year  $t$ .<sup>566</sup> In 1921, for example, the *Department of Agriculture* noted that ‘the very high prices obtained for cotton in the previous season gave a great impetus to the native in increasing his area under this crop, so that output for the 1921 season easily exceeded any previous year’s production’.<sup>567</sup> Still, the effect is not entirely unambiguous. Farmers may not expect a positive trend to persist, or they may choose to invest the cotton gains reaped the previous year off the farm. Such different responses to price incentives, however, are not the central concern of our analysis, and we use the price of cotton merely as a control variable. We use annual prices of lint cotton in Liverpool, deflated by using an estimate of consumer prices for Uganda.<sup>568</sup>

**Coffee income.** In some districts, mainly from the 1930s onwards, farmers began to switch from cotton to coffee. Coffee was more lucrative than cotton and yielded higher returns to labour.<sup>569</sup> We may therefore expect that a higher income from coffee in year  $t$  has a negative effect on cotton planting in year  $t+1$ . To measure coffee income in year  $t$ , we use coffee acreage in year  $t-5$  (since it takes approximately 5 years for Robusta coffee to yield properly), and multiply it with the coffee price in year  $t$ .<sup>570</sup>

**Region dummy.** As discussed in sections I and II of this paper, Uganda was characterized by two rather distinct farming systems. To account for this difference, and to test for any

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<sup>565</sup> :  $(x_{i,t} - \bar{x}_i) / \sigma_i$ , where  $\bar{x}_i$  is the long-term mean (1925–60) of each district,  $x_{i,t}$  is the annual observation in time  $t$  for district  $i$ , and  $\sigma_i$  is the standard deviation of each panel, that is for every  $i$ .

<sup>566</sup> For example, the Agricultural Report of 1921 noted that ‘the very high prices obtained for cotton in the previous season gave a great impetus to the native in increasing his area under this crop, so that output for the 1921 season easily exceeded any previous year’s production’. Uganda, *Report of Agriculture 1921*, p. 6. In the opposite direction, the Report of 1942/43 remarked on ‘widespread reluctance amongst growers to plant a normal acreage, owing to the low prices paid for seed cotton during the previous year’. Idem, *Report of Agriculture, 1942/43*, p. 3.

<sup>567</sup> Idem, *Annual Report of the Department of Agriculture*, p. 6.

<sup>568</sup> Cotton prices are from Idem, *Annual Report of the Department of Agriculture*. For the deflator, we use the price series provided by Frankema and Van Waijenburg, based on barebones subsistence baskets and CPI’s for the later years. Dataset appended to Frankema and Van Waijenburg, ‘Structural impediments to African growth?’.

<sup>569</sup> De Haas, ‘Measuring rural welfare’.

<sup>570</sup> The price and acreage data are from the same sources as the cotton data.

heterogeneous patterns between them, we create a dummy for districts in the grain region. The summary statistics for each of the above variables along with some additional specifications of rainfall deviation are presented in table 1 below.

**Table 1.** *Summary Statistics, District by Year*

Variable	Obs.	Mean	Std. Dev.	Min	Max
Cotton Acres, first difference	350	0.05	0.26	-0.64	1.17
Rainfall deviation (Jan.-June)	458	0.81	0.59	0.00	3.14
Rainfall deviation (July-Dec.)	459	0.79	0.61	0.00	3.77
Rainfall deviation (Jan.-April)	468	0.79	0.59	0.00	3.16
Rainfall deviation (Jan.-Dec.)	468	0.80	0.60	0.00	3.45
Excessive rainfall shock (Jan.-June)	458	0.17	0.38	0.00	1.00
Drought shock (Jan.-June)	458	0.21	0.40	0.00	1.00
World market price (deflated)	468	0.00	1.00	-1.59	2.55
Coffee Income	468	2.08	6.99	0.00	44.57
Region dummy (grain)	468	0.46	0.49	0.00	1.00

*Notes:* Authors' calculations. See main text.

## Results

To investigate the effect of the food crop harvest on cotton planting, we run the following specification:

$$CottonAcresDiff_{i,t} = \beta_0 + \beta_1 AbsoluteRainfallDeviation_{i,t} + \delta WorldMarketPrice_{i,t} + v_i + \mu_t + (District\ dummy \times Time\ Trend)_{i,t} + \varepsilon_{i,t}. \quad (3)$$

$$i = 1,2,3,\dots,10 \text{ and } t = 1,2,3,\dots,36.$$

where  $CottonAcresDiff_{i,t}$  denotes the first difference of total acreages of cotton planted per capita in district  $i$  and year  $t$ .  $AbsoluteRainfallDeviation_{i,t}$  denotes the absolute rainfall deviation in January to June of each district  $i$  from the historical long-term mean of the same district.  $v_i$  and  $\mu_t$  are district and year fixed effects, respectively. We use these controls to

account for possible omitted heterogeneity at the level of districts and time periods. These terms are crucial in controlling for factors that may affect the levels of cotton acreages across all districts in the same year, such as the Great Depression and/or the Second World War. Lastly,  $(District\ dummy \times Time\ trend)_{i,t}$  denotes the unobservable district characteristics ( $v_i$ ) when interacted with a linear time trend ( $t$ ). In practice, we control for district-specific characteristics to capture district-specific changes of cotton cultivation activity over time.

The coefficient of interest,  $\beta_1$ , is the estimated effect of a one-standard-deviation-change (either positive or negative) in rainfall on the first difference of the cotton acreage. A negative sign,  $\beta_1 < 0$ , indicates that, on average, extreme rainfall deviations (in the first six months) are associated with a *decrease* in cotton production, as households decide to cultivate more food crops to compensate for the deficient harvest in the first rainy season. In all estimations we cluster standard errors at the district level (no. of clusters = ten) to avoid any autocorrelation concerns of rainfall deviations and the possibility of measurement errors, which are more likely to be correlated within districts across time.

The results are presented in table 2. A one-standard-deviation-change of rainfall in the first 6 months is associated with a decrease in the production of cotton by 7 per cent (column 1). The results remain largely unchanged when we include the world cotton price as a control variable (column 2), and when we add district-specific effects (column 3). Throughout these specifications, the world market price of cotton yields a positive sign, suggesting that rising cotton prices during the previous harvest motivated households to plant more cotton. We perform several falsification tests where we include the rainfall deviation during the second rainy season, from July to December (column 4) and the total *annual* rainfall deviation (column 5), which do not reflect food security at the time of planting, and should therefore not have a significant effect on cotton planting. It is reassuring that these coefficients are not statistically significant, further validating our analysis. Lastly, in column 6, we evaluate the sensitivity of our estimates to the use of an alternative temporal cut-off point, by including the rainfall deviation from January to April, thus excluding the months of May and June in which some smallholders already began to plant cotton. The result using this alternative rainfall indicator is very similar to our baseline result.

The temporal dimension of the regression coefficient of column (1) in table 2 is presented graphically in figure 6. The strong negative correlation between weather deviation in the first six months and subsequent cotton planting is quite stable over time, suggesting that our results are not driven by a specific sub-set of years within our timeframe. The fact that the

effect persists until the end of our period also shows that farmers' cotton planting decisions were influenced by preceding weather fluctuations all the way through to the end of the colonial period, implying that food security considerations continued to influence cotton planting. Apparently, markets for food crops did not develop to a sufficient extent to convince farmers that it would be safe to (partially) abandon subsistence farming. Such persistent concern for subsistence production and food security helps to explain why Ugandan households never progressed beyond a stage of *partial commercialization*.<sup>571</sup>

Next, we proceed by investigating whether our baseline effect is stronger in grain areas, compared to banana areas. We also include the estimate of annual coffee production, which we expect to correlate negatively with cotton (i.e. we expect a substitution effect). The results are reported in table 3. Contrary to our expectations, the grain interaction in columns (1) and (2) yields a *positive* coefficient, suggesting that the adverse impact of weather shocks on cotton planting was less pronounced in grain regions. However, since the coefficient is not statistically significant, we cannot draw any reliable conclusions from it. As expected, the coffee income variable in column (2) is statistically significant and yields a strong negative correlation with cotton acres. Our baseline effect survives the inclusion of controls. Next, we check the robustness of our baseline findings as well as the symmetry of the effect. Columns (3) and (4) show that inclusion of rainfall during the previous first season ( $t-1$ ) does not yield a significant effect on the cotton acreage, nor does the inclusion of the lead variable ( $t+1$ ), which serves as a falsification test. Column (5) shows that both droughts and excessive rainfall had a statistically significant adverse effect on subsequent cotton growing, with the effect of excessive rainfall somewhat stronger than the effect of drought shocks.

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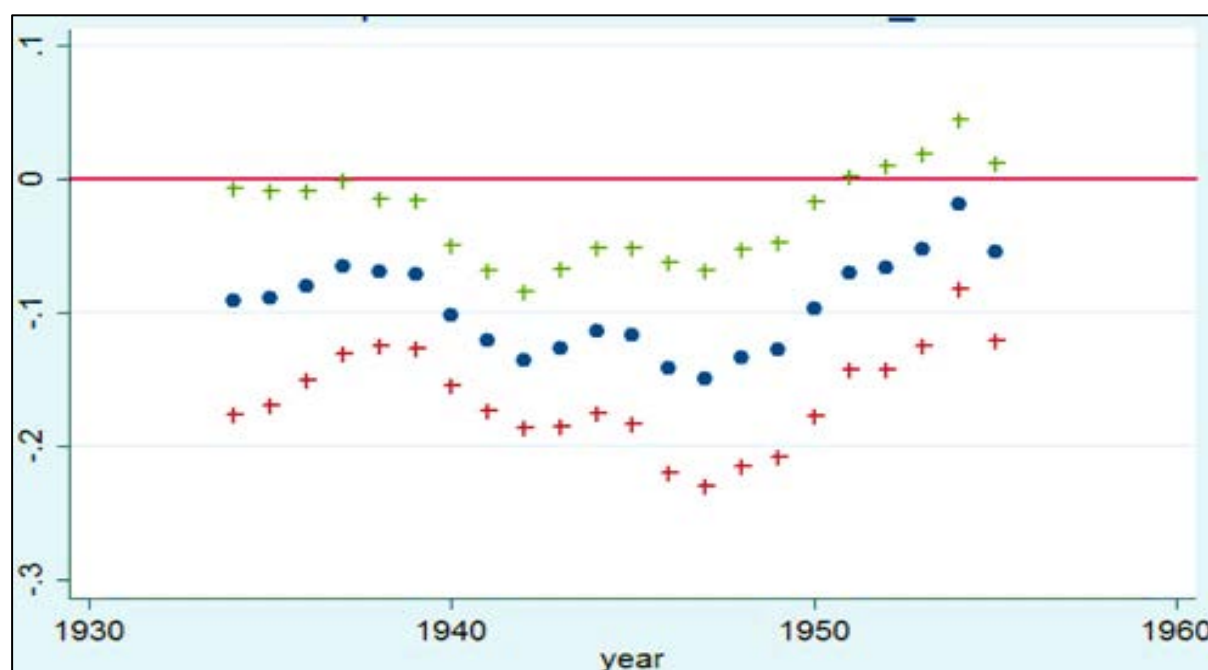
<sup>571</sup> De Haas, 'Measuring rural welfare', p. 607.

**Table 2.** *Rainfall shocks, Price Volatility and Cotton Acres*

	Dependent variable: Cotton Acres					
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	OLS	OLS	OLS	OLS
Rainfall deviation (Jan-June)	-0.0702*** (0.017)	-0.0701*** (0.017)	-0.0706*** (0.018)			
World Cotton Price		0.0641** (0.020)	0.0852** (0.036)			0.0588** (0.021)
Rainfall deviation (July -Dec.)				-0.0040 (0.133)		
Rainfall deviation (Jan.-Dec.)					-0.0171 (0.142)	
Rainfall deviation (Jan.-April)						-0.0806** (0.029)
District & Year FE	Y	Y	Y	Y	Y	Y
District-specific effects	N	N	Y	Y	Y	Y
No. observations	341	341	341	341	341	341
No. districts	10	10	10	10	10	10

Notes: \*Significant at 10%, \*\*5%, \*\*\*1%. Sample period: 1925–60. OLS-FE. Reported in parentheses are standard errors clustered at the district level. The dependent variable is the first difference of annual cotton acres. District-specific effects indicate the interaction of each district dummy with a time trend.

**Figure 6.** *Rolling coefficient of the main effect (10 year time window)*



Notes: The y-axis represents the effect (coefficient) of standardized rainfall deviation (Jan-Jun) on the cotton acreage (in percentage points), with 95% confidence intervals for each individual ten year panel.

**Table 3. Robustness, Symmetricity and Grains**

	Dependent variable: Cotton Acres				
	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	OLS	OLS	OLS
Rainfall deviation (Jan-June)	-0.0987** (0.033)	-0.0943** (0.032)	-0.0832*** (0.031)	-0.0680*** (0.023)	
World Cotton Price	0.0836** (0.035)	0.0786** (0.027)	0.0651** (0.029)	0.0619** (0.030)	
Grain Interaction	0.0494 (0.040)	0.0455 (0.038)			
Coffee Income		-0.0020*** (0.001)			
Rainfall deviation (Jan-June) $t - 1$			0.0184 (0.024)		
Rainfall deviation (Jan-June) $t + 1$				0.0009 (0.018)	
Excessive Rainfall Shock (Jan-June)					-0.0889** (0.029)
Drought Shock (Jan-June)					-0.0516** (0.024)
District & Year FE	Y	Y	Y	Y	Y
District-specific effects	Y	Y	Y	Y	Y
No. observations	341	341	341	341	341
No. districts	10	10	10	10	10

Notes: \*Significant at 10%, \*\*5%, \*\*\*1%. Sample period: 1925–60. OLS-FE. Reported in parentheses are standard errors clustered at the district level. The dependent variable is the first difference of annual cotton acres. District-specific effects indicate the interaction of each district dummy with a time trend.

#### IV. Household-level determinants of cash-crop cultivation

In this section, we probe one layer deeper into Uganda’s rural economy, and examine the complementarity between food crops and cash crops at the household level. Our investigation focuses on a set of village surveys from southern Uganda (the banana region), which were conducted from the late 1930s onwards, when the cash-crop economy was firmly established.

Firstly, we explore to what extent there was *substitution* (or *complementarity*) between food crops and cash crops at the level of individual households. On the basis of sections II and III, which showed that farmers pursued a ‘food first’ strategy, we do not expect that cash crops supplanted food crops to any large extent.<sup>572</sup> Since first rain food crops tended to be planted in

<sup>572</sup> Cf. Fafchamps, ‘Cash crop production, food price volatility, and rural market integration’.



the second- season cotton plots of the previous year, an extension of the cotton acreage may even have had ‘a direct [positive] influence on the available food supplies’.<sup>573</sup>

Secondly, we explore the relationship between cash crops and the *portfolio* of food crops. It is often argued in the wider literature on agricultural commercialization that farmers extend their cultivation possibilities by switching from *labour-intensive* food crops such as grains and oil crops, to *high-yielding* and *less-demanding* staples, such as roots, tubers and bananas.<sup>574</sup> An advantage of cassava and sweet potato is that they are resistant to weather fluctuations, and as a result, can be harvested throughout the year and can be kept underground for a prolonged period of time, which makes them suitable as ‘famine reserve crops’. The downside of roots, tubers and banana is that they tend to be less nutritious, particularly in terms of protein content.<sup>575</sup> Since Ugandan farmers operating in bimodal rainfall conditions had more opportunities to secure a sufficient food supply, we do not expect a strong substitution between cash crops on the one hand and grains and oil crops on the other. We do expect that cash-crop farmers cultivated more roots and tubers to hedge against harvest failure (cf. discussion in section II).

### ***Data description***

**Crop cultivation.** The village surveys provide acreages for each particular crop. To simplify the analysis, we group all acreage statistics under five headings: 1) bananas, 2) roots and tubers, 3) cereals, 4) protein crops, 5) cotton, and 6) coffee. Acreages are not an ideal unit of comparison, since labour inputs, yields and returns in terms of value or calories per acre differ per crop. To overcome such a limitation, we first estimate production (in kilograms) by picking the most dominant crop in each category, and multiply typical yields per acre for this crop with the stated acreage in the category. Next, we express the value of food crops in terms of the dominant crop’s caloric value in each category, and of *cash crops* with their farm gate price (taking the average price for 1935-40).<sup>576</sup> Table 4 summarizes the procedure and the basic assumptions.

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<sup>573</sup> Uganda, *Annual Report of the Department of Agriculture*, p. 8.

<sup>574</sup> Clark and Haswell, *The economics of subsistence agriculture*, p. 100; Cleave, *African farmers*, p. 141 and p. 213; McMaster, *A subsistence crop geography*, p. 71; Tosh, ‘The cash-crop revolution in tropical Africa’, p. 93.

<sup>575</sup> De Haas, ‘Measuring rural welfare’; Tosh, ‘The cash-crop revolution’

<sup>576</sup> One limitation of this approach is that we have to assume that yields are equal across households (or that variation is randomly distributed). However, it is possible that households with cash crops had lower yields, for example because their attention was taken up by cash crops, see Allan, *The African husbandman*, p. 161. It is

**Table 4.** *Crops cultivated and standardized characteristics for the dominant crop*

Category	Sub-category	Crops	KG/acre	Calories/KG	Cent/KG
Food crops	Bananas	Bananas*	2786	677	n/a
		Cassava*			
	Roots and Tubers	Sweet potatoes	3402	1493	n/a
		Irish potatoes			
	Grains	Millet*			
		Sorghum	490	3417	n/a
	Protein crops	Maize			
		Beans*			
		Peas			
		Groundnuts	363	3338	n/a
Cash crops	Cotton	Cotton*	181	n/a	23.59
		Tobacco			
	Coffee	Coffee*	363	n/a	18.08

*Notes:* Yields are typical yields in a year of normal growing conditions. Since cassava and sweet potato can be kept underground for multiple years, yields are *potential* yields when harvested.

*Sources:* Prices and yields for bananas, millet and beans from De Haas, *Measuring rural welfare*. Yields for cassava retrieved from sources used by De Haas, *Measuring rural welfare*.

**Consumption needs of the households.** Households differ considerably in size. The value of crops cultivated by a household obviously depends on the number of dependent consumers. We therefore express the value of crops per *consumer*, rather than per *household*. We use a basic estimate of adult male equivalents (*AME*), a commonly used deflator of purchasing power accounting for varying consumer needs. We count adult men as 1.0 consumer, adult women as 0.7 consumer, and children as 0.5 consumer.

**Livestock.** Livestock was an important source of wealth, and we may expect households with greater access to cash income to accumulate more livestock. In turn, access to livestock (i.e. manure and traction power) may contribute to cash-crop production. We express livestock as *tropical livestock units* (TLU), counting chickens as 0.01 TLU, sheep and goats as 0.1 TLU

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also possible that farm size and yields correlated, for example because smaller farmers used fewer inputs and left their plots fallow in fewer years. Wilson and Watson, 'Two surveys of Kasilang Erony'. These caveats must be kept in mind.

and cows as 0.7 TLU. We calculate the economic returns to livestock using Kampala prices for beef.<sup>577</sup>

**Off-farm income.** It is likely that the introduction of labour intensive cash crops had repercussions for the broader livelihood portfolios of African rural households, limiting their involvement in crafts production, household industry and other non-agricultural activities. This is particularly likely because of Uganda's *bimodal* rainfall distribution, which, as shown in the previous section, resulted in a smoother distribution of agricultural labour requirements, but also meant that there was no pronounced agricultural 'off-season' in which households could pursue non-agricultural activities.<sup>578</sup> Unfortunately, we do not have consistent household level estimates of off-farm income. However, we do have information for 310 households about whether off-farm income was a notable source of income or not, enabling us to create a dummy variable. All variables are described in the summary statistics (table 5) below.

**Region.** We distinguish two sub-areas in Uganda's banana growing regions: three villages in Buganda (208 households) where substantial amounts of cash crops were cultivated, and four villages in western Uganda (356 households) with fewer cash crops, but more involvement in migratory wage labour.

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<sup>577</sup> See De Haas, 'Measuring rural welfare'.

<sup>578</sup> On dry season activities in a West African context of unimodal rainfall, see Austin, 'Resources, techniques, and strategies', idem, 'Labour intensity and manufacturing'.

**Table 5. Summary Statistics, Household Dataset**

<b>Variable</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
<i>Panel (a): Acres per AME</i>					
Ln(Cash Crops)	564	2.43	0.36	0.00	1.95
Ln(Food Crops)	564	0.65	0.34	0.00	1.81
Ln(Banana)	564	0.29	0.34	0.00	1.66
Ln(Roots & Tubers)	564	0.13	0.12	0.00	0.83
Ln(Cereals)	564	0.17	0.21	0.00	1.11
Ln(Protein Crops)	564	0.17	0.22	0.00	1.38
<i>Panel (b): Values per AME</i>					
Ln(Cash Crops)	564	1.71	1.60	0.00	5.58
Ln(Livestock)	564	1.06	0.99	0.00	4.38
<i>Panel (c): Calories per AME</i>					
Ln(Food Crops)	564	13.95	2.56	0.00	16.30
Ln(Banana)	564	9.52	6.07	0.00	15.87
Ln(Roots & Tubers)	564	11.23	4.95	0.00	15.70
Ln(Cereals)	564	8.84	5.90	0.00	15.04
Ln(Protein Crops)	564	9.49	4.55	0.00	14.68
<i>Panel (d): Dummies</i>					
Buganda (region)	564	0.36	0.48	0.00	1.00
Ankole (region)	564	0.07	0.26	0.00	1.00
Kigezi (region)	564	0.37	0.48	0.00	1.00
Bunyoro (region)	564	0.18	0.38	0.00	1.00
Off-Farm Income	310	0.25	0.43	0.00	1.00

*Notes:* Authors' calculations. See main text.

## Results

To investigate the associations of cash crops with overall food crops and several sub-categories of food crops, we estimate the following specification using a simple OLS regression:

$$\text{Ln}(\text{Cash Value per AME})_i = \beta_0 + \beta_1 X'_i + \delta Z'_i + \varepsilon_i \quad (1)$$

where  $\text{Ln}(\text{Cash Value per AME})_i$  denotes the natural logarithm of cash-crop value.  $X'_i$  denotes the various indicators of food crops expressed in their caloric value. These include the natural logarithm of bananas, roots and tubers, cereals, protein crops, and all food crops combined.  $Z'_i$  denotes the controls.  $\varepsilon_{it}$  is the error term.

**Table 6.** Associations between cash crops, food crops and off-farm income at household level

	Ln(Cash Value per AME)					
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Food calories)	0.0778*** (0.015)	0.0672*** (0.016)	0.1581*** (0.032)			
Ln(Banana calories)				0.0490*** (0.008)	0.0484*** (0.010)	0.0585*** (0.015)
Ln(Roots & Tubers calories)				0.0396*** (0.011)	0.0477*** (0.013)	0.0406*** (0.012)
Ln(Cereal calories)				0.0191 (0.012)	0.0184 (0.012)	0.0526*** (0.013)
Ln(Protein crops calories)				0.0101 (0.013)	-0.0082 (0.013)	0.0011 (0.019)
Ln(Livestock per AME)		0.1128** (0.051)			0.0994** (0.050)	
Off-farm Income			-0.4875*** (0.160)			-0.4607*** (0.156)
Clustered St. Errors	Household	Household	Household	Household	Household	Household
Controls	Y	Y	Y	Y	Y	Y
No. observations	563	563	310	563	563	310
R <sup>2</sup>	0.545	0.549	0.446	0.562	0.565	0.479

Notes: \*Significant at 10%, \*\*5%, \*\*\*1%. The dependent variable is the logarithm of cash value per AME. Reported in parentheses are standard errors clustered at the household. Controls include region dummies and family types.

Columns (1) to (3) yield a robust and statistically significant positive coefficient between cash crops and food crop caloric values, confirming a *complementary* relationship between food crops and cash crops on the household level. In other words, households with more cash crops also produced more food crops. Although we do not claim any causality here, this finding is in line with our overall argument that food security was an important precondition for farmers to engage in cash-crop production. This complementarity effect holds even when we exclude the top 1%, 5% and 25% of households (results not reported), which reassures that the relationship is not driven by outliers (i.e. the poorest or richest households). Moreover, the results are consistent with the idea that households who were more successful in achieving food security also cultivated greater amounts of cash crops, profiting from synergies between food and cash crops.<sup>579</sup> Livestock, which we enter as a control variable, shows the expected sign, as it was associated with more cash crops. Column (3) provides evidence for the expected trade-off between off-farm income and cash-crop cultivation.

The results in columns (4) to (6) suggest that households cultivating more cash crops, also cultivated more roots, tubers and bananas. Protein crops remain insignificant throughout all specifications, while the coefficient for cereals show a positive sign only for the sub-sample including information about off-farm income.<sup>580</sup> The positive correlation between cash crops and bananas, roots and tubers suggests that cash-crop farmers used these crops to hedge against harvest failures. The absence of a negative correlation between cash crops and grains and oil crops, suggests that cash-crop farmers, having two rainy seasons at their disposal, were able to sustain the cultivation of their favoured and most nutritious food crops.

In Appendix table A, we check the robustness of our baseline effect. We run specification (1) again, this time using crop acreages instead of caloric values of food crops and monetary values of food crops, thus shedding many of the assumptions on which table 6 relies. The results remain largely unchanged.

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<sup>579</sup> Maxwell and Fernando, 'Cash crops in developing countries'; Kennedy and Von Braun, *Agricultural commercialization, economic development and nutrition*; Pingali and Rosegrant *Agricultural commercialization and diversification*.

<sup>580</sup> This result may be explained by the fact that households with off-farm income also shifted to less labour-intensive food crops to compensate for their absence from the farm during parts of the year. McMaster, *A subsistence crop geography*.

## V. Conclusion

In this study, we have set out to explore the importance of factor endowments in shaping the degrees to which cash crops were adopted in colonial tropical Africa. Our empirical findings, based on a panel data analysis on annual district-level cotton acreage from 1925-60, underscore the importance of Uganda's equatorial *bimodal rainfall distribution* as an enabling factor for Uganda's 'cotton revolution'. To reach our conclusions, we have zoomed in on smallholder cultivation of cotton in colonial Uganda, and amended and tested Tosh's 'labour seasonality' explanation of the Africans' variegated responses to cash crops in the colonial era. The exceptional uptake of cotton among Uganda's smallholders is often attributed to the cultivation of bananas, which, alongside conditions in other 'forest regions,' is posited as an 'exception that proves the rule' of labour constraints in the African savanna. We have demonstrated, instead, that cotton cultivation in Uganda was not confined to the banana areas, but diffused widely in grain areas as well. We attribute this diffusion to Uganda's rainfall pattern as the 'exceptional' condition in Uganda.

The occurrence of two rainy seasons annually enabled farmers to smooth intra-annual labour demands by pursuing food crop and cash crop cultivation at different parts of the year and provided farmers with two chances annually to secure their food supply. Farmers secured their food supply during the first rainy season, while relegating cotton to the second rainy season. Their seasonal commitment to food and cash crops was flexible. In case the food crop harvest in the first season was insufficient, farmers partially substituted cotton cultivation in the second rainy season for additional food crops, to compensate for the incurred shortage. This strategy was prevalent both in the grain and banana regions. At the household level, we find *complementary* between food and cash crops, suggesting that the least food-secure farmers mostly stayed away from cash crops, while the more food-secure farmers successfully pursued a dual strategy of food security and cash-crop production. In particular, we find that cash-crop cultivation was positively associated with the production of 'famine reserve' food crops such as roots and tubers.

While this study has focused on showing how Ugandan farmers *successfully* integrated cotton into their farming practices, it also contributes to a better understanding of the *limits* of cash-crop adoption in colonial Africa, in two ways. Firstly, we argue that the key to the exceptional uptake of cotton among Uganda's smallholders, was neither intense coercion nor access to bananas, but simply the bimodal rainfall distribution, which enabled them to spread agricultural production over two rainy seasons annually, thus facing less stringent seasonal

labour constraints and a lower risk of food insecurity than their counterparts elsewhere. Since bimodal rainfall is confined to equatorial latitudes and did not extend to most other savanna regions, our findings imply that the majority of African farmers did not have the same option to adopt cotton without effectuating any major changes in agricultural practices or giving up food production. Secondly, our temporal analysis has shown that food security concerns affected cotton cultivation decisions of farmers all the way through until the end of the colonial period. This implies that farmers operated at the maximum of their agricultural production capacity, which apparently did not extend beyond the initial process of recalibration and cotton adoption during the first decades of colonial rule. Thus, our results are consistent with a type of economic development that involved an initial ‘productivity breakthrough’, followed by extensive growth.<sup>581</sup>

This brings us to some final, broader thoughts and potential directions for future research. Although we argue that labour seasonality is a powerful explanation for disparate responses of African farmers to agricultural commercialization in the colonial era, we do not argue that the colonial ‘cash-crop revolution’ can be understood and explained solely by looking at labour seasonality, or even resource endowments more broadly. In this paper, we have treated thin markets for credit and food, and limited adoption of agricultural technologies, as exogenously given. In reality, of course, access to physical and institutional infrastructures, marketing conditions for food and cash crops, and technology was mediated by colonial governments, who often operated on a shoestring and were unwilling to invest to any large extent in the agricultural development of their colonies. The limited extension of Uganda’s agricultural production capacity after the adoption of cotton, and the continued focus on food production, then, should also be seen in the light of underdeveloped food markets and limited agricultural innovation. Moreover, there are other African regions with bimodal rainfall, particularly in central Africa, where cotton was much less well received by smallholders. A Belgian colonial officer in the Congo, for example, noted that ‘we have failed to make the crop as popular here as in Uganda. The remuneration is inadequate and the blacks are growing the crop only under the pressure of the administration’.<sup>582</sup>

In conclusion, we propose that, in a colonial context, bimodality was a *close-to-necessary* condition for a ‘cash-crop revolution’ to occur, while it is very well conceivable that, had

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<sup>581</sup> Cf. Austen, *African economic history*, p. 138; Austin, ‘Vent for surplus or productivity breakthrough?; De Haas, ‘Measuring rural welfare’; Green, ‘From extensive to involutory growth’.

<sup>582</sup> Cited in Likaka, *Rural society and cotton*, p. 89.



institutions been better, the outcomes might have been very different. Had markets functioned better, African farmers might have shown a greater willingness to move away from risk-averse 'food first' cultivation strategies. Had high-yielding crop varieties and labour-saving technologies been introduced, labour demands per unit of food or cash crop would have been reduced, and more African farmers may have been enabled to branch out into cash crops. The development record of northern Côte d'Ivoire provides a case in point. Here, in savanna conditions with unimodal rainfall, farmers had rejected French attempts to introduce export cotton for half a century. However, after the end of formal colonial rule, concerted efforts were made by the government and private investors to increase both food crop and cotton yields, and farmers were provided with access to credit, implements and agricultural technology, which resulted in a belated but impressive 'peasant cotton revolution'.<sup>583</sup>

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<sup>583</sup> Bassett, *Peasant cotton revolution*; Lele, Van de Walle and Gbetibouo, *Cotton in Africa*.

## Chapter 5.

*Was cotton doomed to fail? Local conditions, government policies and variegated outcomes in twentieth century Sub-Saharan Africa.*<sup>584</sup>

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<sup>584</sup> I am grateful to Gareth Austin, Ulbe Bosma, Ewout Frankema, Doreen Kembabazi, Niek Koning and Michalis Moatsos for in-depth feedback on earlier drafts of this chapter. For valuable comments I thank participants of the New Frontiers in African Economic History Workshop (Wageningen, Oct. 2015), the African Studies Workshop at the Graduate Institute (Geneva, Mar. 2016), the History Graduate Workshop of the London School of Economics (London, May 2016), The Posthumus Conference (Wageningen, May 2016), The FRESH Workshop in Economic History (Geneva, June 2016) and the African Economic History Workshop (Sussex, Oct. 2016).

## Introduction

Colonial cotton initiatives in Sub-Saharan Africa (Africa henceforth) have received increasing attention by historians,<sup>585</sup> who have emphasized the centrality of cotton to European interests in Africa.<sup>586</sup> European cotton interests saw Africa as the latest raw material frontier, with purported cheap labour and abundant land reserves as its most formidable assets. It was not doubted that Africans would also benefit from the colonial push for cotton. Writing in 1915, one British cotton expert argued that it ‘has been put beyond all doubt’ that imperial cotton initiatives ‘will be profitable, not only as regards cotton growing ... , but also in the general advancement in civilization of the natives of the countries concerned’.<sup>587</sup> However, despite high expectations, cotton in colonial Africa did not become a success story. In many cases, African cultivators rejected cotton and shattered colonial dreams of realizing an abundant supply of this raw material from their African dependencies. Colonial cotton policies tended to result in either failure, or a toxic brew of coercion, resistance and rural impoverishment.

Late colonial officials and recent scholars agree to a surprising extent on where the underlying causes of failure and coercion should be located: cotton was an inherently unviable and unprofitable proposition to African cultivators, it ‘simply [did] not pay to grow’.<sup>588</sup> As a result, cotton exports could only be generated through coercion: ‘[cotton] output levels were often correlated with levels of coercion. When forced cultivation ebbed, cotton output declined’.<sup>589</sup> However, colonial governments were insistent. According to Isaacman and Roberts, ‘cotton was not only the premier colonial crop, it was the premier forced crop’, and ‘the extent to which cotton impoverished rural Africans [is indicated by] the widespread malnutrition and hunger throughout colonial Africa’.<sup>590</sup> All in all, the problem with cotton seems that it was *a priori* unviable, sustained only by the foolhardy and ruthless insistence of colonial officials and cotton capitalists in the face of failure.

In this study, I argue that this rendering of Africa’s colonial cotton history is problematic. Cotton outcomes in colonial Africa were more varied than often acknowledged, and this

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<sup>585</sup> Monograph-length contributions include Bassett, *The peasant cotton revolution*; Engdahl, ‘Exchange of cotton’; Isaacman, ‘*Cotton is the mother of poverty*’; Isaacman and Roberts, *Cotton, colonialism and social history*; Likaka, *Rural society and cotton*; Pitcher, *Politics in the Portuguese Empire*; Roberts, *Two worlds of cotton*; Robins, *Cotton and race across the Atlantic*; Zimmerman, *Alabama in Africa*.

<sup>586</sup> Beckert, *Empire of cotton*, pp. 340-78; Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 2

<sup>587</sup> Todd, *The world’s cotton crops*, p. 199.

<sup>588</sup> Robins, *Cotton and race across the Atlantic*, p. 29, also Bassett, *Peasant cotton revolution*, p. 81; Likaka, *Rural society and cotton*, p. 89, each citing and concurring with colonial officials.

<sup>589</sup> Bassett, *Peasant cotton revolution*, p. 7.

<sup>590</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 29 and p. 37.

variation cannot always be traced back to degrees of colonial coercion. I use successful cases of cotton adoption in colonial and post-colonial Africa to demonstrate that, when a number of specific conditions were met, cotton did become a viable and profitable proposition for African farmers. I argue that policies can (but mostly didn't) play an important conducive role in generating such conditions. The interests of colonial governments and African rural communities are typically seen as antagonistic, and the developmental potential of states is only rarely considered in a colonial context. However, recent literature on contemporary rural development has made a strong case for the importance of policies and top-down coordination to alleviate poverty and spur rural development.<sup>591</sup> Cotton, in particular, can benefit from policy intervention and effective coordination,<sup>592</sup> and governments and other external agents have a particularly important role in making cotton both a viable and profitable proposition. I argue, therefore, that an assessment of policy choices should be an integral aspect of the evaluation of cotton outcomes in colonial Africa.

The approach of this study is comparative. I seek out diversity across time and space, and highlight differences rather than commonalities between the cases studied. In particular, the focus is on cases that do not comply with the scenarios of either failure or coercion. The argument is built up in three steps. First, I reconstruct and compare time series of cotton production in 17 different African countries over the twentieth century. I show that cotton production outcomes in colonial and post-colonial Africa were indeed diverse and provide a complex picture that cannot be reduced to a contrast between 'failure' and 'coercion'. Secondly, I scrutinize the most important arguments advanced in the literature designed to demonstrate that cotton was 'doomed to fail', namely competition with food crops, poor remuneration, farmers' access to more profitable alternatives and, if they cultivated cotton, better prices on parallel markets for raw cotton. Thirdly, I select sub-set of cases, which vary in terms of ecology, colonizer, timing and outcome. For these cases, I compare ecological conditions, cotton yields and cotton prices, and establish that cotton cultivation was not simply unattractive to African cultivators, but, if certain conditions were met, could be a viable and profitable proposition. I put particular emphasis on two cases of widespread cotton adoption in two very different periods and geographical conditions in twentieth century Africa: colonial Uganda, and post-colonial Francophone West Africa (henceforth FWA).

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<sup>591</sup> See for example Chang, 'Rethinking public policy in agriculture'; Poulton, Kydd and Dorward, 'Overcoming market constraints on pro-poor agricultural growth in sub-Saharan Africa'.

<sup>592</sup> Poulton et al., 'Competition and coordination'.

The scholarly literature on cotton is rich, and provides a suitable starting point for the comparative and synthetic approach of this paper. To construct time series of cotton production, yields and producer prices, I rely on colonial reports and statistical yearbooks, as well as secondary literature. For Uganda, which was the most successful case of cotton adoption in colonial Africa, and therefore plays a central role in this study, I rely on extensive primary and secondary sources materials, together with field interviews with elderly farmers in Teso District, one of the key cotton growing regions during the colonial era.

This study generates a number of key insights and new questions. Firstly, I stress that cotton outcomes in Africa resulted from an interaction of variegated local conditions and policies. In most cases, this interaction did not result in conditions favourable to the voluntary adoption of cotton, but in a few specific times and places, most notably colonial Uganda and four countries in post-colonial FWA, local conditions and policies converged to produce a conducive environment for rapid, widespread and mostly voluntary adoption of cotton by African farmers. In the case of colonial Uganda, favourable local conditions were decisive and policies auxiliary, while in the case of FWA, a set of conducive policies played a central role in overcoming serious ecological and institutional constraints. On a broader level, I conclude that to understand why the history of cotton in Africa was so ‘dark’ and ‘tragic’,<sup>593</sup> we should move away from the idea that the local conditions were unfavourable and inimitable. I stress that the failure of most colonial cotton projects was not inherent to the nature of the crop, but rather resulted from the failure of colonial governments and other external actors to overcome local conditions of food security, low yields, low lint quality and ‘low-level equilibrium traps’ in marketing. Consequently, a key question for future research should not be confined to why colonial states so stubbornly clung on to cotton, but extended to why they failed to create a more conducive environment with the potential to make cotton work for African cultivators.

The remainder of this paper is structured as follows. Section I shows the variegated cotton production outcomes in twentieth century Africa. Section II engages with, and refutes, the idea that cotton was inherently unsuitable for African conditions. Sections III - V discuss how the interaction between local conditions and policy interventions has affected the viability and profitability of cotton to African farmers. Section III discusses the synergy between food and cash crops, section IV zooms in on variation in cotton yields and qualities. Section V deals with cotton marketing. A final section concludes.

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<sup>593</sup> Porter, ‘Note on cotton and climate’, p. 49.

## I. Scrutinizing the empirical evidence: did cotton fail?

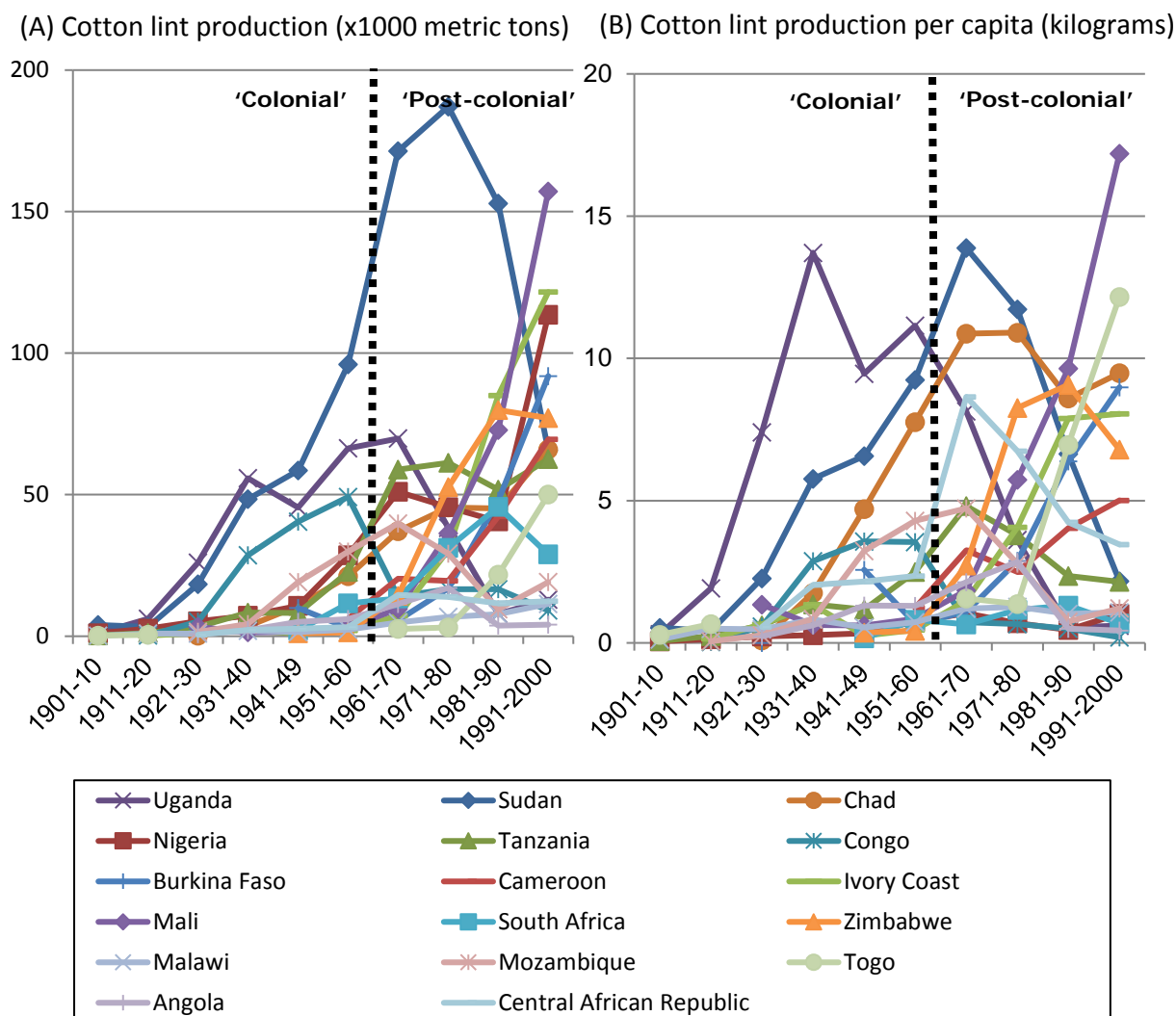
In this section, I compare trends in cotton production in 17 selected African cotton producing countries. I merge data from various sources, most importantly Mitchell's *Historical statistics* and the Food and Agricultural Organization *Statistics database* (FAOSTAT), supplemented with a range of primary and secondary sources which provide data for the earlier period. The country-level production figures, expressed in tons and kilograms/capita (on a country level), are presented in figures 1A and 1B respectively. This basic comparison provides a number of key insights. First of all, a number of notable cotton booms can be observed during the first half of the twentieth century. Most pronounced are the take-offs in Sudan and Uganda, but Congo, Mozambique and Chad also experience a markedly expansion in terms of *total* cotton production (henceforth cotton production) and country-level *per capita* cotton production (henceforth cotton intensity). After 1950, Nigeria and Tanzania experienced notable cotton production increases, Zimbabwe a take-off, and a set of countries in FWA (Burkina Faso, Côte d'Ivoire, Mali and Togo) even more pronounced booms.

It should be noted that throughout the twentieth century, Africa's share in world cotton production remained quite small. The United States dominated production, followed at a distance by India, the (former) Soviet Union, China and Brazil. In 1938, Uganda, Sudan and Congo (the largest three African producers) together produced a mere 2.4 per cent of the world's raw cotton.<sup>594</sup> Since the 1960s, Sub-Saharan Africa's share in world cotton production has never exceeded more than 7.5 per cent, according to the FAOSTAT data. In terms of cotton intensity, however, Sub-Saharan African countries show up much more prominently. In the year 1938, Uganda was the fourth most involved producer worldwide (13 kg per capita), only outperformed by Egypt (23 kilogram), the U.S.A. (20 kg) and Peru (13 kg). In that same year, 8 out of the top twenty were from Sub-Saharan Africa (Uganda, Sudan, Congo, Tanzania, Malawi, Kenya, Nigeria and South Africa). In the year 2000, 8 out of the top twenty of countries with the highest cotton intensity worldwide were situated in Sub-Saharan Africa (Benin, Zimbabwe, Côte d'Ivoire, Togo, Mali, Burkina Faso, Chad and Cameroon). It is notable that no African country shows up *twice* in the cotton intensity top-twenty for these two benchmark years. This is indicative of the fact that cotton never became a widespread success in twentieth century Sub-Saharan Africa, and that localized booms were not sustained. Nevertheless, there were marked pockets of dynamism in different parts of the continent in different periods.

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<sup>594</sup> Atkinson, 'Cotton: this season and the next'.

**Figure 1.** Annual cotton production (five-year-averages), selected countries in sub-Saharan Africa, 1901-2000



*Notes:* Whenever production was reported in unginnged 'seed cotton' I converted to ginned 'cotton lint' using a 3:1 conversion. If the data is based on export figures, production is assigned to the previous year, whenever this reflects reality. The temporal demarcations 'colonial' and 'post-colonial' are approximate.

*Sources:* Angola before 1961 from Pitcher, *Politics in the Portuguese empire*, p. 283. The series only includes cotton exported to Portugal; Chad before 1963 from Cabot, *Le bassin du Moyen Lagone*, p. 186; Congo before 1920 from Likaka, *Rural society and cotton in colonial Zaire*, p. 42; Côte d'Ivoire before 1947 from Bassett, *Peasant cotton revolution*, p. 52; Malawi before 1947 from database appended to Frankema, Williamson and Woltjer, 'An Economic Rationale for the African Scramble'; Mali before 1948 from Roberts, *Two worlds of cotton*, p. 252. Because the data before 1937 pertains to exports only, and in order to account for locally consumed cotton, a mark-up is applied, based on the shares of locally consumed and exported cotton in Côte d'Ivoire, as reported in Bassett, *Peasant cotton revolution*, p. 65; Mozambique before 1940 from Colónia de Moçambique, *Anuário Estatístico*, other data points before 1946 and for the year 1947 from Pitcher, *Politics in the Portuguese Empire*, p. 283; Togo before 1961 from Beckert, 'Tuskegee to Togo', p. 517; all data points after 1960 from FAOSTAT database; all other data points from Mitchell, *International historical statistics*, p. 244-5. Population estimates before 1961 from database appended to Frankema and Jerven, 'Writing history backwards or sideways'; afterwards from the *Maddison Project* database.

How do we explain such temporally and spatially variegated outcomes? Let us begin with outcomes that fit with the ‘conventional’ narrative of colonial cotton failure and coercion. Firstly, there is a story of failed attempts to effectuate substantial cotton production. Numerous studies have demonstrated how cotton failed to entice Africans across the continent, pre-empting colonial schemes to generate a sizeable export to the French, British and German metropolises. For example, colonial administrators and the *Association Cotonnière Coloniale* attempted from the early twentieth century onwards to extract cotton exports from Mali and Côte d’Ivoire. However, only after the colonial period, from the 1960s onwards, did these areas experience a take-off of cotton exports.<sup>595</sup> Substantial experimentation with cotton also took place in early twentieth century Ghana,<sup>596</sup> but the results were so meagre that Ghana, if included in figure 1, would have stuck stiffly to the X-axis. In many other cases, including Angola, Cameroon, Nigeria, Mozambique, Togo and Zimbabwe, colonial attempts to extract cotton exports were of little avail.<sup>597</sup> The failure of colonial cotton in West Africa was aptly summarized by a French colonial official in Mali, in 1941:

Just because cotton was found to grow everywhere, one concluded that it could become an important agricultural product of these regions. A hypothesis even more seductive since this textile <sic> is one of the primary materials for which the Metropole depended almost exclusively on foreign sources and for which it paid a heavy tribute. The reality appears, alas, something entirely different.<sup>598</sup>

Secondly, there is a story of cotton take-offs that should be attributed primarily to colonial coercion. In Congo, as can be seen in figure 1A, cotton exports were substantial from the 1930s to the 1960s. By the late 1950s, an impressive number of 800,000 Congolese households cultivated cotton.<sup>599</sup> This production resulted not from African enthusiasm for the crop, but from the colonial ambition to make its territory economically productive. The development of a cotton economy in Congo was put in the hands of concessionary companies who received coercive backing from the Belgian colonial government. Farmers were obliged

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<sup>595</sup> For Côte d’Ivoire, Bassett, *Peasant cotton revolution*; For Mali, Roberts, *Two worlds of cotton*; Filipovich, ‘Destined to fail’; Van Beusekom, ‘Colonisation Indigène’; idem, *Negotiating development*

<sup>596</sup> Dumett, ‘Obstacles to Government-assisted agricultural development’.

<sup>597</sup> For Angola and Mozambique see Pitcher, ‘Sowing the seeds of failure’. For northern Nigeria, see Hogendorn, *Nigerian groundnut exports*; idem, ‘The cotton campaign in Northern Nigeria, 1902-1914’. For Togo see Beckert, ‘From Tuskegee to Togo’; Maier, ‘Persistence of precolonial patterns of production’. For Zimbabwe see Nyambara, ‘Colonial policy and peasant cotton’.

<sup>598</sup> Quoted in Bassett, *Peasant cotton revolution*, p. 81.

<sup>599</sup> Congo had a population of approximately 15 million in 1960. Assuming an average household size of 4, this implies that 1 in every 5 Congolese households cultivated cotton.



to plant specified amounts of land with cotton, and their farming practices were closely monitored.<sup>600</sup> Quite similar were the stories of cotton in the Portuguese Africa (from the 1940s onwards), and in Equatorial Africa under French rule (Chad and the Central African Republic). In both cases, the development of the cotton sector was consigned to concessionary companies. These companies received coercive backing of the colonial government, and the assistance of newly empowered local elites and ‘cotton boys’, who pushed local cultivators to grow the crop and were rewarded with a share of the income.<sup>601</sup> In each of these concessionary regimes, the introduction of cotton was associated with repression and it provoked resistance, evasion and outmigration by the local population. In Mozambique, farmers came to regard cotton as the ‘mother of poverty’,<sup>602</sup> although the Mozambican cotton regime became less exploitative towards the end of the colonial period.<sup>603</sup>

There are also outcomes that do not clearly fit either scenario of failure or coercion. Adoption of rain-fed cotton cultivation in the British colonies of Uganda and, to a lesser extent, Malawi provide the earliest and most striking deviation from the general pattern of stasis and failure in the first half of the twentieth century.<sup>604</sup> The case of Uganda clearly stands out in a comparative perspective. Interestingly, while Nigeria was framed as a new ‘Mecca of Lancashire’,<sup>605</sup> British cotton capitalists failed to see the potential of Uganda.<sup>606</sup> Cotton expert J.A. Todd, for example, estimated in 1915 that ‘the possible cotton crop of Nigeria is about 6,000,000 bales of 400 pounds’, while maintaining that ‘it is doubtful whether any really large quantity of cotton, more than, say, 100,000 bales per annum, is likely to be raised [in Uganda] for a good many years to come’.<sup>607</sup> Todd’s projection for colonial Nigeria was wildly off the mark: Nigeria exported a meagre average of 70,000 bales annually between 1920 and 1960 (corresponding to 1.2 per cent of Todd’s projection). Exports from Uganda, however, exceeded his expectations, with 260,000 bales annually (260 per cent of Todd’s projection).<sup>608</sup>

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<sup>600</sup> For Congo, see Likaka, *Rural society and cotton in colonial Zaire*.

<sup>601</sup> For Mozambique, see Isaacman, ‘*Cotton is the mother of poverty*’; Pitcher, *Politics in the Portuguese Empire*. For Chad, see Cabot, *Le bassin du Moyen Lagone*; Sturzinger, ‘The introduction of cotton cultivation in Chad’. For the Central African Republic, see De Dampierre, ‘Coton noir, café blanc’.

<sup>602</sup> Isaacman, ‘Cotton is the mother of poverty’.

<sup>603</sup> Pitcher, ‘From coercion to incentives’.

<sup>604</sup> The cotton take-off in Malawi was confined to a small area, so that it does not figure prominently in figure 1. On Malawi, see Mandala, *Work and control in a peasant economy*.

<sup>605</sup> Hogendorn, ‘The cotton campaign in Northern Nigeria, 1902-1914’, p. 54.

<sup>606</sup> Robins *Cotton and race across the Atlantic*, p. 86.

<sup>607</sup> Todd, *The world’s cotton crop*, pp. 170, 177.

<sup>608</sup> A Ugandan bale weighted 182 kilogram, a Nigerian bale 185 kilogram. Rowlett, *How Many?*

Uganda's exceptional involvement in the production and export of cotton was not matched by equally heavy state involvement and coercion, although colonial taxes and government pressure to grow cotton certainly played a role, particularly in the early years. Wrigley, in 1958, captures the relative importance of colonial coercion and African initiative in one region of Uganda:

In the abstract, so to speak, most Ganda agree that cotton-growing started under compulsion—often adding that this was one of the best things that the British have ever done for them. On the other hand, there are many individuals who assert that they personally began to grow cotton, in the years before 1914, of their own will and motion.<sup>609</sup>

By the early 1960s, over 700,000 Ugandan households had integrated cotton into their farming practices,<sup>610</sup> producing more cotton than their counterparts elsewhere in colonial Africa, even though they faced less repression and monitoring.<sup>611</sup> Tellingly, while cotton regions in Africa often faced outmigration, this was not the case in Uganda, where some cotton growing areas even attracted large numbers of voluntary immigrants as farm labourers, sharecroppers and seasonal tenants.<sup>612</sup> During the late colonial and early post-colonial period, Uganda's cotton economy ran out of steam, eventually collapsing during the rule of Idi Amin (1971-9), and has not recovered since. Instead of associating cotton primarily with colonial coercion or poverty, many farmers in Uganda still regret the demise of the industry.<sup>613</sup>

In Sudan, cotton was also produced and exported on a large scale during the colonial era. Even though situated in central eastern Africa like Uganda, the organization of cotton production in Sudan was markedly different. Most of Sudan's cotton was grown under irrigated conditions in a relatively small and concentrated area known as Gezira, at the confluence of the White and Blue Nile. Cotton produced in this *Gezira Scheme* stands out for

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<sup>609</sup> Wrigley, *Crops and wealth*, p. 16. Also Engdahl, 'Exchange of cotton', p. 61; Robins, *Cotton and race across the Atlantic*, pp. 126-7, Vail, *Agricultural innovation Teso district*. Further discussion is provided in De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

<sup>610</sup> This corresponded with some two-thirds of Uganda's smallholders. Uganda, *Census of Agriculture*.

<sup>611</sup> The balance between coercion and incentives in Uganda's cotton sector has been subjected to extensive debate, see De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

<sup>612</sup> Outmigration from cotton zones is mentioned, for example, in Bassett, *Peasant cotton revolution*, p. 95, Likaka, *Rural society and cotton*, p. 39; Pitcher, *Politics in the Portuguese empire*, p. 190.

<sup>613</sup> This sentiment was shared by the majority of 30 elderly farmers from different parts of Teso (Eastern Uganda) during my interviews about their experiences with cotton. In Buganda, farmers were happier to abandon cotton during the late 1950s and 1960s, and replace it with more profitable coffee cultivation. See Kajubi, 'Coffee and prosperity in Buganda'.

the much greater role of capital, compared to the rain-fed cotton cultivation that characterizes the majority of cases in Sub-Saharan Africa. That this capital-intensive strategy would be successful, however, is far from obvious. Gezira itself was successful in terms of exports, but in financial terms, the return on investment was much less clear cut.<sup>614</sup> The French similarly attempted to cultivate cotton in a highly concentrated, irrigated, and capital-intensive context along the Niger river in Mali. However, their *Office du Niger* was far less successful than the *Gezira Scheme*.<sup>615</sup>

When we extend the time frame into the post-colonial period the picture becomes more complex. Cotton production in Tanzania and Nigeria expanded considerably in the 1960s,<sup>616</sup> while Zimbabwe experienced a ‘cotton revolution’ in the 1970s.<sup>617</sup> In each of these cases, the take-off happened after decades of colonial efforts, with meagre initial results. The most striking belated cotton boom took place in a large region of post-colonial Francophone West Africa, covering parts of Benin, Burkina Faso, Côte d’Ivoire, Mali and Togo. After decades of sluggish development under German and French colonial rule, large numbers of African smallholders adopted rain-fed cotton cultivation, resulting in a massive and sustained expansion of production from the early 1960s onwards. This cotton boom cannot be written off as a ‘neo-colonial’ version of the repressive concessionary cotton regimes of French Equatorial Africa, Congo, Mozambique and Angola. Forced labour had been abolished in the French colonies in 1946, and although some top-down pressure was exerted, farmers adopted cotton mostly voluntarily and to their benefit, and conducive rather than coercive policies played a crucial role.<sup>618</sup>

## **II. Scrutinizing the arguments: was cotton doomed to fail?**

In the previous section, it has been demonstrated that an explanation of the variation in cotton outcomes in colonial and post-colonial Africa requires more than a narrative of failure and coercion. In this section, I zoom in on the particular characteristics of cotton, arguing that

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<sup>614</sup> Abdelkarim, *Sudan: the Gezira scheme and agricultural transition*; Bernal, ‘Cotton and colonial order in Sudan’; Robins, *Cotton and race across the Atlantic*, pp. 149-58; Barnett, *Gezira*; Gaitskall, *Gezira*; Mollan, ‘Business, state and economy’.

<sup>615</sup> Van Beusekom, ‘Colonisation Indigène’; idem, *Negotiating development*; Filipovich, ‘Destined to fail’; Roberts, *Two worlds of cotton*, pp. 223-82.

<sup>616</sup> On Tanzania, Von Rotenham, ‘Cotton farming in Sukumaland’.

<sup>617</sup> Nyambara, ‘Colonial policy and peasant cotton’.

<sup>618</sup> Bassett, *Peasant cotton revolution*; Bingen ‘Cotton, democracy, and development’; Lele, Van de Walle and Gbetibouo, ‘Cotton in Africa’; Roberts, *Two worlds of cotton*.

cotton should not be written off as inherently unattractive from the perspective of African farmers, and show that under certain conditions, it was, in fact, a viable and profitable proposition.

This idea that cotton had little to offer to African farmers, and that its cultivation was the result of misguided fantasies of empire, is central in the synthesis provided by Isaacman and Roberts in the opening chapter of a widely-cited edited volume on the social history of cotton in colonial Africa.<sup>619</sup> Porter, in the subsequent chapter of the same volume, goes as far as to claim that ‘never was so much misplaced effort devoted to an enterprise as the production of cotton in Sub-Saharan colonial Africa’.<sup>620</sup> Indeed, the historical record provides ample evidence of the disadvantages of cotton. Firstly, cotton was a labour-intensive crop, which also required meticulous timing. As a result, it competed with food crops for seasonally scarce labour. African farmers were unable and unwilling to forego subsistence cultivation and risk food insecurity in order to cultivate cotton.<sup>621</sup> Secondly, cotton provided low returns to labour. The reason for this was cotton’s suitability for a wide range of climatological conditions, which resulted in an extremely competitive world market. African producers had no clear advantage in this market, in particular because photosynthetic potential close to the equator is comparatively low, and cotton yields meagrely as a result. It is argued, therefore, that the only factor that could make African cotton competitive is cheap labour, obtained by means of exploitation.<sup>622</sup> Thirdly, Africans had access to other cash crops, such as palm oil, coffee, cocoa, groundnuts or sesame seed. They preferred these crops over cotton, either by cultivating such crops on their own farms, or engaging in agricultural labour migration to ecologically more favourable regions.<sup>623</sup> Fourthly, even if African farmers cultivated cotton, they could obtain better prices for their crop on parallel markets for raw cotton, sustained by demand from vibrant local textile industries.<sup>624</sup> The remainder of this section scrutinizes and contextualizes these issues one by one.

Firstly, the issue of competition between food crops and cash crops ties in with a broader literature on the constraints imposed by labour seasonality on agricultural commercialization in tropical Africa. Seasonal labour scarcity was most acute in the African savanna, where

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<sup>619</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, pp. 11, 13-4.

<sup>620</sup> Porter, ‘Note on cotton and climate’, p. 47.

<sup>621</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, pp. 23, 34-5.

<sup>622</sup> Porter, ‘Note on cotton and climate’, pp. 47-9.

<sup>623</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 20, 23, 25.

<sup>624</sup> *Ibid.*, p. 35.

farmers relied on labour-intensive grain cultivation, and where agricultural labour demands were concentrated in one single, short growing season.<sup>625</sup> With respect to labour seasonality, the cotton take-offs in colonial Uganda and Malawi can be framed as ‘exceptions that proves the rule.’<sup>626</sup> In Malawi, agricultural seasonality was partly obviated by the presence of floodbeds.<sup>627</sup> In Uganda, equatorial *bimodal rainfall* allowed for a smoother seasonal distribution of agricultural labour inputs and greater complementarity between food crops and cotton.<sup>628</sup> Still, specific ecological conditions provide neither a sufficient nor a necessary explanation of cotton outcomes. The cotton growing regions in Congo had smoothly distributed rainfall like Uganda, but a Belgian colonial officer had to admit that ‘we have failed to make the crop as popular here as in Uganda’, and that ‘the blacks are growing the crop only under the pressure of the administration’.<sup>629</sup> Conversely, in the case of the ‘peasant cotton revolution’ in post-colonial FWA, cotton was cultivated on a large scale by smallholders operating in a harsh savanna climate with a short rainy season. Clearly, ‘ecology was not destiny’, and even in the most challenging savanna conditions, it was possible to overcome labour constraints.

The second issue, Africa’s competitive disadvantage on the world market, is articulated most explicitly by Porter:

The photosynthetic difference and cotton’s wide production in large, better-suited areas doomed from the start the metropolitan dream of developing a competitive cotton industry in tropical Africa, as against the major mid-latitude producers. ... The only ‘comparative advantage’ the tropical colonies had was the ability of the colonizers to exploit labor and thereby to affect the price of production.<sup>630</sup>

However, even if we accept that cotton yields are lower close to the equator, Porter’s argument is far from self-explanatory. Basic Ricardian theory teaches us that an *absolute* disadvantage does not necessarily imply a *comparative* disadvantage, and that a proper assessment of comparative advantages should take opportunity costs into account. The key issue, then, is about alternatives: which other options did farmers in the African savanna have to benefit from increased market integration and participation in international trade?

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<sup>625</sup> Austin, ‘Resources, techniques, and strategies’; Tosh ‘The cash-crop revolution in tropical Africa’.

<sup>626</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 23.

<sup>627</sup> Mandala, *Work and control in a peasant economy*.

<sup>628</sup> De Haas and Papaioannou, ‘Resource endowments and agricultural commercialization’.

<sup>629</sup> Cited in Likaka, *Rural society and cotton*, p. 89.

<sup>630</sup> Porter, ‘Note on cotton and climate’, pp. 47-9.

This question ties in with the third issue, the greater profitability of alternative cash crops and labour migration. Indeed, it has been widely noted that tropical tree crops (coffee, cocoa, palm oil) provided higher returns to labour than cotton.<sup>631</sup> It is telling, moreover, that European plantations in Africa experimented with cotton, but quickly abandoned it for more profitable crops, such as sisal, tea and coffee.<sup>632</sup> Reflecting the common view of the day, Todd remarked in 1915, that ‘cotton has always been regarded as a cheap-labour crop, that is to say, a crop that can only be profitably cultivated where there is an ample supply of cheap labour’, which implied that ‘cotton is, and must remain, a ‘black man’s crop’, not a white man’s’.<sup>633</sup> Still, cotton also has important advantages over tree crops. Being an annual crop, cotton is much more flexible, requires much less starting capital, and yields much quicker returns. Indeed, in southern Uganda, which was ecologically suitable to both cotton and coffee, most farmers initially preferred the quick returns of cotton over the promise of higher future returns to coffee. Investments in land or education was prioritized over the initial expense of planting coffee trees.<sup>634</sup>

It should be noted, moreover, that, in most cases, cotton can flourish in areas that are ecologically unsuitable to tree crops. In most savanna areas, farmers wishing to grow cash crops had a choice between cotton or other annual crops such as groundnuts, sesame seed or grains. Within this limited set of options, their preference was not *a priori* given. Cotton and food/oil crops each have their own distinct advantages as cash crops. Food/oil crops have the advantage of being less labour intensive. They can also be retained for home consumption in years of low yields and food insecurity. At the same time, they tend to have a lower and more volatile price when sold in local markets, and face higher transport costs when cultivated for export.<sup>635</sup> Cotton, moreover, can be stored more easily without deteriorating. As a result, farmers are able to hold up their cotton and wait for better prices, without having to fear loss

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<sup>631</sup> See, for example, De Haas, ‘Measuring rural welfare’; Dumett, ‘Obstacles to government-assisted agricultural development’; Tosh, ‘Cash-crop revolution’.

<sup>632</sup> Isaacman and Roberts, ‘Cotton, colonialism and social history’, p. 25; Robins, *Cotton and race across the Atlantic*, pp. 99-109.

<sup>633</sup> He referred to both America and Africa. Todd, *The world’s cotton crops*, p. 107, 113, 171. Cf. Robins, *Cotton and race across the Atlantic*, pp. 75-7.

<sup>634</sup> Fortt and Hougham, ‘Environment, population and economic history,’ p. 31, cf. Moseley and Gray, *Hanging by the thread*, p. 12.

<sup>635</sup> This was due to their lower value for weight. During the first half of the twentieth century, the value of lint cotton per weight unit was typically three times higher than the same weight of groundnut oil (based on an average of Nigerian annual export prices from 1909-47). Data from the Wageningen African Trade Database, appended to Frankema, Williamson and Woltjer, ‘An economic rationale for the African scramble’.

of income.<sup>636</sup> In practice, farmers' preferences for either food crops or cotton varied. In Northern Nigeria, groundnuts were evidently more profitable than cotton, which resulted in African farmers ignoring cotton, and utilizing the new railroad to Kano to export groundnuts instead.<sup>637</sup> However, in one sub-region of Uganda's savanna, groundnuts were widely cultivated but never became more than a subsidiary cash crop to cotton,<sup>638</sup> while in another part of Uganda, as well as in the Shire Valley of Malawi, farmers even *switched* from sesame seed to cotton, since the latter was considered more profitable.<sup>639</sup>

Another alternative for savanna farmers to earn cash was to migrate to centres of wage employment or to ecological zones where profitable cash crops could be cultivated, especially if such cultivation coincided with the agricultural off-season at home.<sup>640</sup> Indeed, there are numerous examples where farmers preferred to engage in labour emigration rather than cultivate cotton at home.<sup>641</sup> At the same time, circular migration was socially and economically disruptive, and can hardly be considered a sustainable and expedient income strategy for entire rural communities in the African savanna. Moreover, there are cases, Uganda most notably, where migrants were attracted by, rather than pushed away from, cotton growing areas.<sup>642</sup>

The fourth issue, competition between the cotton export market and the 'parallel market' feeding into the local textile industry, is in itself interesting, because it illustrates the limitations of colonial control over African economies. Moreover, it is striking that indigenous merchants outbid expatriate exporters with substantial margins.<sup>643</sup> Still, it is doubtful whether cotton cultivation for local markets was more than a subsidiary source of cash income for most rural households. To begin with, the idea that labour-constrained savanna farmers were somehow able to produce large amounts of cotton for local markets can

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<sup>636</sup> Farmers in Uganda held their crop up on multiple occasions. In 1921, for example, even though the cotton marketing season had already started in January 'The low prices in Buganda caused natives to hold up their cotton to a considerable extent, and cotton was still being sold late in the year, and some growers benefitted by the rise in prices in September.' Uganda, *Annual Report of the Department of Agriculture, 1921*, p. 6. More examples in Engdahl, 'Exchange of cotton', pp. 65-6.

<sup>637</sup> Hogendorn, *Nigerian groundnut export*. Moreover, As noted by Lugard, 'the Hausa peasant is fully alike to the advantages of a leguminous crop for his fields.' Robins, *Cotton and race across the Atlantic*, p. 94.

<sup>638</sup> Vail, *Agricultural innovation in Teso district*.

<sup>639</sup> Frederick, 'Global and local forces'; Mandala, *Work and control in a peasant economy*; Tosh, 'Lango agriculture'.

<sup>640</sup> Miracle and Berry, 'Migrant labour and economic development'.

<sup>641</sup> Bassett, *Peasant cotton revolution*, p. 95, Likaka, *Rural society and cotton*, p. 39; Pitcher, *Politics in the Portuguese empire*, p. 190; Suret-Canale, *French colonialism*, p. 246.

<sup>642</sup> Richards, *Economic development and tribal change*.

<sup>643</sup> Bassett, *Peasant cotton revolution*; Roberts, *Two worlds of cotton*.

hardly be reconciled with the pressing seasonal labour constraints of the West Africa savanna. Indeed, an evaluation of sparse empirical evidence suggests that the resources committed by ordinary rural households to cotton cultivation were quite limited. Before colonial intervention, local cotton was typically of a perennial variety, which was of lesser quality, but required fewer labour inputs and could be intercropped with various food crops.<sup>644</sup> When farmers switched to annual varieties during the colonial period, cultivation continued on a rather limited scale. Côte d'Ivoire, for example, exported very little cotton, but this was not because so much of its cotton fed into local markets: during the interwar period, only 37 per cent of the total cotton output was marketed locally.<sup>645</sup> It is also telling that the required acreage of cotton per taxpayer was raised from a meagre 0.08 hectares to a – still modest – 0.2 hectare between 1916 and 1925, while taxpayers in Uganda's cotton regions accounted for as much as a full hectare.<sup>646</sup>

The situation in northern Côte d'Ivoire may not be fully representative of the entire and vast West African interior. We know, in fact, that Kano, West Africa's most important textile centre, continued to process large amounts of locally grown cotton throughout the colonial era. Lovejoy, for example, notes that, in 1904, 20,000 bales of cotton were imported into Kano, 'from as far away as one hundred miles or more'.<sup>647</sup> Still, although substantial, this amount of cotton was small compared to the 260,000 bales typically cultivated for export in Uganda between 1920 and 1960. Moreover, as Lovejoy remarks, much of the cotton was cultivated not by smallholders, but by unfree labourers on large plantations.<sup>648</sup> In conclusion, parallel markets existed, but the quantities traded were comparatively small, due to issues of

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<sup>644</sup> Bassett, for example states that 'cotton was a secondary crop that did not require much labour time. In yam fields, for example, peasants planted cotton in every fourth mound. Perennial varieties were cut back each year and produced fibre for up to ten years'. Bassett, *Peasant cotton revolution*, p. 57. Also see Maier, 'Persistence of precolonial patterns of production', pp. 77-8; Robins, *Cotton and race across the Atlantic*, p. 142.

<sup>645</sup> Bassett, *Peasant cotton revolution*, p. 66.

<sup>646</sup> *Ibid.*, p. 59-66. In 1921, taxpayers in Teso cultivated on average 0.4 hectares of cotton (under the assumption that every 1 in 5 persons was a taxpayer). By 1936 this had increased to a full hectare per taxpayer (*idem*). Vail, *Agricultural innovation in Teso District*, p. 146. Differences in direct taxes are also illustrative. In 1925, the head tax in northern Cote d'Ivoire was raised to 7.50 franc, the equivalent of less than 1.5 shillings, following the official exchange rate, see Bassett, *Peasant cotton revolution*, p. 66. In that same year, the poll tax in Teso was 15 shillings – a tenfold increase – which reflects, at least in part, an equally large gap in cash income and purchasing power. Vail, *Agricultural innovation in Teso District*, p. 146. De Haas and Papaioannou also pursue the comparison between Côte d'Ivoire and Uganda, with emphasis on different rainfall regimes, labour seasonality and food security concerns. See De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

<sup>647</sup> Lovejoy, 'Plantations and the economy of the Sokoto Caliphate', p. 356.

<sup>648</sup> *Ibid.*, p. 357.



both demand and supply, and can hardly account for the failure of export cotton in West Africa.

In conclusion, this discussion of the purported drivers of the failure of cotton in colonial Africa has revealed that the attractiveness of cotton was contingent on contextual factors. Cotton tended to grow well in vulnerable savanna areas, where it provided one of a very limited set of options available to farmers to obtain cash income. However, in the savanna the cultivation of cotton (for both local and export markets) was limited by very real food security concerns and seasonal labour bottlenecks. Compared to other cash crops and labour migration, cotton cultivation had its advantages and disadvantages. Sometimes, the advantages prevailed, even in areas suitable to tree crops. In the following sections, I identify and evaluate three domains where local conditions interacted with colonial policies to determine the viability and profitability of cotton to African farmers.

### **III. The nexus between food crops and cash crops**

In this section, I investigate the nexus between cotton and food crops in colonial and post-colonial Africa. As noted above, the tension between cotton and food crops was primarily a result of seasonal labour scarcity.<sup>649</sup> However, patterns of labour seasonality differed quite considerably throughout Africa, as a result of different agricultural practices, but most importantly the distribution of rainfall, which determined the growing season and hence labour demands. At one end of the spectrum, Ugandan farmers benefitted from a pronounced bimodal pattern of rainfall, which meant that they could spread risk and labour inputs over two growing seasons. At the other end, farmers in the northern parts of the West African savanna had to cultivate their entire crop portfolio in only one, short rainy season. Figure 2 illustrates the great variety in terms of the length of the rainy season across regions where cotton was introduced – with varying levels of success – during the twentieth century.<sup>650</sup>

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<sup>649</sup> Austin, 'Resources, techniques, and strategies'; Tosh, 'Cash-crop revolution'.

<sup>650</sup> For further discussion, De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'

**Figure 2.** *Rainfall patterns in selected cotton growing regions in Africa*

Rainy months	1	2	3	4	5	6	7	8	9	10	11	12	>50mm	>100mm
Uganda (south)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	11	8
Congo (north)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	10	8
Uganda (north)	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	9	7
Côte d'Ivoire (north)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	8	5
Mozambique (north)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	7	5
Chad (south)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	5	4
Mali (south)	Light grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	Dark grey	5	4

*Notes:* The figure is based on a long-term average of monthly rainfall (1900-2012). Light grey represents months with more than 50 millimetres of rain, dark grey months with more than 100 millimetres of rain. Note that the figure is presented so as to show the number of rainy months, starting with the first month of more than 50 millimetres. Therefore, the x-axis does not correspond with calendar months (1 ≠ January).

*Sources:* World Bank Climate Change Knowledge Portal, at <http://sdwebx.worldbank.org/climateportal>. Figures are based on the following coordinates: Northern Uganda (1.80,33.60), Congo (3.23,28.25), Southern Uganda (0.65,33.51), Côte d'Ivoire (9.47, -5.61), Mozambique (-16.34, 36.76), Chad (10.4,17.58) and Mali (12.3,-5.71).

There can be little doubt that in a context of harvest fluctuations, missing markets for credit and food, and limited access to capital and technology, farmers' disposition towards cotton adoption was informed, to a large extent, by their ability to sustain a sufficient production of food.<sup>651</sup> Much of the compulsion used in colonial cotton schemes was aimed at directing rural Africans away from subsistence production and towards cotton. In Chad, for example, the colonial authorities forced farmers to cultivate compulsory communal cotton fields at the optimal time of the short agricultural cycle, which meant that work on food crops was compromised. Consequences were serious and food shortages occurred regularly.<sup>652</sup> In Mozambique, facing an equally short rainy season, the concessional companies and colonial authorities exhibited a similar disregard for food security. In the words of Anne Pitcher 'more often than not, the dangerous balance of food versus cash crop appears to have been tipped in favour of cotton'.<sup>653</sup>

In the Congo, rainfall was more smoothly distributed, but farmers faced other challenges. Due to low population densities and the practice of shifting cultivation, farmers had to cover large distances to reach their cotton fields, and, particularly in the forested cotton regions, land

<sup>651</sup> As argued in De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

<sup>652</sup> Sturzinger, 'The introduction of cotton cultivation in Chad', p. 222.

<sup>653</sup> Pitcher, *Politics in the Portuguese empire*, p. 132.

clearing was very arduous. Despite relatively benign rainfall patterns, labour demands were so heavy that cultivators had to narrow their food crop portfolio and focus on the cultivation of roots and tubers, which provide high caloric yields per unit of labour but are poor in terms of nutrition.<sup>654</sup> Colonial policies appear to have aggravated, rather than mediated, labour scarcity. The Belgian authorities framed cotton as an ‘educational crop’. Directives and instructions were given based on the premise that Congolese cultivators were ‘incapable of organizing their activities on their own terms’.<sup>655</sup> They were not permitted to intercrop food crops and cotton, and Belgian authorities went as far as to force farmers to undertake unnecessarily labour-intensive methods, not even to increase yields per acre, but to instil ‘discipline’.<sup>656</sup> Thus, cotton was not just a cash crop, but part of broader social engineering efforts by the Belgian colonial government which imposed demanding and rigid instructions on farmers, who were expected to be able to produce surplus food as well as cotton.<sup>657</sup>

Uganda’s relatively favourable ecology, in combination with the absence of heavy-handed government intervention, enabled African farmers to devise their own strategies to graft cotton onto their food production systems. Given the choice, farmers decided to cultivate cotton in the second, less reliable rainy season, and prioritized tending and harvesting their food crops over cotton planting. As a result, cotton was often planted after the date that would secure optimal yields, a practice that was tolerated by colonial administrators.<sup>658</sup> Ugandan farmers were also allowed to intercrop cotton with food crops. An extensive agricultural census in 1963 revealed that farmers in Uganda’s banana zones intercropped more than half of their cotton fields with food crops. In the grain zones, farmers followed a different strategy to combine food crops and cotton, and only 13 per cent of the cotton acreage was intercropped.<sup>659</sup> In these areas, however, cotton functioned as an ideal, clean seed-bed for millet the next year.<sup>660</sup>

Even though benign ecology, rather than conducive policy, should be seen as the primary reason why Ugandan farmers were able to combine food crops and cotton, the colonial

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<sup>654</sup> Likaka, *Rural society and cotton*, pp. 18-44.

<sup>655</sup> These are the words of A. Brixhe, head of the agricultural service of the *Compagnie Cotonnière Congolaise*. Brixhe, *De katoen in Belgisch-Congo*, p. 64.

<sup>656</sup> Brixhe, *De katoen in Belgisch-Congo*, pp. 62-3.

<sup>657</sup> *Ibid.*, p. 22; Likaka, *Rural society and cotton*, p. 39.

<sup>658</sup> De Haas and Papaioannou, ‘Resource endowments and agricultural commercialization’.

<sup>659</sup> Uganda, *Census of Agriculture*.

<sup>660</sup> Parsons, *The Systems of Agriculture Practiced in Uganda: Introduction and Teso Systems*, pp. 34-8, Vail, *Agricultural innovation in Teso District*, p. 73. Two elderly farmers in Kaberamaido (12 Sep. 2015) district also mentions this particular quality of cotton.

government did play an auxiliary role. While forced off-farm labour initially played an important role in establishing the infrastructure that would eventually benefit cotton marketing, the Ugandan authorities increasingly realized that off-farm labour demands were a burdensome distraction from farming. While forced labour continued to be widely practiced in most French, Belgian and Portuguese colonies, the Ugandan colonial government pragmatically phased out most such practices, thus freeing up labour for food and cash-crop cultivation.<sup>661</sup>

Secondly, the colonial government took some measures to break labour bottlenecks and mitigate the impact of harvest fluctuations. By organizing the sale of ploughs, and established ploughing schools, the government stimulated and facilitated the introduction of ox ploughs among grain farmers.<sup>662</sup> The number of ploughs in Teso District, in particular, rose spectacularly, from practically zero in 1910, to 240 in 1922, 19,894 in 1939 and 60,000 in 1962, and the far majority of farmers gained access to ploughs.<sup>663</sup> The diffusion of ploughs eased an important seasonal labour bottleneck, and was a vital component in the rapid expansion of the cotton acreage.

The colonial government also pushed farmers to supplement their crop portfolio with cassava and sweet potatoes, which were suitable famine reserve crops. It used both ‘carrot’ and ‘stick’: households were required to plant at least one-fourth acre of both cassava and sweet potato before sowing other first-rains crops, while the colonial authorities also made systematic efforts to supply sweet potato and cassava cuttings to farmers.<sup>664</sup> The government also regulated the use of individual and communal granaries to secure a permanent food stock in case of a disappointing harvest. The content of granaries was continually monitored, especially in areas which were most prone to food shortages. These measures, although forcibly introduced through legislation and a credible threat of fines or imprisonment, were certainly not uniformly perceived as bad by African farmers.<sup>665</sup> The measures were also

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<sup>661</sup> De Haas and Papaioannou, ‘Resource endowments and agricultural commercialization’.

<sup>662</sup> Vail, *Agricultural innovation in Teso District*, p. 98.

<sup>663</sup> This calculation is cumulative and ignores losses due to breakage and wear. Jørgensen, *Uganda*, pp. 104-5. Also see Tothill, *Nineteen surveys*; Wilson and Watson, ‘Two surveys of Kasilang Erony’; Vail, *Agricultural innovation in Teso District*, p. 91-105.

<sup>664</sup> McMaster, *A subsistence crop geography of Uganda*, p. 66; Tothill, *Agriculture in Uganda*, p. 135; Vail *Agricultural innovation in Teso District*, pp. 108-9.

<sup>665</sup> During my fieldwork in Teso, one respondent (12 Sep. 2016, in Kaberamaido District), who had been a chief in the late colonial era argued that ‘if you breached ‘bye laws’, you could be imprisoned. These were good laws. People were illiterate and needed guidance’. Another respondent (7 Sep. 2015 in Bukedea District) who had cultivated cotton under colonial rule himself, pointed out that ‘the introduction of cotton went hand in hand with

effective. According to Tosh (writing on Lango, one particular cotton growing region in Uganda), the government relief policies meant that farmers' 'objection that cotton was a pure cash-crop which could not be diverted to subsistence in an emergency, now carried much less weight'.<sup>666</sup>

While Uganda's benign ecology and auxiliary colonial policies enabled farmers to adopt cotton without sacrificing food security, there were also clear limitations to the 'cotton revolution'. Most importantly, there were no major technological breakthroughs in agricultural productivity. Yields remained low, the crop portfolio stagnant, and productive capacity of individual rural households barely extended beyond the initial adoption of cotton. Food markets were thin, and farmers continued to pursue food self-sufficiency, which limited the potential for specialization. In other words, after the initial breakthrough, the diffusion of cotton in Uganda signifies a process of extensive growth.<sup>667</sup> This development trajectory reflects the increasingly half-hearted and complacent attitude of the colonial government. For example, according to Young, Uganda's 'Agriculture Department has long been sceptical of the feasibility of a major fertilizer campaign, and uncertain as to the proper variety. The result has been delay in implementation of a fertilizer program'.<sup>668</sup>

While the role of conducive policy to mitigate labour constraints and food security concerns was *auxiliary* in colonial Uganda, it was *decisive* in post-colonial FWA. Here, the cotton take-off took place in a region with short growing seasons and serious competition over seasonally scarce labour between food crops and cotton. During the colonial era, farmers had been unable to break the seasonal labour bottleneck and largely rejected cotton. In contrast, the impressive and widespread 'peasant cotton revolution' that took place from the 1960s onwards was driven by an impressive embracing of labour-saving technologies and concomitant reconfiguration of farming practices. As in Uganda's grain region half a century earlier, farmers in northern Côte d'Ivoire widely adopted ox-plough use, which has been

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coercion, but when farmers realized it was in their own interest, it became voluntary. A similar thing happened with cassava and groundnuts'. A third elderly farmer (9 Sep. 2015, in Ngora District) explained to me that 'the colonial authorities forced people to maintain their own granaries well-stocked. One granary had to be full and sealed. It could only be opened with government permission. They would come to inspect. This was a good rule. It prevented famines'.

<sup>666</sup> Tosh, 'Lango agriculture during the early colonial period', p. 436.

<sup>667</sup> Further discussion in De Haas, 'Measuring rural welfare'; De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

<sup>668</sup> Young, 'Agricultural policy in Uganda', pp. 144-5, cf. De Haas, 'Measuring rural welfare'; Lury, 'Dayspring mishandled?', pp. 222, 224-5.

estimated to have reduced their time spent on ploughing and ridging by 80 per cent.<sup>669</sup> Further changes here, however, were much more profound than in Uganda. Farmers shifted from intercropping with millet as the dominant grain, to mono-cropping with high yielding varieties of cotton, maize and rice, which had been introduced by agricultural extension agents.<sup>670</sup> Farmers also started using external inputs, most importantly herbicides, to save time on weeding.<sup>671</sup> As a result of these changes, household were able to substantially increase their yields and extend their farmed acreage.<sup>672</sup> Greater overall productivity led to a much greater commitment to cotton: its share in the total acreage rose from a mere 4 per cent in 1962 to 47 per cent in 1988.<sup>673</sup>

There is no reason to believe that the major changes in farming practices in post-colonial FWA were occasioned by a sudden adjustment in the outlook of farmers.<sup>674</sup> Instead, their willingness and ability to extend cotton was the result of the provision of new technologies, and the intensification of extension services, by post-colonial governments and parastatal agencies in conjunction with the *Compagnie Française pour le Développement des fibres Textiles* (CFDT).<sup>675</sup> Notably, farmers were provided not only with advice and inputs related to cotton, but with an integrated intensification package, which was also aimed at achieving increased food crop yields and improved food security. In Mali ‘cotton production technology contribute[d] to increased cereal crop production and the cotton zone has become a Malian breadbasket’.<sup>676</sup> This case illustrates, retrospectively, that the tension between food crops and cotton had not been inevitable, but could be lifted by agricultural innovations and substantial conducive external interventions in farming practices – something which colonial governments had largely failed to do.

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<sup>669</sup> Bassett, *Peasant cotton revolution*, p. 138.

<sup>670</sup> *Ibid.*, p. 129-30. Initially, these were mostly expatriates, but by the late 1980s, the extension services of Mali and Côte d’Ivoire had been almost completely indigenized. Lele, Van de Walle and Gbetibouo, ‘Cotton in Africa’, p. 25.

<sup>671</sup> Bassett, *Peasant cotton revolution*, p. 141.

<sup>672</sup> Cotton farmers in Côte d’Ivoire extended their acreage from 3.3 hectares in 1962, to 5.2 hectares for households without access to a plough, and 8.8 hectares for households with access to a plough by the early 1980s. Bassett, *Peasant cotton revolution*, p. 128.

<sup>673</sup> *Ibid.*, p. 128.

<sup>674</sup> Bassett argues that, in Côte d’Ivoire, ‘an export-oriented and commodity producing peasantry had gestated and finally come forth’. Bassett, *Peasant cotton revolution*, p. 112. However, the rapid adoption of Ugandan farmers to cotton in the early twentieth century puts into doubt the idea that African farmers needed time to ‘gestate’ before participating in agricultural commercialization, as long as it was viable and profitable.

<sup>675</sup> Lele, Van de Walle and Gbetibouo, ‘Cotton in Africa’.

<sup>676</sup> Bingen, ‘Cotton, democracy and development’, p. 271.

#### IV. Cotton yields and quality

In this section, I investigate the role of cotton yields and quality in explaining variegated cotton outcomes in colonial and post-colonial Africa. Figure 3 shows the trends in cotton yields in 8 countries from 1912 to 2000. The figure includes information about Uganda, Chad, Mozambique, Congo and Sudan (irrigated), all of which produced sizeable amounts of cotton during the colonial era, and Burkina Faso Côte d'Ivoire, Mali (rain-fed and irrigated) and Zimbabwe, where cotton failed during the colonial period and took off afterwards. A number of striking insights can be distilled from this spatial and temporal comparison of yields.

Until ca. 1960, recorded rain-fed cotton yields were low, typically in the range of 250 to 500 kilograms of seed cotton per hectare, a potential exception being Zimbabwe, where yields were already at a high level in 1960.<sup>677</sup> In Congo and southern Uganda, yields of 300-500 kilogram of seed cotton per hectare were typical. Yields in the savannas of Mozambique, Chad and northern Uganda, were in the range of 200-400 kilogram. In Côte d'Ivoire during the 1950s, yields were as low as 100-150 kilogram.<sup>678</sup> These yield differences are at least partly explained by local ecological conditions, such as different soil types, disease environment and climate.<sup>679</sup> Much of Congo's cotton was cultivated in the fringes of the forest on newly reclaimed, fertile soils, while farmers in Uganda's banana regions benefitted from relatively deep and suitable soils.<sup>680</sup> Yield differentials were also influenced by the amount of labour farmers were able and willing to invest in their cotton plots. The clearing of forest lands was one of the most arduous aspects of cotton cultivation in Congo, so that investing more labour in sowing and weeding to increase yields was worth the effort.<sup>681</sup> In contrast, in those areas in Uganda's savannah, the clearing of land was much less arduous and time consuming (especially after the adoption of the plough), and striving for higher yields per unit of land was not necessarily the best way to optimize returns to labour. Indeed, within Uganda, the plough regions had the lowest yields per hectare.<sup>682</sup> Irrigated yields were substantially higher, especially in the *Gezira Scheme* in Sudan. This should not come as a surprise. A substantial yield premium over rain-fed cotton was required to justify the

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<sup>677</sup> There are two explanations for Zimbabwe's higher yields. First, cotton in Zimbabwe was cultivated by a smaller number of 'advanced' farmers instead of a large number of smallholders. Secondly, Zimbabwe lies further from the equator and has a higher yield potential (*ceteris paribus*). See Nyambara, 'Colonial policy and peasant cotton agriculture'; Worby, 'Discipline without oppression'.

<sup>678</sup> Bassett, *Peasant cotton revolution*, p. 93, 106.

<sup>679</sup> Some of the factors affecting yields overlap with those affecting quality. See discussion below.

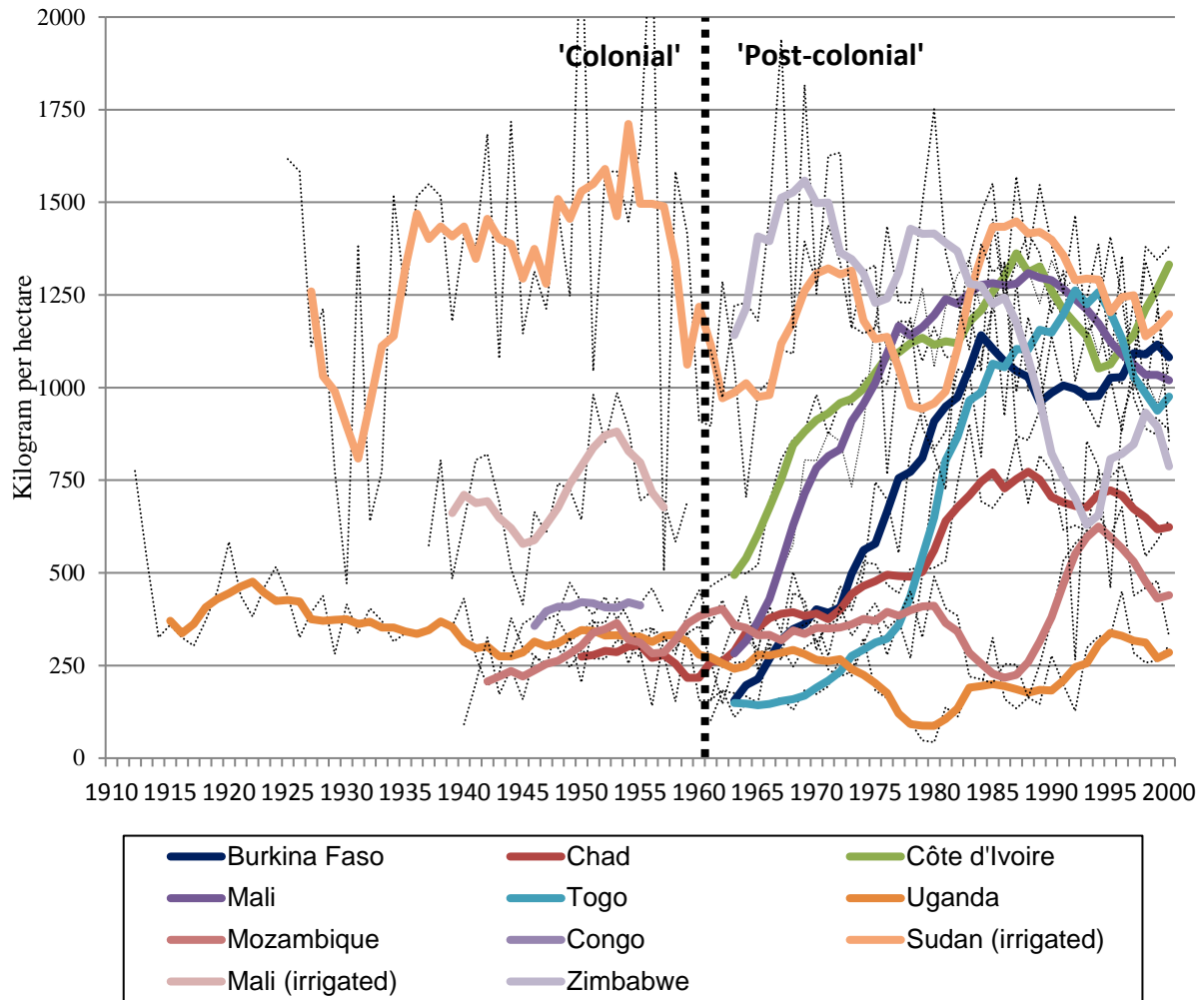
<sup>680</sup> De Brixhe, *De katoen in Belgisch-Congo*; Tohill, *Agriculture in Uganda*.

<sup>681</sup> Likaka, *Rural society and cotton*, p. 37.

<sup>682</sup> De Haas and Papaioannou, 'Resource endowments and agricultural commercialization'.

substantial capital investments and operating costs of irrigation schemes. Disappointing yields were one of the key factors in the failure of the *Office du Niger* in the French Soudan (Mali).<sup>683</sup>

**Figure 3.** Cotton yields in selected African countries, 1910-2000 (moving five-year-averages)



Sources: All data post-1960 from FAOSTAT Database. Chad before 1961 from Cabot, *Le bassin du Moyen Lagone*, p. 183; Congo from Belgisch Congo, *Verslag over het bestuur van de kolonie (1947-58)*; Mali from Van Beusekom, *Negotiating development*, p. 93; Mozambique from Bravo, *Cultura Algodoeira*, p. 135; Sudan before 1940 from Mollan, 'Business, state and economy', p. 112, and other data before 1961 from Said, 'The role of agriculture'; Uganda before 1961 from Uganda, *Annual report of the department of agriculture*.

While cotton yields in colonial Africa were consistently low, substantial variation existed in terms of the quality of the crop. Cotton from Congo and Uganda commanded a premium over *American Middling*, the industry standard, while cotton from colonial FWA and Mozambique

<sup>683</sup> Filipovich, 'Destined to fail', p. 257.



was of sub-standard quality.<sup>684</sup> Such differences were partly the result of local ecological conditions. Cotton is an extremely heterogeneous and adaptive crop, which hybridizes easily. This made it difficult to maintain staple length, uniformity, strength and colour.<sup>685</sup> In western Africa, newly introduced cotton varieties were susceptible to endemic cotton diseases, and degenerated quickly as a result of hybridization with local short-staple varieties.<sup>686</sup> Moreover, farmers in West Africa, who had long experience with growing cotton for local markets, were used to freely experimenting with and hybridizing different crop varieties.<sup>687</sup> In pre-colonial eastern Africa, and Uganda in particular, local cotton was grown on a much smaller scale. Moreover, local cotton varieties had a longer staple length, so that hybridization of the introduced varieties was less problematic to the quality of export cotton.<sup>688</sup> Throughout Africa, cotton was marketed in bulk.<sup>689</sup> Therefore, the maintenance of a uniform and high quality export crop was something individual farmers had little control over, or interest in.<sup>690</sup>

Although local ecological conditions mattered, there was also an important role for policy in maintaining crop conformity and quality, as illustrated by the case of colonial Uganda.<sup>691</sup> Only a few years after cotton had been introduced, and as soon as administrators and other invested parties realized that the future of the Protectorate was tied to the success of smallholder-grown cotton, concerns emerged over its quality. In 1908, to safeguard the production of 'export quality cotton,' the Protectorate government put a far reaching 'Cotton Ordinance' in place. The ordinance included strict planting instructions, forced cultivators to burn the remaining cotton stalks after the harvest to prevent a spill-over of diseases and prevent unwanted hybridization, forbade hand-ginning, and put a closely monitored seed distribution in place.<sup>692</sup> These regulations were burdensome for smallholders and they were

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<sup>684</sup> Brixhe, *De katoen in Belgisch-Congo*, p. 108; Pitcher, *Politics in the Portuguese empire*, p. 187; Roberts, 'The coercion of free markets', p. 233; Tothill, *Agriculture in Uganda*, p. 193.

<sup>685</sup> Poulton et al., 'Competition and coordination', p. 520; Robins, *Cotton and race across the Atlantic*, p. 130; Todd, *The world's cotton crops*, p. 17.

<sup>686</sup> Isaacman and Roberts, 'Cotton, colonialism and social history', p. 18; Bassett, *Peasant cotton revolution*, pp. 33, 80.

<sup>687</sup> Bassett, *Peasant cotton revolution*, Roberts, *Two worlds of cotton*.

<sup>688</sup> See discussion below, also Gaitskell, *Gezira*, p. 54; Robins, *Cotton and race across the Atlantic*, p. 144.

<sup>689</sup> Although a producer price distinction between high and low quality cotton was introduced in all major African cotton economies.

<sup>690</sup> The same problem of bulk and quality maintenance existed in the U.S.A. cotton sector in the early twentieth century. See Olmstead and Rhode, 'Hog-round marketing'.

<sup>691</sup> The importance of policy for contemporary cotton production is made in Poulton et al., 'Competition and coordination'.

<sup>692</sup> Ehrlich, 'Marketing of cotton'; Engdahl, 'Exchange of cotton'; Nayenga, 'Commercial cotton growing in Busoga District', p. 184.

enforced with fines, imprisonment and corporeal punishment. Still, it did serve its purpose of maintaining Uganda's good reputation on the world cotton market.<sup>693</sup>

In conjunction with representatives of the British textile industry and the major cotton ginners, the Ugandan colonial government undertook considerable research efforts to find suitable, disease resistant and high quality cotton varieties, considering issues such as staple length, ginning yield and disease resistance. The government designed a system of seed selection and distribution, and erected a considerable infrastructure of research stations and experimental farms.<sup>694</sup> Trials were conducted with strains of *Gossypium Barbadosense* (Lowland varieties found locally by the nineteenth century, and imported from Egypt)<sup>695</sup> and *Gossypium Hirsutum-Latifolium* (Upland varieties imported from the U.S.A. and Nyasaland).<sup>696</sup> The high-quality, long-staple 'Buganda Local' variety that came to characterize Ugandan export cotton was primarily based on the (imported) American Upland varieties 'Allen' and 'Sunflower', albeit further developed locally and 'probably mixed and interpollinated with other varieties'.<sup>697</sup> The introduction of the *SATU* variety during the early 1960s illustrates the complex history of cotton breeding in Uganda. This variety was developed on the basis of a particular Northern Nigerian strain of cotton, that was in turn based on a variety of an 'Allen' variety earlier developed in Uganda.<sup>698</sup> Farmers interviewed in Teso district were so satisfied by the characteristics of this new type of cotton that they no longer referred to it generically as *Epaba* (cotton), but used the variety name *Albar*.<sup>699</sup> *SATU* illustrates how painstaking breeding efforts could eventually pay off, albeit just a few years before the collapse of Uganda's cotton sector.

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<sup>693</sup> Unlike India, for example, which was known for producing cotton of a very bad quality. Robins, *Cotton and race across the Atlantic*; Todd, *The world's cotton crops*.

<sup>694</sup> The first cotton experiment station was opened in 1911. Nye and Hosking, 'history and development', in Tothill *Agriculture in Uganda*, p. 185. The stations became particularly important in the development of new cotton varieties: Serere and Bukalasa. See Tothill, *Agriculture in Uganda*, pp. 101-10.

<sup>695</sup> Although originally from the New World, Bassett, *Peasant cotton revolution*, pp. 31-2.

<sup>696</sup> Nye and Hosking, 'history and development'; Arnold, 'Origins and characteristics'.

<sup>697</sup> Arnold, 'Origins and characteristics', p. 154. Instead, Robins describes 'Uganda cotton' as a 'localized variant of *G. barbadense*'. Robins, *Cotton and race across the Atlantic*, p. 144. Ehrlich provides the most detailed account of how Uganda's export cotton variety came into existence. He describes how in the early years of cotton cultivation in Uganda, up to 1907, a wide range of (mostly unsuitable) cotton seeds were imported, which were mixed with local long staple varieties. Farmers were allowed to hand-gin their cotton and select their own seeds for planting. This policy resulted in a highly heterogeneous crop of low quality, seriously threatening the fragile reputation of Uganda's emerging cotton sector. In 1908, the government intervened with the stringent legislation discussed above. From this moment on, farmers were obliged to use cotton seeds provided by the government. This officially propagated variety was the localized American Upland variety described by Arnold. Ehrlich, 'Cotton and the Uganda economy'.

<sup>698</sup> Arnold, 'Origins and characteristics', pp. 162-3.

<sup>699</sup> 'Al' refers to the 'Allen Upland' variety, 'bar' to 'Blackarm Disease' resistant.

Figure 3 shows clearly that, after 1960, there was a clear divergence in rain-fed cotton yields. Yields in Uganda and Mozambique remained stagnant, and even declined to very low levels during the 1970s (Idi Amin's rule in Uganda) and the 1980s (civil war in Mozambique) respectively. In contrast, Chad experienced a substantial increase in yields, from a mere 250 kilograms per hectare to 750 kilograms per hectare. As least partly as a result of increasing yields, Chad could make a transition from coercion-based to incentive-based cotton production, and sustain its sector after independence. An even more impressive increase in cotton yields per hectare took place in FWA. Here, yields peaked at 1,000 to 1,250 kilograms per hectare in the 1980s.<sup>700</sup> During the colonial era, authorities in West Africa had not managed to control the problem of hybridization and had failed to develop a suitable, disease-resistant variety. However, persistent research efforts of the *Institut de Recherches du Coton et des Textiles Exotiques* (IRCT), founded in 1946 to coordinate French colonial cotton research, laid the groundwork for the take-off in the post-colonial period.<sup>701</sup> The pronounced yield gains were made after the introduction of a new strain of 'Allen' cotton, developed by the IRCT, and offered to farmers by the CFTD as part of its broader technology package. Frustrated with disappointingly low yields, colonial governments often shifted the blame to African idleness and bad farming practices.<sup>702</sup> However, the impressive performance of FWA in terms of yield shows that African farmers were perfectly capable of attaining high yields, as long as they were provided with the right cotton varieties and inputs.

## V. Cotton marketing

In this final core section of the paper, I discuss and compare cotton marketing conditions and policies across colonial Africa. Figure 4 shows the prices that African farmers were paid for their cotton, in nominal values converted into shillings (Pound sterling) (figure 4a), as a share of the world market price (figure 4b), and as a share of the producer price in Uganda figure 4c). Two clear patterns emerge from the different figures. Firstly, African farmers only profited marginally from the rapid increase of nominal cotton prices on the world market during the 1940s and early 1950s. Although nominal cotton producer prices did increase during the 1940s, the gap with the world market price also widened substantially. Only after

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<sup>700</sup> Because cotton varieties used in post-colonial FWA also had a comparatively high ginning outturn of seed cotton (i.e. more lint, less seed), its yield lead is even greater when expressed in terms of cotton lint. Lele, Van de Walle and Gbetibouo, 'Cotton in Africa', p. 10.

<sup>701</sup> Bassett, *Peasant cotton revolution*, p. 57; Lele, Van de Walle and Gbetibouo, 'Cotton in Africa', p. 27.

<sup>702</sup> See for example Robins, *Cotton and race across the Atlantic*, pp. 116-64.

the fall of the world market price during the late 1950s, did the share of the value accruing to farmers recover. Secondly, except for a limited number of years, Ugandan farmers received a substantially higher nominal value for their cotton than any of their counterparts in the other regions. On average for the entire period, Ugandan farmers received 63 per cent of the world market value for their cotton, those in Mali and Côte d'Ivoire 49 per cent,<sup>703</sup> in Chad 44 per cent, in Mozambique 40 per cent, and in Congo a meagre 36 per cent. Expressed as share of the Ugandan producer price, farmers in Mali and Côte d'Ivoire received 90 per cent of their Ugandan counterparts, those in Mozambique and Chad received 77 per cent, and those in Congo only 66 per cent.<sup>704</sup> The fact that Ugandan farmers received a better price, suggests that they had greater incentives than their counterparts elsewhere to cultivate cotton, which is consistent with the high cotton intensity and comparatively low levels of coercion observed in Uganda.<sup>705</sup>

What explains these substantial differences in the remuneration received by African farmers for their raw cotton? As noted in section IV above, part of the explanation may be found in quality differences. Still, Congolese cotton commanded a *good* price on the world market, while its primary producers received a *poor* remuneration for their crop. To understand why the prices African farmers received for their cotton differed so substantially, we have to zoom in on issues of *competition* and *coordination* in colonial cotton marketing.

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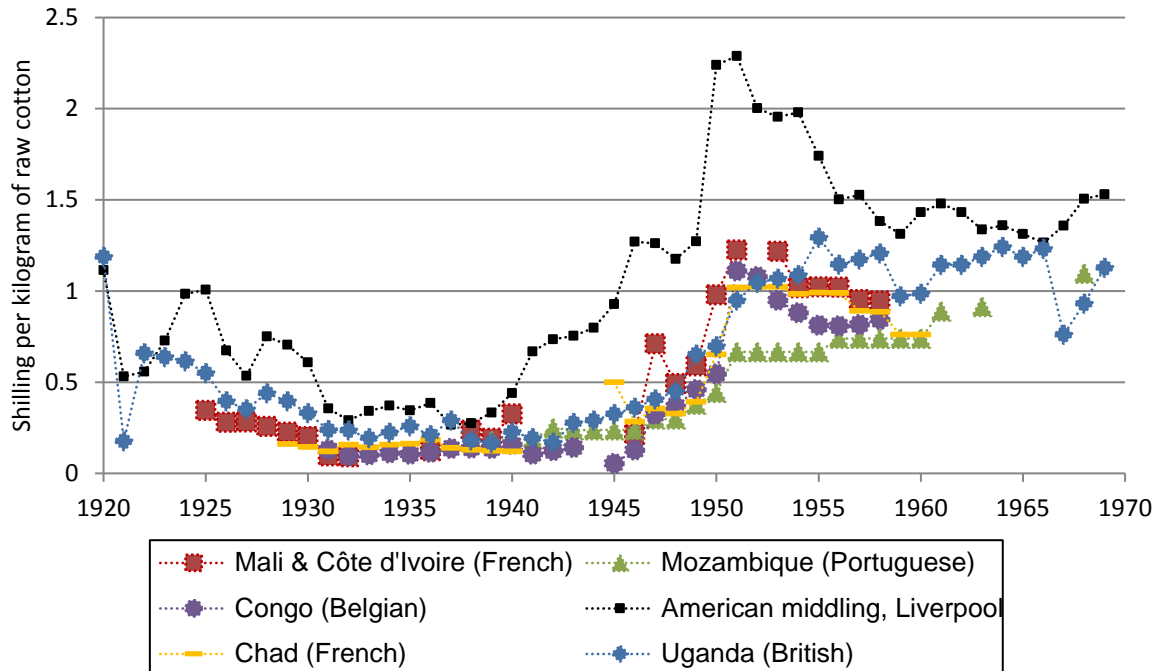
<sup>703</sup> This includes price data from *Office du Niger*. Scattered producers of rain-fed cotton received substantially lower prices.

<sup>704</sup> The calculations of world market shares and Uganda producer price shares are based on different available data points, and are therefore not entirely consistent with each other.

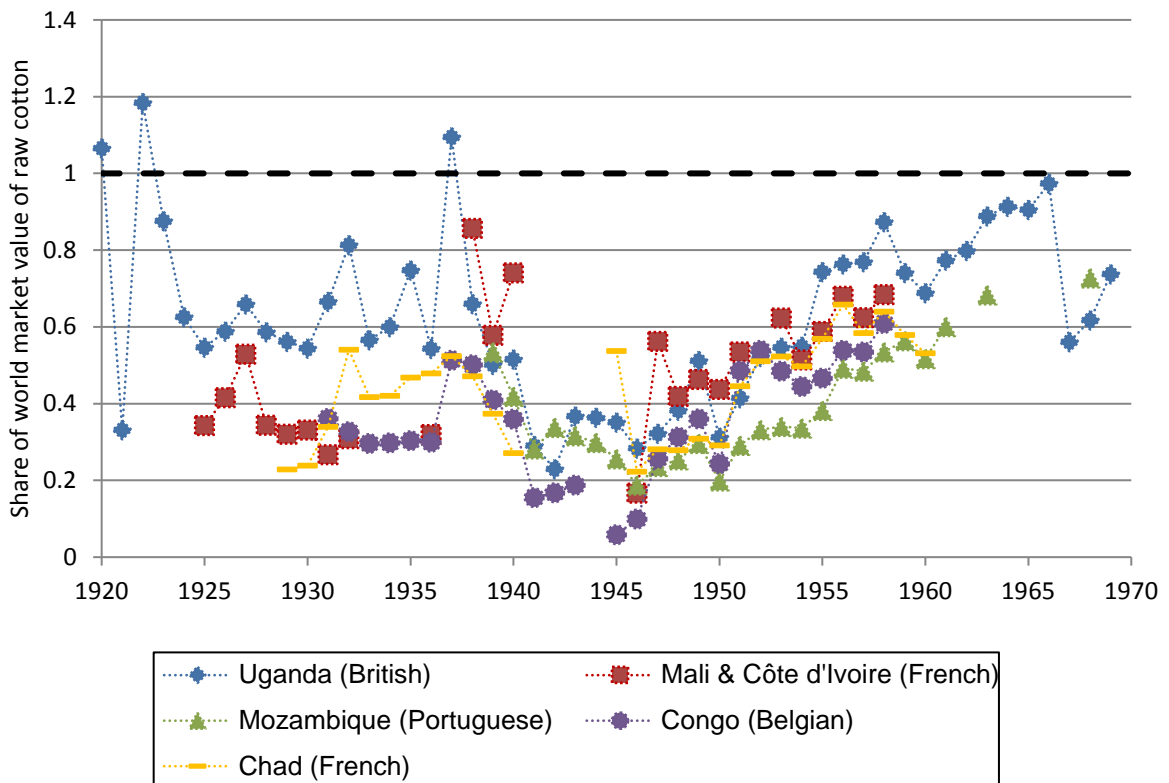
<sup>705</sup> Although the key advantage of Ugandan farmers was ecological, as argued in section III.

**Figure 4.** Price paid to African cultivators for raw (seed) cotton, 1920-70

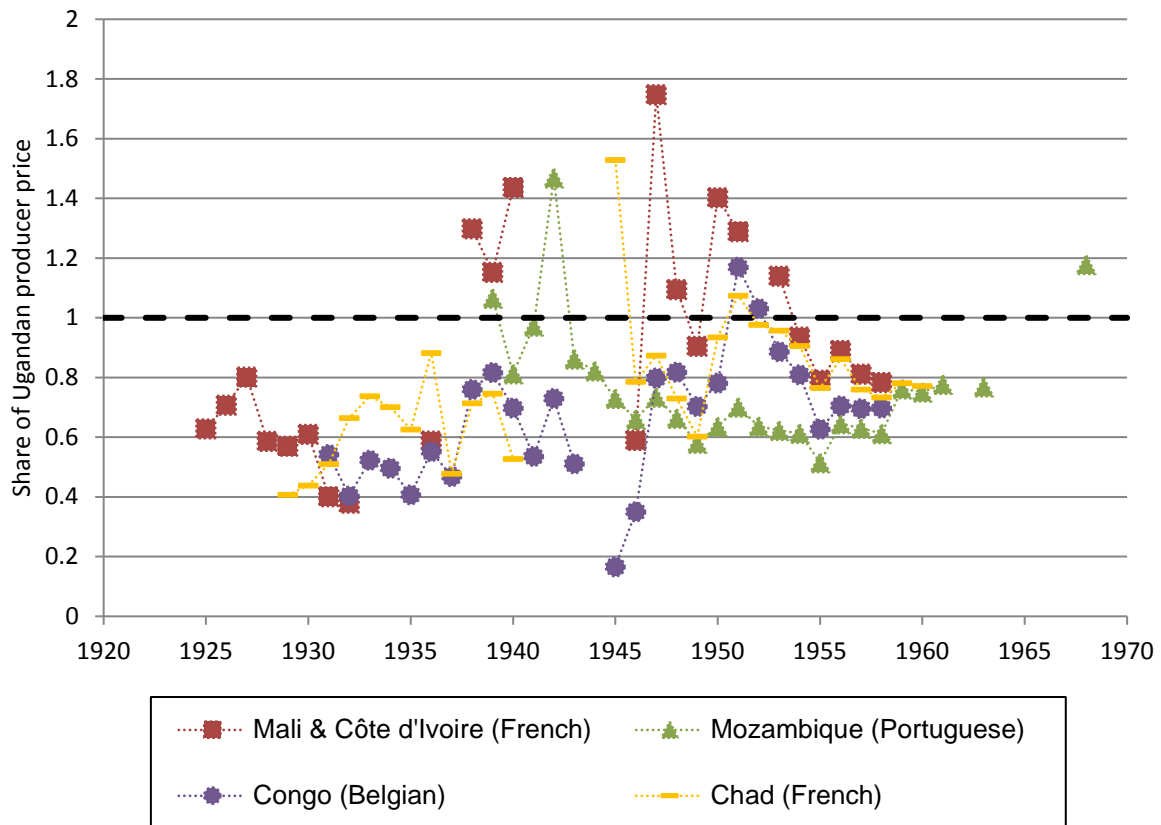
(A) Producer prices and world market values of raw cotton



(B) Share of the estimated world market value of raw cotton



(C) Share of the Ugandan producer price for raw cotton



Notes: To compare producer prices (expressed in seed cotton) and export prices (expressed in lint cotton), I divide the export prices by three, thus assuming a seed cotton to lint ratio of 3:1. I use prices of American Middling in Liverpool to estimate the world market price. The F.O.B. price of East African cotton in Mombasa was sometimes higher than this price, especially in the early 1920s and during the 1950s. Using the Mombasa series would reduce the grower share for the post-war years by a few percentage points, but would not affect level comparisons.

Sources: Producer prices: Chad from Cabot, *Le bassin du Moyen Lagone*, p. 186. Prices are quoted in (C.F.A.) francs and converted to Pound sterling using the infra Clio database; Congo 1924-46 from Likaka, *Rural society and cotton in colonial Zaire*, p. 88. Likaka's price data is derived from a range of sources. His post-1947 prices (derived from different sources) are unrealistically high and not in line with prices quoted in the official Belgian colonial reports. His pre-1931 prices (also derived from different sources) are unrealistically low. The prices from 1931-46 seem plausible and I use them. Congo post-1947 from Congo, *Verslag over het bestuur van de kolonie* (1947-58). Prices are quoted in Belgian francs and converted to Pound sterling using the Infra Clio database; Mozambique from Pitcher, *Politics in the Portuguese Empire*, p. 290. Prices are quoted in escudos and converted to Pound sterling using *ibid.*, p. 281; Uganda from De Haas, *Measuring rural welfare*; French West Africa from scattered price observations in Côte d'Ivoire from Bassett, *Peasant cotton revolution*, Mali (rain-fed) from Roberts, *Two worlds of cotton*, and Van Beusekom, *Negotiating development*, p. 135. Prices are quoted in (C.F.A.) francs and converted to Pound sterling using the infra Clio database.

The most outspoken ‘neo-mercantilist’ approach to African cotton marketing was taken by the Portuguese Salazar regime in Angola and Mozambique. Concessionary companies were obliged to sell their cotton to Portuguese buyers at a set price, and Portuguese textile companies were forced to buy cotton from the colonies. In years when the colonial price was below the world market price, imports from the colonies sustained Portugal's floundering and uncompetitive textile industry. If the colonial price was above the world market price, the premium benefitted the concessionary companies and the colonial treasury.<sup>706</sup> The French colonial cotton strategy was to fix producer prices at a (low) share of world market prices, and use cost calculations to establish profit margins for European traders and concessionary companies. The result was that cotton was exported from African ports at a price considerably below the world market value. The revenue generated by selling cotton at competitive prices in Europe was pocketed by the colonial governments and a further share distributed to the European companies.<sup>707</sup> Unlike the other colonial powers, the Belgians sought to establish a textile industry in the Congo, in order to develop its colony, and to diminish the need to procure expensive imports, after the devaluation of the Belgian franc in the 1920s. The Belgian colonial government fixed ‘gross’ and ‘net’ producer prices, and skimmed off the difference for purposes of colonial development.<sup>708</sup> In the British colonies, cotton marketing was organized less by the government, and instead dominated by private enterprise. According to Robins, the *British Cotton Growing Association* (BCGA), although given some preferential treatment, ‘was unable to “capture” the colonial state, and the interests of government were not synonymous with the interests of Lancashire’.<sup>709</sup> There were also substantial differences between individual British colonies. While the (failed) cotton project in Nigeria was driven by the BCGA, Uganda’s early cotton marketing was dominated by the *Uganda Company*, a commercial off-shoot of the local Protestant missionary movement.<sup>710</sup>

One issue that all colonial governments were facing, was that if they wanted Africans to grow cotton voluntarily, they had to be offered good prices and access to markets. Cotton seeds take up approximately two-thirds of the weight of raw cotton, but have a very low market value. Ginning by hand was an extremely laborious task and reduced the quality of the crop. At the same time, farmers were reluctant to carry their heavy raw cotton for long distances to

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<sup>706</sup> Much detail is provided in Pitcher, *Politics in the Portuguese Empire*.

<sup>707</sup> Tadei, ‘Measuring extractive institutions’; Roberts, *Two worlds of cotton*.

<sup>708</sup> Brixhe, *De katoen in Belgisch-Congo*.

<sup>709</sup> Robins, *Cotton and race across the Atlantic*, p. 120.

<sup>710</sup> Ehrlich, ‘Marketing of cotton in Uganda’.

ginneries. Therefore, small rural ginneries, buying outposts or travelling agents had to be present relatively close to the farm in order to incentivize farmers to market their cotton. Since mechanized ginning required substantial capital and technology, the erection and operation of a ginning infrastructure could not be organized by farmers themselves (at least initially).<sup>711</sup> At the same time, external public or private agents required a sufficiently large and constant input of cotton to warrant the investment of fixed capital. This ‘low-level equilibrium trap’ or ‘Catch 22’ was pertinent in West Africa, where European merchants dominated the processing industry, and lobbied the colonial governments to fix low producer prices.<sup>712</sup>

In Uganda, there were only 3 cotton ginneries in 1908, run by European firms in Kampala. This meant that farmers not only had to invest labour in cultivation, but also headload their crop for processing, which posed a great burden and disincentive. Governor Bell noted that, after having cultivated their plots,

The idea of having now to carry their crops on their heads all the way to ginnery at Kampala, ninety miles off, was ... much more than [peasants] were prepared to do ... and they declared they would far sooner let the cotton rot on the bush than to be put to such intolerable trouble.<sup>713</sup>

Over time, however, cotton marketing in Uganda, distinguished itself for being comparatively competitive. The number of ginneries exploded, from one in 1905 to 58 in 1920 and peaking at 180 in 1926,<sup>714</sup> and European companies were increasingly edged out by more agile Indian and Japanese competitors. While initially most cotton was exported to Liverpool, by the mid-1920s the majority of Ugandan cotton ended up in Bombay (India), partially for re-export to England, but mostly to be processed in the Indian textile industry.<sup>715</sup> During the 1930s, Japanese textile firms also became important buyers of Uganda cotton. European cotton capitalists were clearly disgruntled about this policy. One ginner appealed to the government that:

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<sup>711</sup> On the role of Africans in Uganda’s ginning industry see Ehrlich ‘Some social and economic implications’

<sup>712</sup> Bassett, *Peasant cotton revolution*, p. 62; Robins, *Cotton and race across the Atlantic*, pp. 72-114. The concept of a ‘low-level equilibrium trap’ in commodity marketing in rural Africa is developed in Poulton, Kydd and Dorward, ‘Overcoming market constraints’.

<sup>713</sup> Quoted in Taylor, ‘Role of the British cotton industry’, p. 37. Also, Engdahl, ‘Exchange of cotton’, p. 58.

<sup>714</sup> Uganda, *Report of the Commission of Enquiry into the Cotton Industry of Uganda, 1929*, Appendix 2.

<sup>715</sup> Ehrlich, ‘Marketing of cotton in Uganda’, p. 153.



It is indeed a curious commentary upon British Colonial rule that an industry that has been built up with British capital aided at the beginning by grants in aid from the British taxpayer, and later by voluntary contributions from the Lancashire cotton industry, should be jeopardised for the sole benefits of the natives of a Dependency that is through boycott and legislation endeavouring to shut out the manufactures of Lancashire, while some two thirds of that crop is now diverted to the Bombay market.<sup>716</sup>

Because the entry of large numbers of South Asians into cotton marketing increased competition for raw cotton, reduced overhead costs and improved market access, it initially benefitted Ugandan farmers.<sup>717</sup> South Asian investors were willing to face greater risks, and work with smaller profit margins, than their European counterparts. In 1918, Uganda's Governor explained to the British Secretary of State that '[Indian traders] perform a very useful function in this country where the European cannot trade in such a small way, and the native has not yet learned to do so on any extensive scale'.<sup>718</sup> South Asian entrepreneurs were responsible for the construction of many small up-country ginneries, which substantially increased market access for remote African farmers.

The unwillingness to give preferential treatment to British firms, and the presence of South Asian traders and ginners, increased competition over the crop and weakened the power of European firms to manipulate prices. Still, the British authorities in Uganda increasingly intervened in the market. They used several arguments to justify market intervention: to prevent cheating of African growers by unscrupulous middlemen, to rationalize and standardize the industry to benefit cotton quality, and to prevent overcapitalization.<sup>719</sup> The colonial government created fixed market places, instituted a cotton tax, created ginning zones, designed production cost formulas to fix producer prices and set profit margins for the ginneries, and stimulated the formation of ginning associations. It is debatable whether these measures were beneficial to the sector as a whole.<sup>720</sup> Certainly, they disadvantaged smaller

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<sup>716</sup> Cited in *ibid.*, p. 170.

<sup>717</sup> The same traders who bought cotton also sold goods that farmers wanted to obtain, such as textiles, agricultural implements and bicycles. Ginneries often also functioned as shopping centres. *Ibid.*, p. 13.

<sup>718</sup> *Ibid.*, p. 133, also p. 173.

<sup>719</sup> In a comparative perspective, the argument that unscrupulous South Asian traders were particularly prone to cheating African cultivators is not very convincing. In colonial FWA, African growers were equally lifted (literally: scales were lifted to reduce the weight of the cotton) by the agents of French ginners. In Mozambique, cotton bought from farmers was unduly discounted because of quality issues. Bassett, *Peasant cotton revolution*, p. 76; Pitcher, *Politics in the Portuguese empire*, p. 125.

<sup>720</sup> The central thesis of Ehrlich is that it did not. Ehrlich, 'Marketing of cotton'.

Indian and African middlemen, as well as Africans aspiring to enter trading and processing, while established ginners were shielded from competition and were able to reap substantial profits.<sup>721</sup> African cultivators themselves were also not content with policies that limited competition. In 1929, the Buganda native parliament agreed unanimously that ‘in order to enable growers to understand the market the Government should provide them with weekly lists of price movements in Liverpool, Bombay and Japan’.<sup>722</sup> In the same year, Buganda’s King, wrote a letter to the Governor, noting that ‘the more competition is in existence the better price the grower gets’ and that

instead of giving a correct price the Syndicate [ginning association] reduces it; and we therefore find that it is not necessary for such associations to exist and ruin cotton industry and also the British Government should not interfere with this urging them to be formed and receive its support.<sup>723</sup>

In 1934, a group of organized African farmers from Busoga District criticized a newly introduced zoning system, arguing that it ‘gives an opportunity to the cotton buyers to reduce the prices of cotton, knowing that people cannot remove their cotton and sell it in other neighbouring districts which pay a fair price’.<sup>724</sup> Another group of farmers from Bukedi District petitioned a group of visiting British Members of Parliament against zoning legislation, arguing that

cotton is a saleable thing through which the growers hunt for money, so that they should be free to find out where a suitable price is. At present our cotton is under syndicate system, which it is disagreeable to the cotton growers. The business should be running freely, that is to say that every seller may make a bargain according to his wish, but not the buyer to have a fixed price.<sup>725</sup>

The fact that the share of the cotton value received by Ugandan growers declined from approximately 60 per cent in the 1920s and 1930s, to approximately 30 per cent in the 1940s (figure 4b) shows that farmers’ fears that colonial policies would result in the worsening of producer prices were well-founded.<sup>726</sup> Some of the funds accumulated by the marketing

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<sup>721</sup> Ehrlich, ‘Some social and economic implications of paternalism in Uganda’; Jamal, ‘Asians in Uganda, 1880-1972’, Lury, ‘Dayspring mishandled?’, pp. 231-2.

<sup>722</sup> Quoted in Ehrlich, ‘Marketing of cotton in Uganda’, p. 222.

<sup>723</sup> Quoted in *Ibid.*, p. 222.

<sup>724</sup> Quoted in *Ibid.*, p. 256.

<sup>725</sup> Quoted in *Ibid.*, pp. 257-8.

<sup>726</sup> For farmers’ protests against the low producer prices, see Bowles, ‘Economic anti-colonialism’.

boards were put in a Price Assistance Fund and used to compensate for the fall in world prices during the 1960s, but cotton taxes were also used to benefit development projects outside agriculture.<sup>727</sup> Still, despite the fact that marketing arrangements became increasingly extractive, Ugandan farmers continued to receive a *comparatively* good price for their cotton. Even when markets were more tightly regulated and characterized by a higher degree of extraction, processing and trade were still organized more efficiently than elsewhere in colonial Africa. This was partly as a result of the favourable geography of Uganda's cotton regions, particularly their proximity to lakes (Victoria and Kyoga), and the expansion of Uganda's road network during the first two decades of the twentieth century, for which large amounts of forced labour were used, and partly because of the presence of South Asian ginners and traders, who were more agile and operated with tighter margins than their European counterparts elsewhere.

## **VI. Conclusion**

This study has re-evaluated the history of cotton in twentieth century Sub-Saharan Africa in a comparative perspective. I focused on the diversity of cotton outcomes in colonial and post-colonial Africa, and have argued that the historical record does not warrant the conclusion that the cultivation of cotton in Africa was somehow 'doomed to fail.' Cotton had distinct advantages for farmers in marginal rural areas. Unlike food crops, cotton always found a steady demand on international markets, even though world market prices were highly competitive. Moreover, cotton grew well in dry savanna areas, and its storability and high value for weight made it suitable for landlocked areas. Cotton, however, is also a demanding crop, and it was only viable and profitable to African farmers if specific conditions were met. I have argued that effective policy and top-down coordination have proven particularly important in the case of cotton, since the crop requires local processing, concerted efforts to maintain yields and quality, and food security measures to compensate for its labour intensive, inedible nature. The more challenging local conditions, the more crucial the role of policy to break labour bottlenecks, increase cotton yields and quality, and improve market access.

This analysis has implications for how we see the role and impact of the colonial state on African rural development. Instead of framing colonial policies as stubborn and overbearing, I

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<sup>727</sup> Bowles, 'Economic anti-colonialism'; Lury, 'Dayspring mishandled'; Young, Sherman and Rose *Cooperatives & development*, p. 47.

highlight their failure in making cotton a more viable and profitable crop for African farmers. With few inputs and low yields, cotton was only attractive to a few settings in Africa. In Uganda, rainfall patterns, the hybridization environment, and the presence of South Asian traders and ginners, in combination with a rather unimpressive set of conducive colonial policies, contributed to the widespread adoption of cotton. In most other colonial settings, the interaction of local conditions and supportive policies resulted in less favourable outcomes from the perspective of African farmers, resulting in failed or coercive regimes. In the second half of the twentieth century, cotton was more widely adopted, which is a reflection of the more successful policies. In particular, the post-colonial experience of Burkina Faso, Côte d'Ivoire, Mali and Togo shows that with more effective and committed external intervention, even the most challenging ecological conditions could be overcome. Particularly essential to this success story were the new, high-yielding cotton varieties resulting from persistent colonial and post-colonial research efforts, and the provision of an integrated set of agricultural innovations to African farmers. This 'success story' undermines narratives blaming either African conditions or farming practices for the limited success of cotton in colonial Africa. Instead, it exposes the failure of colonial states and cotton interests to make cotton a more viable and profitable proposition for African smallholders as the true reason for the failure of colonial cotton projects.

Why were colonial governments so ineffective in making cotton work for African cultivators? Firstly, colonial governments failed to realize their ambitions. Although little is known about the amounts of financial resources committed to colonial cotton projects, the budgets of colonial governments in general were very constrained. The research capacity and understanding of African agro-ecological conditions was equally limited.<sup>728</sup> Coercion was a cheap and easy – but mostly ineffective – alternative for more conducive efforts.<sup>729</sup> Secondly, the ambitions of cotton projects were often highly ambiguous, and the result of conflated aims to supply the metropole with cheap raw materials, to 'educate' Africans, to provide an investment opportunity for European firms or to make the colonial territory solvent. The relative success of Ugandan colonial cotton policies can be traced back to the absence of such conflated motives and the simple fact that the Ugandan treasury soon became highly

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<sup>728</sup> Richards, *Indigenous agricultural revolution*.

<sup>729</sup> Anne Pitcher makes this point explicitly about the Portuguese colonies. Pitcher, *Politics in the Portuguese empire*, p. 137, 202. Also Bassett, *Peasant cotton revolution*; Roberts, *Two worlds of cotton*.

dependent on cotton.<sup>730</sup> In conclusion, cotton failed to contribute to widespread rural development in colonial Africa, not because it was inherently unsuitable to African conditions, but because of its particular characteristics, its voluntary adoption required conducive policies that far exceeded the capacities of African colonial states.

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<sup>730</sup> Here, a comparison with Ghana is in place, where cotton was introduced but received no backing at all from the colonial state and made no attempt to fight diseases or organize marketing. See Dumett, 'Obstacles to government-assisted agricultural development'.

## Summary

The economic history of Sub-Saharan Africa is characterized by geographically and temporally dispersed booms and busts. The export-led ‘cash-crop revolution’ in parts of Sub-Saharan Africa during the colonial era is a key example of an economic boom. This thesis examines how external influences and local realities shaped the nature, extent and impact of the ‘cash-crop revolution’ in colonial Uganda, a landlocked country in central east Africa, where cotton and coffee production for global markets took off following completion of a railway to the coast. The thesis consists of five targeted ‘interventions’ into contemporary debates of comparative African development. Each of these five interventions is grounded in the understanding that the ability of rural Africans to respond to and benefit from trade integration during the colonial era was mediated by colonial policies, resource endowments and local institutions.

The first chapter reconstructs welfare development of Ugandan cash-crop farmers. Recent scholarship on historical welfare development in Sub-Saharan Africa has uncovered long-term trends in standards of living. How the majority of rural dwellers fared, however, remains largely elusive. This chapter presents a new approach to reconstructing rural living standards in a historical context, building upon the well-established real wage literature, but moving beyond it to capture rural realities, employing sub-national rural survey, census, and price data. The approach is applied to colonial and early post-colonial Uganda (1915–70), and yields a number of findings. While an expanding smallholder-based cash-crop sector established itself as the backbone of Uganda’s colonial economy, farm characteristics remained largely stagnant after the initial adoption of cash crops. Smallholders maintained living standards well above subsistence level, and while the profitability of cash crops was low, their cultivation provided a reliable source of cash income. At the same time, there were pronounced limits to rural welfare expansion. Around the time of decolonization, unskilled wages rose rapidly while farm incomes lagged behind. As a result, an urban–rural income reversal took place. The study also reveals considerable differences within Uganda, which were mediated to an important extent by differential resource endowments. Smallholders in Uganda’s banana regions required fewer labour inputs to maintain a farm income than their grain-farming counterparts, creating opportunities for additional income generation and livelihood diversification.

The second chapter zooms in on labour migration which connected Belgian-controlled Ruanda-Urundi to British-controlled Buganda, the central province of Uganda on the shores of Lake Victoria. The emergence of new labour mobility patterns was a key aspect of economic change in colonial Africa. Under conditions of land abundance and labour scarcity, the supply of wage labour required either the ‘pull’ forces of attractive working conditions and high wages, or the ‘push’ forces of taxation and other deliberate colonial interventions. Building upon primary sources, I show that this case diverges from the ‘conventional’ narrative of labour scarcity in colonial Africa. I argue that Ruanda-Urundi should be regarded as labour abundant and that migrants were not primarily ‘pushed’ by colonial labour policies, but rather by poverty and limited access to agricultural resources. This explains why they were willing to work for low wages in Buganda. I show that African rural employers were the primary beneficiaries of migrant labour, while colonial governments on both sides of the border were unable to control the course of the flow. As in the first chapter, this chapter highlights that the effects of trade integration on African rural development were uneven, and mediated by differences in resource endowments, local institutions and colonial policies.

The third chapter zooms out of the rural economy, evaluating the broader opportunity structures faced by African men and women in Uganda, and discussing the interaction of local institutions and colonial policies as drivers of uneven educational and occupational opportunities. The chapter engages with a recent article by Meier zu Selhausen and Weisdorf (2016) to show how selection biases in, and Eurocentric interpretations of, parish registers have provoked an overly optimistic account of European influences on the educational and occupational opportunities of African men and women. We confront their dataset, drawn from the marriage registers of the Anglican Cathedral in Kampala, with Uganda’s 1991 census, and show that trends in literacy and numeracy of men and women born in Kampala lagged half a century behind those who wedded in Namirembe Cathedral. We run a regression analysis showing that access to schooling during the colonial era was unequal along lines of gender and ethnicity. We foreground the role of Africans in the spread of education, argue that European influences were not just diffusive but also divisive, and that gender inequality was reconfigured rather than eliminated under colonial rule. This chapter also makes a methodological contribution. The renaissance of African economic history in the past decade has opened up new research avenues to study the long-term social and economic development of Africa. We show that a sensitive treatment of African realities in the evaluation of

European colonial legacies, and a critical stance towards the use of new sources and approaches, is crucial.

The fourth chapter singles out the role of resource endowments in explaining Uganda's 'cotton revolution' in a comparative African perspective. Why did some African smallholders adopt cash crops on a considerable scale, while most others were hesitant to do so? The chapter sets out to explore the importance of factor endowments in shaping the degrees to which cash crops were adopted in colonial tropical Africa. We conduct an in-depth case study of the 'cotton revolution' in colonial Uganda to put the factor endowments perspective to the test. Our empirical findings, based on an annual panel data analysis at the district-level from 1925 until 1960, underscore the importance of Uganda's equatorial bimodal rainfall distribution as an enabling factor for its 'cotton revolution'. Evidence is provided at a unique spatial micro-level, capitalizing on detailed household surveys from the same period. We demonstrate that previous explanations associating the variegated responses of African farmers to cash crops with, either the role of colonial coercion, or the distinction between 'forest/banana' and 'savannah/grain' zones, cannot explain the widespread adoption of cotton in Uganda. We argue, instead, that the key to the cotton revolution were Uganda's two rainy seasons, which enabled farmers to grow cotton while simultaneously pursuing food security. Our study highlights the importance of food security and labour seasonality as important determinants of uneven agricultural commercialization in colonial tropical Africa.

The fifth and final chapter further investigates the experience of African smallholders with cotton cultivation, providing a comparative explanatory analysis of variegated cotton outcomes, focusing in particular on the role of colonial and post-colonial policies. The chapter challenges the widely accepted view that (i) African colonial cotton projects consistently failed, that (ii) this failure should be attributed to conditions particular to Africa, which made export cotton inherently unviable and unprofitable to farmers, and that (iii) the repression and resistance often associated with cotton, all resulted from the stubborn and overbearing insistence of colonial governments on the crop per se. I argue along three lines. Firstly, to show that cotton outcomes were diverse, I compare cases of cotton production in Sub-Saharan Africa across time and space. Secondly, to refute the idea that cotton was *a priori* unattractive, I argue that the crop had substantial potential to connect farmers to markets and contribute to poverty alleviation, particularly in vulnerable, marginal and landlocked areas. Thirdly, to illustrate how an interaction between local conditions and government policies created conducive conditions for cotton adoption, I zoom in on the few yet significant 'cotton



success stories' in twentieth century Africa. Smallholders in colonial Uganda adopted cotton because of favourable ecological and marketing conditions, and policies had an auxiliary positive effect. Smallholders in post-colonial Francophone West Africa faced much more challenging local conditions, but benefitted from effective external intervention and coordinated policy. On a more general level, this chapter demonstrates that, from a perspective of rural development, colonial policies should not only be seen as overbearing and interventionist, but also as inadequate, failing to aid rural Africans to benefit from new opportunities created by trade integration.

# Appendices

## Appendices, Chapter 1

**Appendix Table A1. Farm surveys and censuses in banana areas with cash crops**

Survey location	District	year surveyed	# of households surveyed	Household size	Means per household				Income source for % of households			
					Food crops (acres)	Cotton (acres)	Coffee (acres)	Livestock (TLU)	Banana	Cotton	Coffee	Off-farm
Bukeka	Mengo	1935	72	3.6	3.2	1.4	0.9	0.4	<i>high</i> <sup>a)</sup>	79%	53%	25%
Lubogo	Mengo	1935	60	4.4	3.2	2.2	0.4	0.3	92%	88%	68%	18%
Kawoko	Masaka	1936	87	3.4	2.8	0.6	0.9	0.2	97%	83%	69%	15%
Kayuji	Masaka	1936	61	2.9	1.9	0.9	0.3	1.6	95%	92%	51%	30%
Namakata	Mengo	1937	75	3.1	4.1	2.3	1.3	0.3	<i>high</i>	85%	56%	3%
Namakata	Mengo	1962	86	4.7	2.6	0.5	3.4	0.6	<i>high</i>	62%	99%	10%
Namungalwe	Busoga	1934	168	4.5	3.4	1.9	0.0	1.6	<i>high</i>	<i>high</i>	0%	17%
Mpita	Busoga	1935	36	4.8	3.5	2.1	0.0	0.4	<i>high</i>	<i>high</i>	0%	58%
Kitayunjwa	Busoga	1938	118	4.7	4.5	2.0	0.0	0.6	<i>high</i>	<i>high</i>	0%	31%
Bwase	Bugwere	1935	190	4.6	4.6	1.8	0.0	1.2	71%	96%	0%	2%
Bujenje	Bunyoro	1936	88	4.6	2.6	0.9	0.1	0.5	*	*	*	40%
Bujenje	Bunyoro	1961	133	3.4	3.5	1.1	0.1	0.3	68%	81%	15%	44%
Buchunga	Bunyoro	1961	102	3.6	2.6	0.4	0.1	0.8	87%	56%	41%	60%
District sample	West Mengo	1963	1250	4.3	2.0	0.3	1.1	0.7	96%	64%	91%	17%
District sample	East Mengo	1963	1524	4.5	2.3	0.6	1.1	0.9	86%	72%	81%	16%
District sample	Mubende	1963	288	3.7	2.0	1.4	0.5	0.8	94%	69%	83%	9%
District sample	Masaka	1963	1051	5.0	2.9	0.2	1.4	0.9	96%	43%	94%	11%
District sample	Busoga	1963	1057	4.5	2.7	1.1	0.3	1.2	90%	94%	36%	10%
District sample	Bukedi	1963	769	5.6	3.2	1.7	0.0	2.3	85%	98%	0%	9%
District sample	Bugisu/Sebei	1963	891	6.3	4.2	1.0	0.4	2.4	91%	33%	71%	14%
District sample	Bunyoro	1963	444	4.8	2.2	0.5	0.2	0.6	81%	62%	51%	30%
District sample	West Nile/Madi	1963	740	6.1	3.8	0.7	0.0	1.9	92%	48%	0%	16%
<b>Unweighted average</b>			<b>(9290)</b>	<b>4.4</b>	<b>3.0</b>	<b>1.1</b>	<b>0.6</b>	<b>1.0</b>	<b>88%</b>	<b>72%</b>	<b>48%</b>	<b>22%</b>

Notes: a) *High* means that the far majority of households cultivated the crop but that no exact statistics have been recorded. Acreages are cultivated acreages. If land was cropped twice, it is included twice. If acreages of specific crops are noted to be intercropped, they are counted for half the stated acreage. Cattle are counted as 0.7 Tropical Livestock Units (TLU), goats and sheep as 0.1 TLU and chickens as 0.01 TLU, following International Livestock Centre for Africa 'Livestock production'. Note that in West Nile/Madi not banana, but cassava was the main staple.

Sources: Nye, 'Bukeka Mutala'; Stedman-Davies, 'Agricultural survey of Lubogo'; Masfield, 'Mutala survey of Kawoko'; idem, 'Mutala survey of Kayuji'; Todd, 'Agricultural change in a Mutalla'; Hayes and Struckey, 'Survey of Mpita Mutala'; Kirkham, 'Survey carried out in Namungalwe'; idem, 'Kitayunjwa Mutalla Survey'; Maidment, 'Bwase Mutala survey'; Kirkham, 'Mutala Survey of Bujenje'; Dunbar, 'Mutala survey of Bujenje (Kisonga)'; Low, 'Mutala Survey of Buchunga'; Uganda, *Agriculture 1935*, pp. 24-36; idem, *Census Vol. 1 & III*.

**Appendix Table A2. Farm surveys and censuses in grain areas with cash crops**

Survey location	District	year surveyed	# of households surveyed	Household size	Means per household				Income source for % of households			
					Food crops (acres)	Cotton (acres)	Coffee (acres)	Livestock (TLU)	Grain	Cotton	Coffee	Off-farm
Kakusi	Teso	1936	267	3.3	2.9	3.2	0.0	2.3	high	high	0%	15%
Kasilang	Teso	1937	141	5.1	6.2	3.2	0.0	*	high	high	0%	6%
Kasilang	Teso	1953	173	5.1	5.6	2.2	0.0	*	high	high	0%	24%
Moruita	Teso	1955	190	5.1	6.9	3.3	0.0	*	high	high	0%	low
Kachumbala	Bugwere	1933	275	4.0	6.5	3.0	0.0	2.2	high	high	0%	12%
Ajuluku	Teso	1935	148	4.6	5.0	3.4	0.0	2.9	high	high	0%	low
Wera	Teso	1935	131	5.3	6.6	2.4	0.0	5.7	high	high	0%	low
Adwaa	Lango	1935	82	5.3	8.4	1.8	0.0	4.5	high	high	0%	24%
District sample	Teso	1963	1567	5.5	7.1	2.1	0.0	5.0	97%	96%	0%	10%
District sample	Lango	1963	710	5.7	6.1	2.0	0.0	4.2	93%	95%	0%	18%
District sample	Acholi	1963	513	6.7	7.7	2.4	0.0	2.3	93%	95%	0%	17%
<b>Unweighted average</b>			<b>(4197)</b>	<b>5.1</b>	<b>6.3</b>	<b>2.6</b>	<b>0.0</b>	<b>3.6</b>	<b>94%</b>	<b>95%</b>	<b>0%</b>	<b>16%</b>

Notes: see table A1 of this appendix.

Sources: Williams, 'Agricultural survey – Kakusi'; Wilson and Watson, 'Two surveys of Kasilang Erony'; Wilson, 'Agricultural survey of Moruita Erony'; Maidment, 'Mutala survey of Kachumbala'; De Courcy-Ireland, 'Agricultural Survey – Muraka'; idem, 'Agricultural Survey Teso district'; Badcock, 'Agricultural survey: Adwaa Pacho'; idem, 'Agricultural survey of Ajuluku'; Uganda, *Census of Agriculture Vol. 1 & III*

**Appendix Table A3. Farm surveys and censuses in areas with few to no cash crops**

Survey location	District	year surveyed	# of households surveyed	Household size	Means per household				Income source for % of households			
					Food crops (acres)	Cotton (acres)	Coffee (acres)	Livestock (TLU)	Grain/Banana	Cotton	Coffee	Off-farm
Gayaza	Ankole	1935	43	4.2	2.6	0.0	0.1	0.3	91%	0%	53%	51%
Kasheregenyi	Kigezi	1936	23	5.7	6.3	0.0	0.0	1.2	high	0%	0%	100%
Kitozho	Kigezi	1938	175	5.4	4.4	0.0	0.1	2.4	82%	0%	18%	>77%
District sample	Ankole	1963	935	6.0	1.8	0.0	0.4	1.8	97%	0%	70%	30%
District sample	Kigezi	1963	875	6.5	4.3	0.0	0.1	0.8	96%	0%	41%	22%
<b>Unweighted average</b>			<b>(2051)</b>	<b>5.6</b>	<b>3.9</b>	<b>0.0</b>	<b>0.1</b>	<b>1.3</b>	<b>92%</b>	<b>0%</b>	<b>36%</b>	<b>51%</b>

Notes: see table A1 of this appendix.

Sources: Milne, 'Agricultural survey of Gayaza'; Wickham, 'Agricultural survey of Kasheregenyi Mutala'; Purselove and Wright, 'Kitozho Mutala Survey'; Uganda, *Census of Agriculture Vol. 1 & III*.

**Appendix Table B. Urban wages and prices**

	Unskilled wages, shillings/month		Producer prices, cent/lbs		Market prices (Kampala), cent/lbs unless otherwise indicated												
	Kampala	Rural	Cotton	Coffee	Banana	Maize	Millet	Sorghum	Cassava	Sweet Potato	Beans	Beef	Sugar	Cooking oil	Cloth (cent/yard)	Soap	Kerosene (cent/gallon)
<b>1915</b>	7.3	4.6	10.5	9.0	2.5	4.2	4.2	4.4	2.8	4.2	7.5	25.0	33.0	25.0	29.0	*	250.0
<b>1916</b>	9.8	6.1	12.2	10.1	1.3	3.7	4.5	4.5	8.3	1.4	7.5	33.0	50.0	25.0	38.0	*	*
<b>1917</b>	9.8	6.1	17.2	9.7	2.8	8.3	16.7	*	*		7.5	41.7	58.3	25.0	44.1	*	*
<b>1918</b>	9.8	6.1	16.2	9.1	5.0	20.0	*	*	16.7	4.7	15.0	50.0	50.0	50.0	50.6	*	*
<b>1919</b>	11.4	5.3	28.0	12.8	2.5	10.0	8.3	8.3	*	5.4	15.0	50.0	100.0	50.0	71.2	*	*
<b>1920</b>	13.8	6.4	54.0	17.0	1.5	6.0	*	*	2.0	3.0	15.0	50.0	83.3	50.0	64.4	80.0	550.0
<b>1921</b>	13.8	6.4	8.0	8.9	1.5	6.0	*	*	2.0	3.0	15.0	50.0	83.3	50.0	64.4	80.0	550.0
<b>1922</b>	13.8	6.4	30.0	8.6	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1923</b>	23.6	13.0	29.0	11.8	3.6	8.0	*	12.0	10.0	4.0	15.0	66.0	60.0	50.0	53.3	40.0	640.0
<b>1924</b>	23.6	22.5	28.0	25.0	5.4	15.6	*	10.0	13.0	6.0	15.0	66.0	60.0	50.0	53.3	40.0	512.0
<b>1925</b>	47.1	14.6	25.0	20.9	3.8	15.6	*	*	3.3	*	15.0	60.0	38.0	50.0	53.3	40.0	320.0
<b>1926</b>	30.9	13.5	18.0	18.8	3.8	77.9	20.0	20.0	3.3	*	20.0	100.0	35.0	40.0	50.0	40.0	288.0
<b>1927</b>	26.8	13.0	16.0	17.5	3.8	77.9	20.0	20.0	3.3	*	20.0	100.0	45.0	40.0	50.0	40.0	250.0
<b>1928</b>	30.9	14.1	20.0	18.2	3.8	19.5	5.0	25.0	20.0	*	10.0	66.0	40.0	40.0	70.0	60.0	262.5
<b>1929</b>	26.0	9.8	18.0	19.2	3.8	15.6	5.0	25.0	20.0	*	10.0	66.0	40.0	40.0	70.0	60.0	250.0
<b>1930</b>	26.0	9.8	15.1	15.2	2.0	7.8	5.0	25.0	6.7	*	10.0	50.0	25.0	40.0	55.0	86.0	250.0
<b>1931</b>	14.6	9.8	10.8	10.3	3.8	15.6	10.0	20.0	1.7	*	10.0	150.0	25.0	28.0	60.0	20.0	212.5
<b>1932</b>	13.0	8.7	10.7	11.5	1.5	9.7	10.0	10.0	1.7	*	10.0	50.0	25.0	20.0	50.0	20.0	212.5
<b>1933</b>	15.8	8.5	8.8	9.4	2.5	15.6	10.0	10.0	10.0	4.0	6.0	33.0	20.0	20.0	50.0	8.0	162.5
<b>1934</b>	16.5	6.9	10.1	8.5	2.5	7.8	10.0	10.0	1.0	1.8	10.0	40.0	20.0	20.0	50.0	8.0	162.5
<b>1935</b>	16.5	7.5	11.7	8.2	2.5	7.8	10.0	10.0	2.0	2.0	10.0	30.0	10.0	20.0	50.0	20.0	150.0
<b>1936</b>	16.5	7.5	9.5	7.4	1.9	11.7	10.0	10.0	2.0	2.0	10.0	40.0	10.0	20.0	50.0	20.0	162.5
<b>1937</b>	16.5	7.5	13.2	7.5	2.5	7.8	10.0	10.0	20.0	10.0	10.0	40.0	13.0	30.0	50.0	20.0	175.0
<b>1938</b>	16.5	7.5	8.2	5.5	4.4	11.7	12.0	12.0	6.0	6.0	11.0	40.0	11.0	60.0	50.0	20.0	175.0
<b>1939</b>	18.0	7.5	7.6	5.5	3.3	19.5	10.0	10.0	6.0	4.0	10.0	40.0	14.0	30.0	60.0	24.0	200.0
<b>1940</b>	23.3	9.2	10.3	9.5	2.5	11.7	10.0	10.0	6.0	4.0	6.0	40.0	17.0	30.0	60.0	32.0	188.3
<b>1941</b>	23.3	10.9	8.8	15.5	2.5	3.0	10.0	10.0	10.0	2.0	6.0	40.0	17.0	30.0	100.0	48.0	191.3
<b>1942</b>	23.3	10.9	7.7	9.1	3.8	11.7	8.0	10.0	7.0	4.0	8.0	40.0	19.0	30.0	200.0	42.0	191.3
<b>1943</b>	21.0	10.9	12.6	13.0	3.8	11.7	10.0	10.0	7.0	3.0	8.0	40.0	18.0	30.0	200.0	55.0	191.3
<b>1944</b>	21.0	10.9	13.2	12.4	3.8	11.7	10.0	10.0	7.0	3.0	9.0	40.0	18.0	30.0	200.0	55.0	191.3

	Kampala	Rural	Cotton	Coffee	Banana	Maize	Millet	Sorghum	Cassava	Sweet Potato	Beans	Beef	Sugar	Cook- ing oil	Cloth (cent/ yard)	Soap	Kerosene (cent/ gallon)
<b>1945</b>	16.5	10.2	14.8	14.0	3.8	11.7	10.0	10.0	5.0	2.0	10.0	60.0	22.0	30.0	200.0	55.0	177.0
<b>1946</b>	18.0	11.8	16.4	15.0	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1947</b>	25.0	13.4	18.5	17.0	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1948</b>	15.0	13.4	20.4	19.0	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1949</b>	26.0	15.3	29.6	21.0	7.0	13.0	*	*	5.0	6.0	22.0	45.0	24.0	69.6	283.3	89.0	328.6
<b>1950</b>	29.0	18.4	31.8	25.0	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1951</b>	28.5	18.4	43.2	40.0	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>1952</b>	35.0	24.0	47.6	50.0	8.0	28.0	*	*	8.0	8.0	42.0	120.0	46.0	121.4	239.8	136.0	492.9
<b>1953</b>	43.4	30.0	48.6	70.0	21.0	28.0	*	*	17.0	19.0	38.0	150.0	62.0	116.0	206.3	117.0	385.7
<b>1954</b>	45.5	33.0	49.4	100.0	16.8	26.0	*	*	*	*	*	189.5	44.6	*	*	*	277.3
<b>1955</b>	70.0	45.0	58.8	125.0	8.8	27.0	*	*	*	*	*	190.0	50.5	*	*	*	314.0
<b>1956</b>	65.5	52.0	52.1	75.0	7.4	25.0	*	*	17.5	13.0	*	190.0	54.0	136.5	143.0	146.0	327.8
<b>1957</b>	55.5	40.0	53.3	80.0	8.3	26.0	*	*	17.5	10.0	32.0	199.0	54.0	273.1	*	110.0	428.6
<b>1958</b>	64.5	43.0	54.9	80.0	8.3	30.0	*	*	14.0	17.0	30.0	151.0	60.0	110.9	208.0	160.0	392.9
<b>1959</b>	64.5	44.0	44.2	68.0	8.2	25.0	*	*	13.3	12.0	30.0	149.0	60.0	213.3	232.0	160.0	364.0
<b>1960</b>	44.5	58.0	44.8	56.0	6.0	22.0	*	*	8.4	9.0	30.0	150.0	60.0	213.3	250.0	154.0	372.3
<b>1961</b>	54.5	68.5	52.2	50.0	10.5	25.0	*	*	13.0	14.0	30.0	150.0	60.0	211.2	266.0	127.0	368.8
<b>1962</b>	112.0	82.6	52.1	55.0	5.4	26.0	*	*	9.8	11.0	33.0	150.0	63.0	213.3	200.0	111.0	463.8
<b>1963</b>	112.0	100.0	53.6	48.0	6.1	28.0	*	*	20.3	17.0	33.0	155.0	63.0	213.3	195.0	118.0	388.8
<b>1964</b>	112.0	100.0	56.5	57.0	7.5	29.0	*	*	13.3	11.0	27.0	177.0	63.0	289.7	200.6	118.0	400.0
<b>1965</b>	137.0	125.0	54.0	43.0	11.0	41.9	*	*	18.9	20.0	44.0	180.0	65.0	266.7	200.0	133.0	355.0
<b>1966</b>	137.0	125.0	56.0	40.0	10.1	39.0	*	*	7.0	10.0	45.9	185.5	65.0	264.4	200.0	181.1	405.0
<b>1967</b>	137.0	125.0	34.6	40.0	12.5	30.9	*	*	10.5	19.1	45.9	180.5	65.0	307.7	200.0	131.2	400.0
<b>1968</b>	137.0	130.0	42.3	40.0	9.3	32.2	*	*	10.5	13.2	48.2	194.5	65.0	305.4	299.5	180.2	428.6
<b>1969</b>	137.0	130.0	51.3	40.0	12.7	43.1	*	*	10.5	20.0	67.3	223.6	70.0	394.3	409.1	166.2	428.6

*Notes and sources on next page*

## Notes and sources for Appendix Table B.

Unskilled urban wage rates are monthly wages of unskilled construction workers employed by the colonial government. Unskilled wage rates from 1915-45 are from Uganda, *Blue Books*: wages for 1915-9 refer to 'native porters Buganda', 1920-4 to 'trade and manufacture', 1925-30 to 'government employment' (average of minimum and maximum rates), 1931-45 to 'government employment – public works' (average of minimum and maximum rates). Wages from 1946-53 are from Uganda, *Department of Labour*: 1947 refers to 'public works department – central areas' 1948-53 refer to 'building and construction'. Wages from 1954-70 are from Uganda, *Statistical Abstracts*, and refer to 'construction'. To ensure conservative assumptions in the light of my argument (to make sure that I would not underestimate wage rates in the colonial era, and that I would not overestimate them in the late-colonial and early post-colonial period) I took the average rather than the log-average (used by Frankema and Van Waijenburg, 'Structural impediments') whenever minimum and maximum rates rather than averages were reported. I also multiplied the averages by 1.5 for the period up to 1945 to represent the higher wage rates in Kampala relative to other areas of employment and did not make this correction for the post-war era. For the period 1946-70 wage rates were grouped in different ranges. I took the modal range (the most common one, i.e. 125 to 149 shilling) and took the mean of this range. Producer prices of cotton are average prices paid in cents to farmers per lbs. of unginne (seed) cotton of good quality. A number of more specific breakdowns suggest that price differences for cotton paid to cultivators in the key producing regions were not very large. This is an understandable reality. Cotton was only a marginally interesting proposition for smallholders. If the producer prices for a specific region would drop significantly below this average price, local smallholders would choose alternative sources of income over the cultivation of cotton. Coffee are prices in cent of 'Kiboko' (unhulled) coffee per lbs paid to farmers in Buganda. Prices are reported in different sources, summarized in Jørgensen, *Uganda*. Scattered price observations of coffee before 1945 are from Uganda, *Department of Agriculture*. For years without price observations, I interpolate, taking the grower price to be 25% of the export price of Uganda coffee. Kampala prices from 1915-45 are from the *Blue Books*. Prices from 1945-70 are from the *Statistical Abstracts*. In the absence of cooking oil prices up until 1945, I used the price of sesame seed multiplied by 2 (sesame seed has approximately 50% fat content and was used widely for cooking). Banana prices up until 1945 were reported as 'bunches'. I assume a bunch weight of 40 lbs. See Masfield, 'Some recent observations'.

**Appendix Table C. Urban and rural labour surveys**

Location	Timing	Setting	Sample size	% of 'migrants'	% living without dependants	% of income from wage	% with <u>local</u> smallholding
Kampala	March-April 1949	Urban	68	84%	78%	91%	<i>n/a</i>
Kampala	September 1950	Urban	55	65%	64%	86%	<i>n/a</i>
Kampala	September 1951	Urban	110	72%	60%	79%	<i>n/a</i>
Kampala	September 1952	Urban	155	68%	79%	81%	28%
Kampala	September 1953	Urban	175	82%	74%	78%	25%
Kampala	February 1957	Urban	171	80%	67%	89%	26%
Kampala	February 1964	Urban	180	79%	33%	91%	12%
Jinja	November 1951	Urban	96	<i>n/a</i>	<i>n/a</i>	83%	<i>n/a</i>
Jinja	November 1952	Urban	104	82%	74%	81%	13%
Jinja	June 1965	Urban	150	88%	27%	87%	35%
Mbale	March 1950	Rural	55	31%	47%	36%	53%
Mbale	February 1958	Rural	111	34%	37%	62%	56%
Mbale	June 1967	Rural	178	54%	16%	78%	78%
Fort Portal	February 1960	Rural	133	3%	28%	37%	76%
Gulu	February 1961	Rural	198	34%	<i>n/a</i>	56%	99%
Average (unweighted)		Urban	1264	78%	62%	85%	22%
Average (unweighted)		Rural	675	31%	32%	54%	72%

*Notes:* The survey results must be treated with care because sample was not completely randomly selected, and the surveyors admitted that they probably significantly underestimated non-wage income. 'Migrants' are defined as: all non-Baganda in Kampala, all non-Bagishu, -Bagwere or -Banyuli in Mbale, all non-Batooro in Fort Portal and all non-Acholi in Gulu.

*Sources:* Uganda, *African labourers in Kampala 1949*; idem, *Unskilled workers in Kampala 1952*; idem, *Unskilled workers in Kampala 1953*; idem, *Unskilled workers in Kampala 1957*; idem, *Unskilled workers in Kampala 1964*; idem, *Unskilled workers in Jinja 1952*; idem, *Unskilled workers in Jinja 1965*; idem, *African unskilled labourers in Mbale 1950*; idem, *African unskilled workers Mbale 1958*; idem, *African unskilled workers Mbale 1967*; idem, *African unskilled labourers in Fort Portal 1960*; idem, *African unskilled labourers in Gulu 1961*.



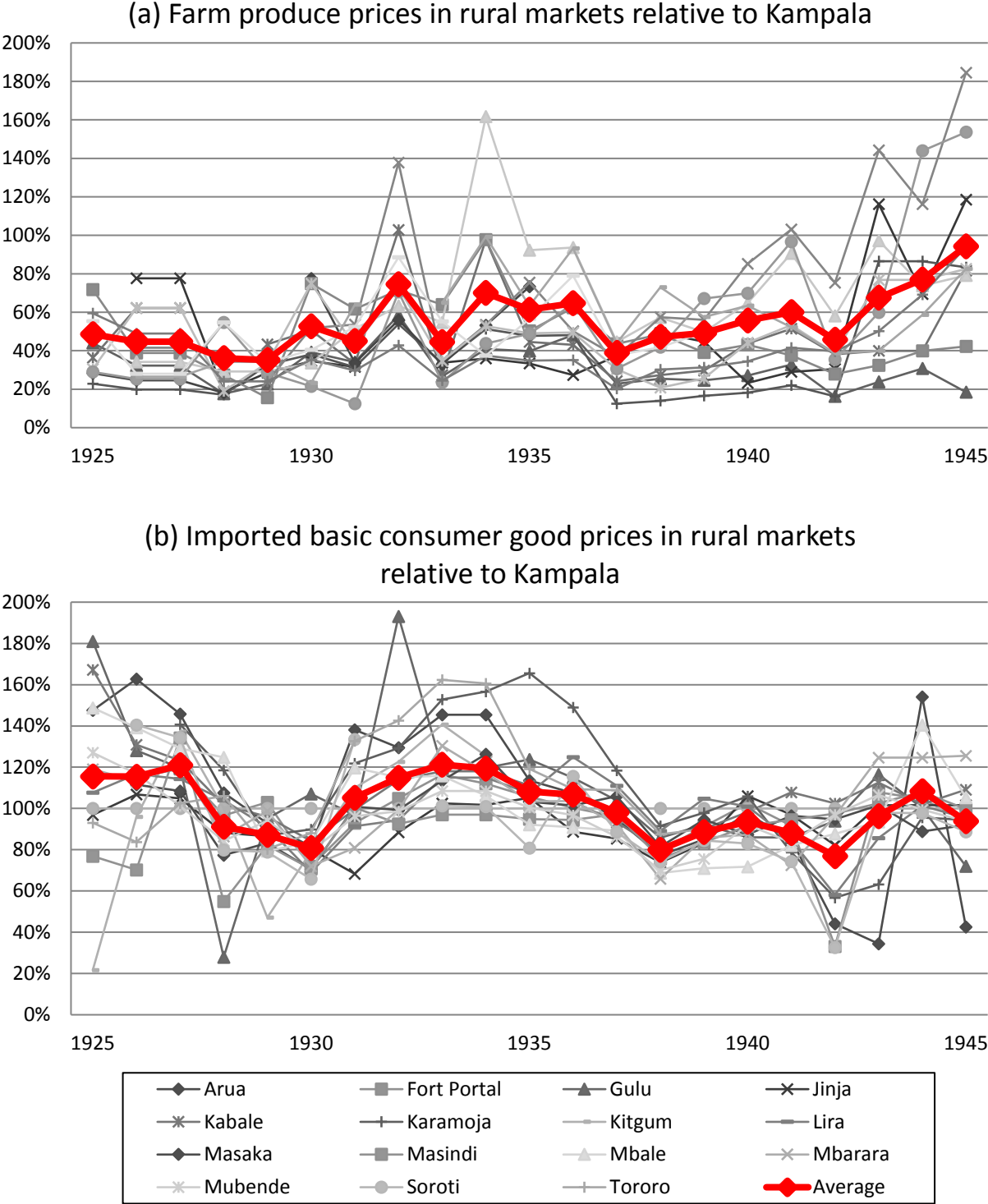
**Appendix Table D. Smallholder household income surveys**

Location	Income class	Sample		Source of income										
		size	Coffee		Cotton		Other (farm)		Wage labour		Other (non-farm)		Total	
			Shs	%	Shs	%	Shs	%	Shs	%	Shs	%	Shs	%
Bujenje (1936)	Village average	88	0	0%	64	57%	16	14%	30	27%	2	2%	112	100%
	>1000 shs	14	0	0%	666	30%	371	17%	413	19%	737	34%	2187	100%
Gulu area (1955)	500-999 shs	20	0	0%	289	43%	139	21%	120	18%	126	19%	674	100%
	<500 shs	26	0	0%	198	65%	50	16%	37	12%	20	7%	305	100%
	>4000 shs	18	2733	27%	105	1%	2516	25%	22	0%	4572	46%	9948	100%
Masaka area (1955)	2000-3999 shs	23	1138	42%	46	2%	452	17%	138	5%	943	35%	2717	100%
	<2000 shs	29	276	24%	113	10%	217	19%	229	20%	333	29%	1168	100%
	>8 acres	41	2559	68%	3	0%	486	13%	466	12%	264	7%	3777	100%
Buganda (1962/63)	1.5-8 acres	777	918	59%	31	2%	152	10%	166	11%	279	18%	1547	100%
	<1.5 acres	346	319	35%	17	2%	88	9%	194	21%	305	33%	923	100%

*Notes:* 'Other (farm)' includes sales of food crops, livestock and beer. 'Other (non-farm)' includes gifts, sales of home-made crafts and income from trade. The highlighted income classes are most consistent with the typical farm estimates. The estimated cotton income from a typical smallholding in the banana region in 1936 was 76 shs (compare Bujenje). The estimated cotton income from a typical smallholding in the grain region in 1955 was 294 shs (compare Gulu). The estimated coffee income from a typical smallholding in the banana region was 1875 shs in 1955 and 773 in 1962/63 (compare Masaka and Buganda). Smallholders in Bujenje, in fact, obtained 49 shs from tobacco instead of cotton. Since tobacco was also a commercial annual field crop, I add it to cotton. When the village was re-surveyed in 1961, the entire tobacco acreage had been replaced by cotton.

*Sources:* Kirkham, 'Mutala Survey of Bujenje'; Marketing Development Company, *Market surveys*; Uganda, *Coffee growers in Buganda*.

**Appendix Figure A. Rural-urban price differences, 1925-45**



Notes: a) I use the weights of products in the barebones subsistence basket (see table 3 in the main text) to create indices. Farm produce includes either the cheapest of millet, sorghum and maize (grain areas) or banana (banana areas), and meat. Beans had to be excluded due to a lack of bean prices in rural markets. Basic consumer goods include oil, sugar, cloth, soap, and kerosene. b) The sudden rise of farm prices in rural areas in 1942-5 (especially in the banana areas west of Kampala) should be partly attributed to several consecutive failed harvests in combination with an active campaign by the colonial state to export maize to aid the war effort. See *Uganda Agriculture*, for the years 1942-5 for more details.

Sources: Uganda, *Blue Books*, 1901-1945

## Appendices, Chapter 3

**Appendix Table A.** *Share of cohort born 1914-43 with >0 and >4 years of schooling*

		Any schooling		More than 4 years	
		Census 1991	Census 1959	Census 1991	Census 1959
<b>Buganda</b>	Men	75%	53%	41%	24%
	Women	48%	36%	20%	11%
<b>Eastern</b>	Men	49%	39%	27%	21%
	Women	12%	6%	4%	4%
<b>Northern</b>	Men	52%	32%	29%	17%
	Women	7%	6%	3%	1%
<b>Western</b>	Men	48%	33%	22%	11%
	Women	12%	8%	4%	2%

*Notes:* The 1959 census reports shares for the age cohort 16-45 (thus born between 1914 and 1943). We may expect that the younger individuals in this cohort were still accumulating years of schooling, which explains part of the difference. The remainder of the difference with the reported education of the same cohort in the 1991 census can be attributed to the upward biases of the 1991 census data discussed in section 2 of this paper (survival bias of educated individuals and/or adult education).

*Sources:* Uganda, *Census 1959*; IPUMS; Uganda, *1991 Census*

**Appendix Table B1. Logit regression on literacy, birth cohorts 1903-1972**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	literacy	literacy	literacy	literacy	literacy	literacy	literacy	literacy
Female	-1.337*** (0.0058)	-1.341*** (0.0058)	-1.413*** (0.0061)	-1.344*** (0.0058)	-1.420*** (0.0061)	-1.485*** (0.00641)	-1.361*** (0.0073)	-1.543*** (0.0081)
Kampala		1.374*** (0.0345)						1.087*** (0.0363)
Ganda			1.910*** (0.0147)		1.874*** (0.0157)	1.454*** (0.0191)		1.431*** (0.0201)
Anglican				0.289*** (0.0059)	0.301*** (0.0066)		0.265*** (0.0090)	0.238*** (0.0095)
Ganda*Anglican					0.453*** (0.0200)			0.107*** (0.0206)
Ganda*Female						0.704*** (0.0191)		0.716*** (0.0193)
Anglican*Female							0.0441*** (0.0117)	0.124*** (0.0123)
Constant	2.168*** (0.0086)	2.106*** (0.0087)	1.227*** (0.0128)	2.083*** (0.0087)	1.133*** (0.0130)	1.266*** (0.0130)	2.092*** (0.0091)	1.134*** (0.0136)
Cohort controls	Y	Y	Y	Y	Y	Y	Y	Y
Province controls	Y	Y	Y	Y	Y	Y	Y	Y
Observations	649,085	649,085	614,527	649,085	614,527	614,527	649,085	614,527

Notes: Robust standard errors between parentheses. \*\*\* indicates significance at the 1% level, \*\* at the 5% levels and \* at the 10% level.

Sources: IPUMS; Uganda, 1991 Census.

**Appendix Table B2. Summary statistics**

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Literacy	649,085	0.52	0.50	0	1
Years of schooling	645,976	3.65	3.84	0	18
Female	649,085	0.52	0.50	0	1
Kampala	649,085	0.02	0.12	0	1
Ganda	614,527	0.16	0.37	0	1
Anglican	649,085	0.39	0.49	0	1

*Source: Uganda, 1991 Census.*

**Appendix Table B3. Correlation matrix**

	<b>Yrschool</b>	<b>Literacy</b>	<b>Female</b>	<b>Kampala</b>	<b>Ganda</b>	<b>Anglican</b>
<b>Years of schooling</b>	1.00					
<b>Literacy</b>	0.83	1.00				
<b>Female</b>	-0.28	-0.28	1.00			
<b>Kampala</b>	0.14	0.09	0.00	1.00		
<b>Ganda</b>	0.25	0.25	0.00	0.21	1.00	
<b>Anglican</b>	0.07	0.05	0.00	0.00	-0.06	1.00

*Source: Uganda, 1991 Census.*

## Appendix, Chapter 4

**Appendix Table A.** *Substitution effect between cash crop and food crop acres*

	Ln(Cash Crop Acres per AME)					
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Food Acres)	0.1728*** (0.036)	0.1568*** (0.037)	0.294*** (0.057)			
Ln(Banana Acres)				0.1367** (0.063)	0.1321** (0.062)	0.1837*** (0.066)
Ln(Roots & Tubers Acres)				0.5200*** (0.144)	0.5001*** (0.140)	0.1431* (0.151)
Ln(Cereal Acres)				0.0368 (0.055)	0.0272 (0.055)	0.4278*** (0.142)
Ln(Protein crops Acres)				0.0077 (0.053)	-0.0065 (0.056)	0.2848 (0.164)
Ln(Livestock TLU per AME)		0.0231** (0.011)			0.0210* (0.010)	
Off-farm Income			-0.0479** (0.021)			-0.0413* (0.145)
Clustered St. Errors	Household	Household	Household	Household	Household	Household
Controls	Y	Y	Y	Y	Y	Y
No. observations	563	563	310	563	563	310
R <sup>2</sup>	0.475	0.478	0.401	0.493	0.496	0.412

*Notes:* \*Significant at 10%, \*\*5%, \*\*\*1%. The dependent variable is the natural logarithm of cash crop value per AME. Reported in parentheses are standard errors clustered at the household. Controls include region dummies and family types.

## List of references

### Primary sources, unpublished (frequently cited archives)

Kabale District Archives (Uganda): indicated in footnotes as KDA [location, description].

The National Archives (United Kingdom): indicated in footnotes as TNA [idem].

Archives Africaines (Belgium): indicated in footnotes as AAB [idem].

### Primary sources, unpublished (other)

Letter dated 16 June, 1937, Archives of the Church of Uganda, file 'Statistics 1937'.

'Native taxation', Uganda National Archives, Kampala, C-series, box 19, file A58.

Dunbar, A.R. (1962), 'Mutala survey of Bujenje (Kisonga) Bunyoro District' in SOAS Archives, PP MS 38, M.L. Perlman Collection, 122. Mutala Survey.

Kirkham, R.K., 'Kitayunjwa mutalla survey' in Jinja (Uganda) District Archives, Collection 'Agriculture', Box 15, File 12.

Low, M.H.F., 'Mutala survey of Buchunga Bunyoro District, 1962' in SOAS Archives, PP MS 38, M.L. Perlman Collection, 122. Mutala Survey.

Purseglove, J.W. and A.C.A. Wright, 'Kitozho mutala survey, Kigezi, 1940', a digital copy from the private papers of Jeremy Purseglove, obtained in the district archives in Kabale, Uganda, was kindly shared by Grace Carswell.

Todd, A.W.J., 'Agricultural change in Mutalla in Buganda over a quarter of a century' in Cambridge African Studies Library, 676.1: 63: 3301.11 (091).

UN Trusteeship Council 'Study of population, land utilization and land system in Ruanda-Urundi', 26 March 1957, Leiden Afrika Studiecentrum, Box 675.57.

### Primary sources, published

Annual Board of Trade, *Statistical abstracts for the Commonwealth* (London, 1946–9).

Badcock, W.J., 'Agricultural survey: Adwaa Pacho of Ogur Gombolola in the Erute County of Lango' in J.D. Tohill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 134-9.

Belgique, Ministre des Colonies, *Rapport sur l'administration Belge du Ruanda-Urundi pendant l'année* (Bruxelles, various years).

- Congo Belge, *Verslag over het bestuur van de kolonie/Rapport sur l'administration de la colonie* (Bruxelles, various years).
- De Courcy-Ireland, M.G., 'Agricultural Survey – Muraka, Ng'ora Saza in Uganda, *Annual Report of the Department of Agriculture for the Year ended 31 December, 1935 (Part I)* (Kampala, 1936), pp. 37-40.
- De Courcy-Ireland, M.G., H.R. Hosking and L.J.A. Loewenthal, *An investigation into health and agriculture in Teso, Uganda* (Kampala, 1937).
- De Courcy-Ireland, M.G., 'Agricultural survey Teso District, Wera Gombolola: Amuria Saza' in J.D. Tohill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 140-50.
- De Courcy-Ireland, M.G., 'Agricultural survey of Ajulukuku in Teso District' in J.D. Tohill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 161-6.
- Dunbar, A.R., 'Mutala survey of Bujenje (Kisonga), Bunyoro', *Uganda Journal*, 29, 1 (1965).
- East African Statistical Department, *African population of Tanganyika Territory: Geographical and tribal studies* (Nairobi, 1950).
- East African Statistical Department, *African population of Uganda Protectorate, 1948: Geographical and tribal studies* (Nairobi, 1950).
- East African Statistical Department, *Report on the census of the non-native population of Uganda Protectorate taken on the night of the 25<sup>th</sup> February, 1948* (Nairobi, 1953).
- East African Statistical Department, *General African census, August 1957, tribal analysis, part I* (Nairobi, 1957).
- Elliot, J.R. *Report on an investigation into conditions affecting unskilled labour and the supply thereof, within the Protectorate* (Entebbe, 1937)
- Food and Agriculture Organization of the United Nations, *Report on the 1950 world census of agriculture, 1: Census results by countries* (Rome, 1955).
- Food and Agriculture Organization of the United Nations, *Report on the 1960 world census of agriculture, 1, pt. A: Census results by countries* (Rome, 1966).
- Food and Agriculture Organization of the United Nations, *Global food losses and food waste: extent, causes, and prevention* (Rome, 2011).
- Food and Agriculture Organization of the United Nations, *FAOSTAT statistics database* (Rome, 2017)



- Hayes, T.R. and R.K. Kerkham, 'Namungalwe Mutala in Kigulu County of Busoga District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 85-6.
- Hayes, T.R. and R.W. Stuckey, 'Survey of Mpita Mutala, Ibulanku, Busoga', in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 74-84.
- International Livestock Centre for Africa, *Livestock production in tsetse affected areas of Africa: Proceedings of a meeting held in Nairobi, Kenya, from the 23rd to 27th November 1987* (Nairobi, 1988).
- Kirkham, R.K., 'Survey carried out in Namungalwe' in Uganda Protectorate *Annual report of the Department of Agriculture for the year ended 31 December, 1935, Part I* (Kampala, 1936), pp. 24-36.
- Kirkham, R.K., 'Mutala Survey of Bujenje, Bunyoro District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 122-33.
- Latham, M. C., *Human nutrition in the developing world*, Food and Nutrition ser., 29 (Rome, 1997).
- Loewenthal, L.J.A., 'A survey of diet and nutritional health at Giharo and Mutanda' *Agricultural Survey Committee Nutritional Report 5-Kigezi* (Entebbe, 1940).
- Maddison-Project, 'Population and GDP Database' (2013)  
<http://www.ggdc.net/maddison/maddison-project/home.htm> (accessed in 2013).
- Maidment, W.T.O., 'Bwase Mutala survey, Bugwere District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 167-81.
- Maidment, W.T.O., 'Mutala survey of Kachumbala, Bugwere' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 182-7.
- Marketing Development Company Ltd., *Market surveys Uganda, 1956* (Kampala, 1957).
- Masefield, G.B., 'Mutala survey of Kawoko in Mumyuka Mukuka of Musale Gombolola Buddu' in J.D. Tothill *Report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Entebbe, 1938), pp. 31-55.

- Masefield, G.B., 'Mutala survey of Kayuji in Mutuba XI, Muluka of Mutuba III, Gombolola of Buddu' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 56-73.
- Masefield, G.B., 'Some recent observations on the banana crop in Buganda', *East African Agricultural Journal*, 10 (1944), pp. 12-7.
- Meteorological Department of the East African Common Services Organization, *Monthly and annual rainfall in Uganda during the 30 years, 1931 to 1960* (Nairobi, 1965).
- Milne, H.L.G., 'Agricultural survey of Gayaza in Ankole District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 110-22.
- Moçambique, Colónia de, *Anuário Estatístico* (Lisboa, various years).
- Nye G.W., 'Survey of Bukeka Mutala, situated in the Gombolola Mutuba II in the country of Bulemezi' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 88-98.
- Orde-Browne, G. S. J., *Labour conditions in East Africa* (London, 1946).
- Parsons, D. J., *The systems of agriculture practiced in Uganda: the plantain-robusta coffee systems, with a note on the plantain-millet-cotton areas* (Kampala, 1960).
- Parsons, D.J., *The systems of agriculture practiced in Uganda: introduction and Teso system* (Kampala, 1960).
- Parsons, D.J., *The systems of agriculture practiced in Uganda: the Northern systems* (Kampala, 1960).
- Stedman-Davies, D., 'Agricultural survey of Lubogo in Entebbe District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 101-9.
- Tothill, J.D., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Entebbe, 1938).
- Uganda, *Blue Books of statistics* (Entebbe, various years).
- Uganda, *Annual report of the Department of Agriculture* (Entebbe, various years).
- Uganda, *Census returns 1911* (Entebbe, 1911).
- Uganda, *Census returns 1921* (Entebbe, 1921).
- Uganda, *Annual reports of the Department of Labour* (Entebbe, various years).
- Uganda, *Census returns 1931* (Entebbe, 1931).

Uganda, *Report of the committee of enquiry into the labour situation in the Uganda Protectorate, 1938* (Entebbe, 1938).

Uganda, *Second report of the labour advisory committee: organization of the south-western labour migration routes* (Entebbe, 1943).

Uganda, *Third report of the labour advisory committee: supervision of labour and other matters relating to conditions of employment in Uganda* (Entebbe, 1944).

Uganda, *Report on a cost of living survey carried out among African labourers in Kampala and district, March–April 1949* (Entebbe, 1949).

Uganda, *The pattern of income, expenditure and consumption of African unskilled labourers in Mbale, March 1950* (Entebbe, 1951).

Uganda, *The pattern of income, expenditure and consumption of African unskilled labourers in Jinja, November 1952* (Entebbe, 1953).

Uganda, *The patterns of income, expenditure and consumption of African unskilled labourers in Jinja, November 1952* (Entebbe, 1953).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Kampala, September 1952* (Entebbe, 1953).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Kampala, September 1953* (Entebbe, 1954).

Uganda, *Advancement of Africans in Trade* (Entebbe, 1956).

Uganda, *Statistical Abstracts* (Kampala, various years).

Uganda, *Revised crop acreage estimates 1945-1956* (Entebbe, 1957).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Kampala, February 1957* (Entebbe, 1957).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Mbale, February 1958* (Entebbe, 1958).

Uganda, *Uganda census 1959: African population* (Nairobi, 1959).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Fort Portal, February 1960* (Entebbe, 1960).

Uganda, *Uganda census 1959: Non-African population* (Nairobi, 1960).

Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Fort Portal, February 1961* (Entebbe, 1961).

Uganda, *Report on Uganda census of agriculture, Volume I* (Kampala, 1965).

Uganda, *The patterns of income, expenditure and consumption of African Unskilled Workers in Kampala, February 1964* (Entebbe, 1965).

- Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Kampala, February 1964* (Entebbe, 1965).
- Uganda, *Report on Uganda census of agriculture, Volume III* (Kampala, 1966).
- Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Jinja, June 1965* (Entebbe, 1966).
- Uganda, *Report on Uganda census of agriculture, Volume IV* (Kampala, 1967).
- Uganda, *The patterns of income and expenditure of coffee growers in Buganda, 1962/63* (Entebbe, 1967).
- Uganda, *The patterns of income, expenditure and consumption of African unskilled workers in Mbale, June 1967* (Entebbe, 1968).
- Uganda, *Report on the 1969 population census* (Kampala, 1971).
- Uganda, *Report on the 1980 population census* (Kampala, 1982).
- Uganda, *1991 Population and housing census* (Kampala, 1995).
- Uganda, *2002 Population and housing census* (Kampala, 2006).
- Wickham, R.T., 'Agricultural survey of Kasheregenyi Mutala in Kigezi District' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 85-6.
- Williams, E., 'Agricultural survey – Kakusi, Serere Saza, Teso District, 1936' in J.D. Tothill, ed., *A report on nineteen surveys done in small agricultural areas in Uganda with a view to ascertaining the position with regard to soil deterioration* (Kampala, 1938), pp. 151-60.

## **Secondary literature**

- Abdelkarim, A., *Sudan: The Gezira Scheme and agricultural transition* (London, 2013).
- Acemoglu, D. and J. A. Robinson 'Why is Africa poor?', *Economic History of Developing Regions*, 25, 1 (2010), pp. 21-50.
- Acemoglu, D., S. Johnson, and J.A. Robinson, 'The colonial origins of comparative development: An empirical investigation', *The American Economic Review*, 91, 5 (2001), pp. 1369-1401.
- Acemoglu, D., S. Johnson, and J.A. Robinson, 'Reversal of fortune: geography and institutions in the making of the modern world income distribution', *The Quarterly Journal of Economics*, 117, 4 (2002), pp. 1231-94.

- A'Hearn, B., J. Baten, and D. Crayen, 'Quantifying quantitative literacy: age heaping and the history of human capital', *The Journal of Economic History*, 69, 3 (2009), pp. 783-808.
- Ahluwalia, D.P.S., *Plantations and the politics of sugar in Uganda* (Kampala, 1995).
- Akyeampong, E.K., R.H. Bates, Nathan Nunn, and James A. Robinson, *Africa's development in historical perspective* (New York, 2014).
- Alesina, A., B. Brioschi, and E. La Ferrara, 'Violence against women: a cross-cultural analysis for Africa.' *National Bureau of Economic Research* (2016).
- Alesina, A., P. Giuliano, and N. Nunn, 'On the origins of gender roles: women and the plough', *The Quarterly Journal of Economics*, 128, 2 (2013), pp. 469-530.
- Allan, W., *The African husbandman* (Münster, 1965).
- Allen, R.C., 'The high wage economy and the industrial revolution: a restatement', *Economic History Review*, 68 (2015), pp. 1–22.
- Allen, R.C., Bassino, J.-P., Ma, D., Moll-Murata, C., and Van Zanden, J. L., 'Wages, prices, and living standards in China, 1738–1925: in comparison with Europe, Japan, and India', *Economic History Review*, 64, 1 (2011), pp. 8–38.
- Allen, R.C., Murphy, T.E., and Schneider, E.B., 'The colonial origins of the divergence in the Americas: a labor market approach', *Journal of Economic History*, 72 (2012), pp. 863–94.
- Allen, R.C., *The British industrial revolution in global perspective* (Cambridge, 2009).
- Alsan, M., 'The effect of the tsetse fly on African development', *The American Economic Review*, 105, 1 (2014), pp. 382-410.
- Amin, S. 'Underdevelopment and dependence in black Africa - origins and contemporary forms', *The Journal of Modern African Studies*, 10, 4 (1972), pp. 503-24.
- Amin, S., ed., *Modern migrations in Western Africa. Studies presented and discussed at the Eleventh International African Seminar, Dakar, April 1972.* (London, 1974).
- Anderman, T.L., R. Remans, S.A. Wood, K. DeRosa, and R.S. DeFries, 'Synergies and tradeoffs between cash crop production and food security: a case study in rural Ghana', *Food Security* 6, 4 (2014), pp. 541-54.
- Anderson, D. M., 'Depression, dust bowl, demography, and drought: the colonial state and soil conservation in East Africa during the 1930s', *African Affairs*, 83 (1984), pp. 321–43.
- André, C. and J. P. Platteau, 'Land relations under unbearable stress: Rwanda caught in the Malthusian trap', *Journal of Economic Behavior and Organization* 34 (1998), pp. 1-47.

- Arnold, M.H., 'The origins and characteristics of Uganda varieties' in Jameson, J.D., ed., *Agriculture in Uganda* (London, 1970).
- Arrighi, G., 'Labour supplies in historical perspective: a study of the proletarianization of the African peasantry in Rhodesia', *Journal of Development Studies*, 3 (1970), pp. 197-234.
- Arthi, V. and J. Fenske, 'Intra-household labor allocation in colonial Nigeria', *Explorations in Economic History*, 60, (2016), pp. 69-92.
- Ashraf, N., N. Bau, N. Nunn and A. Voena, 'Bride price and female education', *National Bureau of Economic Research* (2016).
- Asiwaju, A. I., 'Migrations as revolt: the example of the Ivory Coast and the Upper Volta before 1945', *The Journal of African History*, 17, 4 (1976), pp. 577-94.
- Atkinson, D.R., 'Cotton: this season and the next', *The Empire Cotton Growing Review*, 30, 3 (1953)
- Austen, R.A. *African economic history: internal development and external dependency*. (London, 1987).
- Austin, G., *Labour, land, and capital in Ghana: from slavery to free labour in Asante, 1807-1956* (Rochester, 2005).
- Austin, G., 'Reciprocal comparison and African history: tackling conceptual Eurocentrism in the study of Africa's economic past', *African Studies Review*, 50, 3 (2007), pp. 1-28.
- Austin, G., 'Resources, techniques, and strategies south of the Sahara: revising the factor endowments perspective on African economic development, 1500–2000', *Economic History Review*, 61 (2008), pp. 587-624.
- Austin, G., 'The 'reversal of fortune' thesis and the compression of history: perspectives from African and comparative economic history', *Journal of International Development*, 20, 8 (2008), pp. 996-1027.
- Austin, G., 'African economic development and colonial legacies', *Revue Internationale de Politique de Développement* (2010).
- Austin, G., 'Labour intensity and manufacturing in West Africa, c.1450 – c.2000', in G. Austin and K. Sugihara, eds., *Labour-intensive industrialization in global history* (London, 2013), pp. 201-30.
- Austin, G., 'Explaining and evaluating the cash crop revolution in the 'peasant' colonies of tropical Africa, ca. 1890 – ca. 1930: beyond 'vent for surplus'', in E. Akyeampong, R. H. Bates, N. Nunn, and J. A. Robinson, eds., *Africa's development in historical perspective* (Cambridge, 2014), pp. 295–320.

- Austin, G., 'Vent for surplus or productivity breakthrough? The Ghanaian cocoa take-off, c. 1890–1936', *The Economic History Review*, 67, 4 (2014), pp. 1035-1064.
- Austin, G. and S. Broadberry, 'Introduction: The renaissance of African economic history', *Economic History Review*, 67 (2014), pp. 893–906.
- Austin, G., J. Baten, and B. van Leeuwen, 'The biological standard of living in early nineteenth-century West Africa: new anthropometric evidence for northern Ghana and Burkina Faso', *Economic History Review*, 65 (2012), pp. 1280–302.
- Baker, R.C., 'Reorientation in Rwanda.' *African Affairs*, 69 (1970), pp. 141-54.
- Bantebya Kyomuhendo, B.G., and K.M. McIntosh, *Women, work and domestic virtue in Uganda, 1900-2003* (Oxford, 2006).
- Barnett, T., *The Gezira Scheme : an illusion of development* (London, 1977).
- Barrett, C.B, T. Reardon and P. Webb, 'Nonfarm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications', *Food Policy*, 26, 4 (2001), pp. 315-31.
- Barrios, S., B. Ouattara and E. Strobl, 'The impact of climatic change on agricultural production: is it different for Africa?' *Food Policy*, 33, 4 (2008), pp. 287-98.
- Bassett, T.J., *The peasant cotton revolution in West Africa, Côte d'Ivoire, 1880-1995*. (Cambridge, 2001).
- Baten, J. and J. Fourie, 'Numeracy of Africans, Asians, and Europeans during the early modern period: new evidence from Cape Colony court registers', *The Economic History Review*, 68, 2 (2015), pp. 632-656.
- Bates, R.H., *Beyond the miracle of the market: the political economy of agrarian development in Kenya* (Cambridge, 1989).
- Beckert, S., 'From Tuskegee to Togo: the problem of freedom in the empire of cotton', *The Journal of American History*, 92, 2 (2005), pp. 498-526.
- Beckert, S., *Empire of Cotton* (New York, 2015).
- Berg, E. J., 'Backward-sloping labor supply functions in dual economies—the Africa case', *The Quarterly Journal of Economics*, (1961), pp. 468-492.
- Bernal, V., 'Cotton and colonial order in Sudan: A social history, with emphasis on the Gezira Scheme', in A. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, New Hamp., 1995), pp. 96-118.
- Berry, S.S., *Cocoa, custom and socio-economic change in rural western Nigeria* (Oxford, 1975).

- Berry, S.S., *No condition is permanent: the social dynamics of agrarian change in sub-Saharan Africa* (Madison, Wis., 1993).
- Bertocchi, G. and Canova, F., 'Did colonization matter for growth? An empirical exploration into the historical causes of Africa's underdevelopment', *European Economic Review*, 46, 10 (2002), pp. 1851-71.
- Bingen, R.J., 'Cotton, democracy and development in Mali', *The Journal of Modern African Studies*, 36, 2 (1998), pp. 265-85.
- Binswanger, H.P. and J. McIntire, 'Behavioral and material determinants of production relations in land-abundant tropical agriculture', *Economic Development and Cultural Change*, 36, 1 (1987), pp. 73-99.
- Bloom, D. and J.D. Sachs, 'Geography, demography and economic growth in Africa', *Brookings Papers on Economic Activity* (1998), pp. 207-95.
- Bolt, J. and D. Bezemer, 'Understanding long-run African growth: colonial institutions or colonial education?', *Journal of Development Studies*, 45, 1 (2009), pp. 24-54.
- Bolt, J. and E. Hillbom, 'Long-term trends in economic inequality: lessons from colonial Botswana, 1921–74', *The Economic History Review* 69, 4 (2016), pp. 1255-84.
- Bolt, J. and E. Hillbom, 'Potential for diversification? The role of the formal sector in Bechuanaland Protectorate's economy, 1900–65', *Economic History of Developing Regions*, 30, 2 (2015), pp. 95–124.
- Boserup, E., *Woman's role in economic development* (New York, 1970).
- Bossuroy, T. and D. Cogneau, 'Social mobility in five African countries', *Review of Income and Wealth*, 59, 1 (2013), pp. 84-110.
- Botte, R. C. F., 'Rwanda and Burundi, 1889-1930: chronology of a slow assassination, part 1', *The International Journal of African Historical Studies*, 18, 1 (1985), pp. 53-91.
- Botte, R. C. F., 'Rwanda and Burundi, 1889-1930: chronology of a slow assassination, part 2', *The International Journal of African Historical Studies*, 18, 2 (1985), pp. 289-314
- Bowden, S., B. Chiripanhura, and P. Mosley, 'Measuring and explaining poverty in six African countries: a long-period approach', *Journal of International Development*, 20 (2008), pp. 1049–79.
- Bowles, B. D., 'Economic anti-colonialism and British reaction in Uganda, 1936-1955', *Canadian Journal of African Studies* 9, 1 (1975), pp. 51-60.
- Bravo, N.S., *A cultura algodoeira na economia do norte de Moçambique* (Lisboa, 1963).
- Brett, E. A., *Colonialism and underdevelopment in East Africa : the politics of economic change, 1919-1939* (London, 1973).



- Brierley, J. and T. Spear, 'Mutesa, the missionaries, and Christian conversion in Buganda', *The International Journal of African Historical Studies*, 21, 4 (1988), pp. 601-18.
- Brixhe, A., *De katoen in Belgisch-Congo* Brussel: Directie van Landbouw, Bossen en Veeteelt van het Ministerie van Kolonien, 1953
- Brown, D. S., 'Democracy, colonization, and human capital in Sub-Saharan Africa', *Studies in Comparative International Development*, 35, 1 (2000), pp. 20-40.
- Brown, S.T., 'Planning Kampala: histories of sanitary intervention and in/formal spaces', *Critical African Studies*, 6, 1 (2014), pp. 71-90.
- Bryceson, D.F., *Food insecurity and the social division of labour in Tanzania, 1919-85* (Oxford, 1990).
- Bryceson, D.F., 'The scramble in Africa: reorienting rural livelihoods', *World Development*, 30, 5 (2002), pp. 725-39.
- Buell, R.L., *The Native Problem in Africa* (New York, 1929).
- Burgess, A. P., 'Calories and proteins available from local sources for Uganda Africans in 1958 and 1959', *East African Medical Journal*, 39 (1962), pp. 449-63.
- Cabot, J., *Le Bassin Du Moyen Logone* (Paris, 1968).
- Cappelli, G. and J. Baten 'European trade, colonialism and human capital accumulation in Senegal, Gambia and Western Mali, 1770-1900.' *Journal of Economic History* (forthcoming).
- Carswell, G., 'Food crops as cash crops: the case of colonial Kigezi, Uganda', *Journal of Agrarian Change*, 3 (2003), pp. 521-51.
- Carswell, G., *Cultivating Success in Uganda: Kigezi Farmers and Colonial Politics* (Oxford, 2007).
- Chang, H.-J., 'Rethinking Public Policy in Agriculture: Lessons from History, Distant and Recent', *The Journal of Peasant Studies* 36, 3 (2009), pp. 477-515.
- Chrétien, J.-P. and E. Mworoha, 'Le cas de l'émigration des Banyarwanda et des Barundi vers l'Uganda', In Commission Internationale d'Histoire des Mouvements Sociaux et des Structures Sociales, ed., *Les Migrations internationales de la fin du XVIIIe siècle à nos jours* (Paris, 1980).
- Chrétien, J.-P., 'Des sédentaires devenus migrants : les motifs de departs des Barundais et des Rwandais vers l'Ouganda', *Cultures et developpement*, 10, 1 (1978), pp. 71-101.
- Chrétien, J.-P., *The great lakes of Africa: two thousand years of history* (New York, 2003).

- Chrétien, J.-P., 'The slave trade in Burundi & Rwanda at the beginning of German colonization, 1890-1906' in H. Médard, and S. Doyle eds., *Slavery in the Great Lakes Region of East Africa* (Oxford, 2007), pp. 210-30.
- Clark, C. and M. Haswell, *The Economics of subsistence agriculture* (London, 1964).
- Cleave, J. H., *African farmers: labor use in the development of smallholder agriculture* (New York, 1974).
- Codere, H., *The biography of an African society, Rwanda, 1900-1960 : based on forty-eight Rwandan autobiographies* (Tervuren, 1973)
- Cogneau, D. and Moradi, A., 'Borders That Divide: Education and Religion in Ghana and Togo since Colonial Times', *Journal of Economic History*, 74, 3 (2014), pp. 694-729.
- Cogneau, D. and Rouanet, L., 'Living conditions in Côte d'Ivoire and Ghana, 1925–1985: what do survey data on height stature tell us?', *Economic History of Developing Regions*, 26, 2 (2011), pp. 55–82.
- Cohen, D.W., 'Food production and food exchange in pre-colonial Lakes Plateau Region', in R. Rotberg, ed., *Imperialism, Colonialism and Hunger: East and Central Africa*, (Massachusetts: Heath, 1983).
- Collier, P. and J.W. Gunning. 'Explaining African economic performance', *Journal of Economic Literature*, 37, 1 (1999), pp. 64-111.
- Collier, P. and S. Dercon, 'African agriculture in 50 years: smallholders in a rapidly changing world?', *World Development*, 63 (2014), pp. 92–101.
- Collier, P., 'Poverty Reduction in Africa', *Proceedings of the National Academy of Sciences*, 104, 43 (2007), pp. 16763-68.
- Cooper, F., *Plantation slavery on the east coast of Africa* (New Haven, 1977).
- Cooper, F., *Decolonization and African society: the labor question in French and British Africa* (Cambridge, 1996).
- Cordell, D.D. and J.W. Gregory, 'Labour reservoirs and population: French colonial strategies in Koudougou, Upper Volta, 1914 to 1939', *The Journal of African History*, 23, 2 (1982), pp. 205-24.
- Cordell, D.D., J.W. Gregory, and V. Piche, *Hoe and wage: a social history of a circular migration system in West Africa* (Boulder: Westview, 1996).
- Cornet, A., *Histoire d'une famine, Rwanda 1927-1930: crise alimentaire entre tradition et modernité* (Louvain, 1996).
- Curtin, P.D., *The world and the west: The European challenge and the overseas response in the age of empire* (Cambridge, 2002).

- Dak. O., A 'Geographical analysis of the distribution of migrants in Uganda' *Makerere University College, Department of Geography, Occasional Paper 11* (1968).
- Davis, P.J., 'On the sexuality of 'town women' in Kampala', *Africa Today*, 47, 3 (2000), pp. 29-60.
- De Dampierre, E., 'Coton noir, café blanc. deux cultures du Haut-Oubangui a la veille de la loi-cadre', *Cahiers d'Études Africaines*, 1, 2 (1960), pp. 128-47.
- De Haan, A., 'Livelihoods and poverty: the role of migration: a critical review of the migration literature', *The Journal of Development Studies*, 36, 2 (1999), pp. 1-47.
- De Haas, M. and E.H.P. Frankema, 'Tracing the uneven diffusion of missionary education in colonial Uganda: European influences, African realities and the pitfalls of church record data', *African Economic History Working Paper Series*, 25 (2016).
- De Haas, M. and E.H.P. Frankema, 'Gender, ethnicity and unequal opportunity in colonial Uganda: European influences, African realities and the pitfalls of parish register data', *The Economic History Review* (forthcoming).
- De Haas, M. and K.J. Papaioannou, 'Resource endowments and agricultural commercialization in colonial Africa: did labour seasonality and food security drive Uganda's cotton revolution?', *European Historical Economics Society Working Paper Series*, no.111 (2017).
- De Haas, M., 'Measuring rural welfare in colonial Uganda: why farmers would not work for wages', *African Economic History Working Paper Series*, 18 (2014).
- De Haas, M. 'Measuring rural welfare in colonial Africa: did Uganda's smallholders thrive?' *The Economic History Review*, 70, 2 (2017), pp. 605-31.
- De Janvry, A., M. Fafchamps and E. Sadoulet, 'Peasant household behavior with missing markets: some paradoxes explained', *Economic Journal*, 101, 409 (1991), pp. 1400-17.
- De Zwart, P., 'South African living standards in global perspective, 1835–1910', *Economic History of Developing Regions*, 26, 1 (2011), pp. 49–74.
- Deininger, K. and J. Okidi, 'Growth and poverty reduction in Uganda, 1999–2000: panel data evidence', *Development Policy Review* 21, 4 (2003), pp. 481-509.
- DesForges, A. Liebhafsky, *Defeat Is the Only Bad News: Rwanda under Musinga, 1896 – 1931* (Madison, Wis., 2011).
- Diamond, J. M., *Collapse: how societies choose to fail or succeed* (New York, 2005).
- Domar, E. D., 'The causes of slavery or serfdom: a hypothesis', *Journal of Economic History*, 30 (1970), pp. 18-32.

- Dorsey, L., 'The Rwandan colonial economy, 1916-1941' (unpub. Ph.D. thesis, Michigan State University, 1983).
- Doyle, S.D., *Crisis and decline in Bunyoro: population and environment in western Uganda, 1860-1955* (Athens: Ohio, 2006).
- Doyle, S.D., 'Parish baptism registers, vital registration and fixing identities in Uganda' in K. Breckenridge and S. Szreter, eds., *Registration and recognition: documenting the person in world history* (Oxford, 2012), pp. 277-98.
- Doyle, S.D., *Before HIV: sexuality, fertility and mortality in East Africa, 1900-1980* (Oxford, 2013).
- Duignan, P. and L.H. Gann, eds., *Colonialism in Africa 1870-1960, Volume 4 The economics of colonialism* (Cambridge, 1975).
- Duignan, P. and LH Gann, *Burden of empire: an appraisal of western colonialism in Africa south of the Sahara* (Stanford, 2013).
- Dumett, R.E., 'Obstacles to government-assisted agricultural development in West Africa: cotton-growing experimentation in Ghana in the early 20th century', *Agricultural History Review*, 23, (1975), pp. 156-72.
- Dupraz, Y., 'British and French colonial education in Africa: a discontinuity analysis at the border between French and English speaking Cameroon' (mimeo, Paris School of Economics, 2013).
- Easterly, W. and R. Levine, 'Africa's Growth Tragedy: Politics and Ethnic Divisions', *Quarterly Journal of Economics* 112 (1997), pp. 1203-50.
- Ehrlich, C., 'The economy of Buganda, 1893-1903', *The Uganda Journal*, 20, 1 (1956), pp. 17-26.
- Ehrlich, C., 'Cotton and the Uganda economy, 1903-1909', *The Uganda Journal*, 21, 2 (1957), pp. 162-75.
- Ehrlich, C., 'The marketing of cotton in Uganda, 1900-1950' (unpub. Ph.D. thesis, University of London, 1958).
- Ehrlich, C., 'Some social and economic implications of paternalism in Uganda', *The Journal of African History*, 4, 2 (1963), pp. 275-85.
- Elkan, W., 'The employment of women in Uganda' *Inter-African Labour Institute Bulletin*, 4 (1957), pp. 8-23.
- Elkan, W., *Migrants and proletarians: urban labour in the economic development of Uganda* (London, 1960).

- Elliot, C. M., 'Agriculture and economic development in Africa: theory and experience 1880-1914', In E.L. Jones and S.J. Woolf, eds., *Agrarian change and economic development* (London, 1969).
- Elliot, C. M., *Employment and income distribution in Uganda* (Norwich, 1977).
- Ellis, F. and G. Bahigwa, 'Livelihoods and rural poverty reduction in Uganda', *World development*, 31, 6 (2003), pp. 997-1013.
- Ellis, F., 'The determinants of rural livelihood diversification in developing countries', *Journal of Agricultural Economics*, 51, 2 (2000), pp. 289-302.
- Ellis, F., *Rural livelihoods and diversity in developing countries* (Oxford, 2000).
- Engdahl, T., 'The exchange of cotton: Ugandan peasants, colonial market regulations, and the organisation of international cotton trade, 1904-1918' (unpub. Ph.D. thesis, Uppsala University, 1999)
- Fafchamps, M., 'Cash crop production, food price volatility, and rural market integration in the Third World', *American Journal of Agricultural Economics*, 74, 1 (1992), pp. 90-9.
- Fafchamps, M., 'Vulnerability, risk management, and agricultural development', *African Journal of Agricultural Economics*, 5, 1 (2010), pp. 243-60.
- Feldmann, H., 'The long shadows of Spanish and French colonial education', *Kyklos*, 69, 1 (2016), pp. 32-64.
- Fenske, J., 'The causal history of Africa: a response to Hopkins', *Economic History of Developing Regions* 25, 2 (2010), pp. 177-212.
- Fenske, J., 'African polygamy: past and present', *Journal of Development Economics*, 117, (2015), pp. 58-73.
- Ferguson, N., *Empire: How Britain Made the Modern World* (London, 2012).
- Fermont, A. and Benson, T., 'Estimating yield of food crops grown by smallholder farmers: a review in the Uganda context', *International Food Policy Research Institute discussion paper* 01097 (2011).
- Fieldhouse, D. K., *The West and the Third World : trade, colonialism, dependence, and development* (Oxford, 1999).
- Filipovich, J., 'Destined to fail: forced settlement at the Office du Niger, 1926-45', *Journal of African History* (2001), pp. 239-60.
- Fortt, J.M. and D.A. Hougham, 'Environment, population and economic history' in Richards, A.I., F.G. Sturrock and J.M. Fortt, eds., *Subsistence to commercial farming in present-day Buganda: an economic and anthropological survey* (Cambridge, 1973), pp. 17-46.

- Fortt, J.M., 'The Distribution of the immigrant and Ganda population within Buganda' in Audrey Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 77-118.
- Foster, P. Y. L., *Population growth and rural development in Buganda: a simulation of a micro-socio-economic system* (College Park, Md., 1968).
- Fourie, J., 'The data revolution in African economic history', *Journal of Interdisciplinary History*, 47, 2 (2016), pp. 193-212.
- Frankema, E.H.P., 'The origins of formal education in Sub-Saharan Africa: was British rule more benign?', *European Review of Economic History*, 16, 4 (2012), pp. 335-55.
- Frankema, E.H.P., 'Colonial education and post-colonial governance in the Congo and Indonesia', in E.H.P. Frankema and F. Buelens, eds., *Colonial exploitation and economic development: the Belgian Congo and the Netherlands Indies compared*, (London, 2013), pp. 153-77.
- Frankema, E.H.P., 'The biogeographic roots of world inequality: animals, disease, and human settlement patterns in Africa and the Americas before 1492', *World Development*, 70 (2015), pp. 274-85.
- Frankema, E.H.P. and M. van Waijenburg, 'Metropolitan blueprints of colonial taxation? lessons from fiscal capacity building in British and French Africa, c. 1880-1940', *The Journal of African History*, 55, 3 (2014), pp. 371-400.
- Frankema, E.H.P. and M. van Waijenburg. 'Structural impediments to African growth? New evidence from British African real wages, 1880-1965', *Journal of Economic History*, 72, 4 (2012), pp. 895-926.
- Frankema, E.H.P. and M. Jerven, 'Writing history backwards or sideways: towards a consensus on African population, 1850–2010', *Economic History Review*, 67 (2014), pp. 907–31.
- Frankema, E.H.P., J. Williamson and P. Woltjer, 'An economic rationale for the African scramble: the commercial transition and the commodity price boom of 1845-1885,' *Journal of Economic History* (forthcoming).
- Frederick, K., 'Global and local forces in deindustrialization: the case of cotton cloth in East Africa's Lower Shire Valley' *Journal of Eastern African Studies*, 11, 2 (2017), pp. 266-89.
- Freund, B., *The making of contemporary Africa: the development of African society since 1800*, (New York, 2016).
- Gaitskell, A., *Gezira, a story of development in the Sudan* (London, 1980).

- Gallego, F.A. and Woodberry, R., 'Christian missionaries and education in former African colonies: how competition mattered' *Journal of African Economies*, 19, 3 (2010), pp. 294-329.
- Goldthorpe, J.E., *An African elite: Makerere College students, 1922-1960* (London, 1965).
- Gravel, P.B., *Remera: a community in eastern Ruanda* (The Hague, 1968).
- Green, E.D., 'The politics of ethnonationalism in contemporary Uganda: the case of Buganda' (unpub. Ph.D. thesis, London School of Economics and Political Science, 2005).
- Green, E., 'From extensive to involutory growth: a dialectic interpretation of the boom and busts of cocoa production in the Gold Coast', *Journal of Agrarian Change* (2016).
- Grier, R.M., 'Colonial legacies and economic growth', *Public Choice*, 98, 3-4 (1999), pp. 317-35.
- Gutkind, P.C.F., 'Town life in Buganda' *Uganda Journal*, 20 (1956), pp. 37-46.
- Gutkind, P.C.F., *The royal capital of Buganda; a study of internal conflict and external ambiguity* (The Hague, 1963).
- Hall, J., 'Some aspects of economic development in Uganda', *African Affairs*, 51 (1952), pp. 124-32.
- Hansen, K. T., *African encounters with domesticity* (New Brunswick, N.J., 1992)
- Hanson, H.E., 'Queen mothers and good government in Buganda: the loss of women's political power in nineteenth-century East Africa', in S. Geiger, J.M. Allman and N.B. Musisi, eds., *Women in African colonial histories* (Bloomington, 2002), pp. 219-36.
- Hanson, H.E., *Landed obligation: the practice of power in Buganda* (Portsmouth, N.H., 2003).
- Hanson, H.E., 'Indigenous adaptation: Uganda's village schools, ca. 1880–1937', *Comparative Education Review*, 54, 2 (2010), pp. 155-74.
- Harlow, V. and E. Chilver, eds., *History of East Africa. Vol II* (Oxford, 1965).
- Harrison, A.E., J.Y. Lin and L.C.Xu, 'Explaining Africa's (dis)advantage', *World Development*, 63 (2014), pp. 59-77.
- Heldring, L. and J.A. Robinson, 'Colonialism and Economic Development in Africa', *National Bureau of Economic Research* (2012).
- Henderson, M. and W. Whatley, 'Pacification and gender in colonial Africa: evidence from the Ethnographic Atlas', *MPRA Paper* 61203 (2015).
- Herbst, J.I., *States and Power in Africa: Comparative Lessons in Authority and Control* (Princeton, N.J., 2000).

- Higginson, J.E., 'The making of an African working class: the Union minière du Haut Katanga and the African mine workers, 1907-1945' (Unpub. Ph.D. thesis, University of Michigan, 1979).
- Hill, P., *The migrant cocoa-farmers of southern Ghana: a study in rural capitalism*. (Cambridge, 1963).
- Hogendorn, J.S., 'Economic initiative and African cash farming: pre-colonial origins and early colonial developments' in Peter Duignan and Lewis H. Gann eds., *Colonialism in Africa 1870-1960*, Volume IV: *The economics of colonialism* (Cambridge, 1975)
- Hogendorn, J.S., 'The cotton campaign in Northern Nigeria, 1902-1914: an example of a public/private planning failure in agriculture' in A. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 50-70.
- Hogendorn, J.S., *Nigerian groundnut exports: origins and early development* (Zaria, 1978).
- Hopkins, A.G., 'The new economic history of Africa'. *Journal of African History*, 50 2, (2009), pp. 155-77.
- Hopkins, A.G., *An economic history of West Africa* (New York, 1973).
- Huillery, E., 'History matters: the long-term impact of colonial public investments in French West Africa', *American Economic Journal: Applied Economics*, 1, 2 (2009), pp. 176-215.
- Humphries, J., 'The lure of aggregates and the pitfalls of the patriarchal perspective: a critique of the high wage economy interpretation of the British industrial revolution', *Economic History Review*, 66 (2013), pp. 693–714.
- Hurst, H.R.G., 'A survey of the development of facilities for migrant labour in Tanganyika during the period 1926-1959', *Inter-African Labour Institute Bulletin*, 6, 4 (1959), pp. 50-91.
- Hutton, C., *Reluctant farmers? A study of unemployment and planned rural development in Uganda* (Nairobi, 1973).
- Iliffe, J., *Africans: The History of a Continent* (Cambridge, 1995).
- Iliffe, J., *The African poor: a history* (Cambridge, 1987).
- International Livestock Centre for Africa, 'Livestock Production in Tsetse Affected Areas of Africa' Proceedings of a Meeting Held in Nairobi, Kenya from the 23rd to 27th November 1987 (Nairobi, 1988).



- Isaacman, A.F. and R.L. Roberts, 'Cotton, colonialism and social history' in A.F. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 1-42.
- Isaacman, A.F. and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995).
- Isaacman, A.F., 'Peasants and rural social protest in Africa', *African Studies Review*, 33, 02 (1990), pp. 1-120.
- Isaacman, A.F., '*Cotton is the mother of poverty*': peasant resistance to forced cotton production in Mozambique, 1938-1961 (London, 1996).
- Jamal, V., 'Asians in Uganda, 1880-1972: inequality and expulsion', *Economic History Review*, 29 4, (1976), pp. 602-16.
- Jamal, V., 'Taxation and inequality in Uganda, 1900–1964', *Journal of Economic History*, 38 (1978), pp. 418–38.
- Jameson, J.D. and J.D. Tothill eds., *Agriculture in Uganda* (London, 1970).
- Jayne, T. S., Jordan Chamberlin, and Derek D. Headey, 'Land pressures, the evolution of farming systems, and development strategies in Africa: a synthesis', *Food Policy*, 48, (2014), pp. 1-17.
- Jerven, M., 'African growth recurring: an economic history perspective on African growth episodes, 1690-2010', *Economic History of Developing Regions*, 25, 2 (2010), pp. 127-54.
- Jerven, M., 'Users and producers of African income: measuring the progress of African economies', *African Affairs*, 110, 439 (2011), pp. 169-90.
- Jerven, M., *Poor numbers: how we are misled by African development statistics and what to do about it* (Ithaca, N.Y., 2013).
- Jerven, M., 'A West African experiment: constructing a GDP series for colonial Ghana, 1891–1950', *Economic History Review*, 67 (2014), pp. 964–92.
- Johnson, H.B., 'The location of Christian missions in Africa', *Geographical Review* (1967) pp. 168-202.
- Jørgensen, J J., *Uganda: a modern history* (New York, 1981).
- Juif, D. and E.H.P. Frankema, 'From coercion to compensation: institutional responses to labour scarcity in the central African copperbelt', *Journal of Institutional Economics* (2016), pp. 1-31.
- Kajubi, W. Senteza, 'Coffee and prosperity in Buganda; some aspects of economic and social change', *The Uganda Journal*, 29, 2 (1965), pp. 135-47.

- Karugire, S.R., *The roots of instability in Uganda* (Kampala, 1988).
- Kasozi, A., *Social Origins of Violence in Uganda, 1964-1985* (Montreal, 1994).
- Kennedy, T. J., 'A study of economic motivation involved in peasant cultivation of cotton', *Eastern Africa Economic Review*, 10 (1965), pp. 88–95.
- Kodesh, N. C., 'Renovating tradition: the discourse of succession in colonial Buganda', *The International Journal of African Historical Studies*, 34, 3, (2001), pp. 511-41.
- Kodesh, N., *Beyond the royal gaze: clanship and public healing in Buganda* (Charlottesville, VA, 2010).
- Langlands, B. W., *Atlas of population census 1969 in Uganda* (Kampala, 1974).
- Langlands, B.W. and G. Namirembe, 'The historical background to the distribution of religion in Buganda', in B.W. Langlands and G. Namirembe, eds., *Studies on the geography of religion in Uganda* (Kampala, 1967), pp. 41-65.
- Langlands, B.W. and S.B. Bazirake, 'The expansion of missionary activity in Uganda', in B.W. Langlands and G. Namirembe, eds., *Studies on the geography of religion in Uganda* (Kampala, 1967), pp. 41-65.
- Lele, U., N. Van de Walle and M. Gbetibouo, *Cotton in Africa: an analysis of differences in performance* (Washington D.C., 1989).
- Leurquin, P. P., *Agricultural change in Ruanda-Urundi, 1945-1960* (Stanford, CA, 1963).
- Levine, Philippa, ed. *Gender and empire* (Oxford, 2010).
- Lewis, W. A., 'Economic development with unlimited supplies of labour'. *The Manchester School*, 22 2 (1954), pp. 139-91.
- Likaka, O., *Rural Society and Cotton in Colonial Zaire* (Madison, Wis., 1997).
- Lloyd, C. B., C.E. Kaufman and P. Hewett, 'The spread of primary schooling in Sub-Saharan Africa: implications for fertility change', *Population and Development Review*, 26, 3 (2000), pp. 483-515.
- Lonsdale, J. and B. Berman, 'Coping with the contradictions: the development of the colonial state in Kenya, 1895-1914', *The Journal of African History*, 20, 4 (1979), pp. 487-505.
- Louis, W.R., *Ruanda-Urundi, 1884-1919* (Oxford, 1963).
- Lovejoy, P.E., 'Plantations in the economy of the Sokoto Caliphate', *The Journal of African History*, 19, 3 (1978), pp. 341-68.
- Low, D.A. and A. Smith, *History of East Africa Volume III* (Oxford, 1976).
- Low, D.A., *Fabrication of empire: the British and the Uganda kingdoms, 1890-1902* (Cambridge, 2009).

- Lury, D.A., 'Dayspring mishandled? The Uganda economy 1945-1960', in D.A. Low and A. Smith. *History of East Africa* Volume III (Oxford, 1976), pp. 212-50.
- Lynn, M., *Commerce and economic change in West Africa: the palm oil trade in the nineteenth century* (Cambridge, 2002).
- Lyons, M., 'Foreign bodies: the history of labour migration as a threat to public health in Uganda', in Paul Nugent and A.I. Asiwaju, eds., *African boundaries: barriers, conduits and opportunities* (Athens, Ohio, 1996), pp. 131-44.
- Maat, H. and S. Hazareesingh, *Local subversions of colonial cultures: commodities and anti-commodities in global history* (Basingstoke, 2016).
- Mafeje, A., 'Agrarian revolution and the land question in Buganda', *ISS Occasional Papers* (1973).
- Maier, D.J.E., 'Persistence of precolonial patterns of production: cotton in German Togoland, 1800-1914', in A. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 71-95.
- Mair, L., 'Obituary: Sir Granville Orde Browne, K.C.M.G', *Nature*, 159 (1947), pp. 800-1.
- Mamdani, M., *Politics and class formation in Uganda* (New York, 1976).
- Mamdani, M., *Citizen and subject: contemporary Africa and the legacy of late colonialism* (Princeton, N.J., 1996).
- Mamdani, M., *When victims become killers: colonialism, nativism, and the genocide in Rwanda* (Princeton, 2001).
- Manchuelle, F., *Willing migrants: Soninke labor diasporas, 1848-1960* (Athens, Ohio, 1997)
- Mandala, E.C., *Work and control in a peasant economy: a history of the Lower Tchiri Valley in Malawi, 1859-1960* (Madison, Wis., 1990).
- Manning, P., *Slavery, colonialism and economic growth in Dahomey, 1640-1960* (Cambridge, 2004).
- Masefield, G. B., 'Some recent observations on the plantain crop in Buganda', *East African Agricultural Journal*, 10 (1944), pp. 12-7.
- Masefield, G. B., *Agricultural change in Uganda, 1945-1960* (Stanford, Calif., 1962).
- Mathys, G., 'People on the move: frontiers, borders, mobility and history in the Lake Kivu region' (unpub. Ph.D. thesis, Ghent University, 2014).
- Maxwell, S. and A. Fernando, 'Cash crops in developing countries: the issues, the facts, the policies', *World Development*, 17, 11 (1989), pp. 1677-708.
- McMaster, D.N., *A subsistence crop geography of Uganda* (London, 1962).

- McMillan, M. and D. Headey, 'Introduction – understanding structural transformation in Africa', *World Development*, 63 (2014), pp. 1-10.
- McMillan, M., D. Rodrik and Í. Verduzco-Gallo, 'Globalization, structural change, and productivity growth, with an update on Africa', *World Development* 63, 1 (2014), pp. 11-32.
- Médard, H. and S. Doyle, eds., *Slavery in the Great Lakes Region of East Africa* (Oxford, 2007)
- Meier zu Selhausen, F., 'Missionaries and female empowerment in colonial Uganda: new evidence from Protestant marriage registers, 1880–1945', *Economic History of Developing Regions*, 29 (2014), pp. 74–112.
- Meier zu Selhausen, F., 'Women's empowerment in Uganda: colonial roots and contemporary efforts, 1894–2012' (unpub. Ph.D. thesis, Utrecht University, 2015).
- Meier zu Selhausen, F. and Weisdorf, J.L., 'A colonial legacy of African gender inequality? Evidence from Christian Kampala, 1895–2011', *Economic History Review*, 69 (2016), pp. 229–57.
- Meier zu Selhausen, F., M.H.D. van Leeuwen, and J.L. Weisdorf, 'Social mobility among Christian Africans: Evidence from Anglican marriage registers in Uganda, 1895–2011', *Economic History Review* (forthcoming).
- Michalopoulos, S. and E. Papaioannou. 'Pre-colonial ethnic institutions and contemporary African development', *Econometrica*, 81, 1 (2013), pp. 113-52.
- Minnesota Population Center, *Integrated public use microdata series, international: version 6.4* Machine-readable database (Minneapolis, Min. 2015).
- Miracle, M.P. and S.S. Berry, 'Migrant labour and economic development', *Oxford Economic Papers*, 22 (1970), pp. 86-108.
- Mitchell, B.R., *International historical statistics 1750-1988* (Basingstoke, 1993).
- Mollan, S.C., 'Business, state and economy: cotton and the Anglo-Egyptian Sudan, 1919-1939', *African Economic History*, 36 (2008), pp. 95-123.
- Moradi, A., 'Towards an objective account of nutrition and health in colonial Kenya: a study of stature in African army recruits and civilians, 1880–1980', *Journal of Economic History*, 69 (2009), pp. 719–55.
- Moradi, A., G. Austin and J. Baten, 'Heights and development in a cash-crop colony: living standards in Ghana, 1870-1980', *African Economic History Network Working Paper Series*, 7 (2013).

- Moseley, W.G. and L. Gray, *Hanging by a thread: cotton, globalization, and poverty in Africa* (Athens, Ohio, 2008)
- Mosley, P., *The settler economies: studies in the economic history of Kenya and Southern Rhodesia, 1900-1963* (Cambridge, 1983).
- Mukwaya, A. B., *Land tenure in Buganda* (Kampala, 1953).
- Musisi, N.B., 'Elite polygyny,' and Buganda state formation', *Signs*, 16 (1991), pp. 757-86.
- Musisi, N.B., 'Morality as Identity: the missionary moral agenda in Buganda, 1877–1945', *Journal of Religious History*, 23, 1 (1999), pp. 51-74.
- Musisi, N.B., 'The environment, gender, and the development of unequal relations in Buganda: a historical perspective', *Canadian Woman Studies/Les Cahiers de la Femme* 13, 3 (1993), pp. 53-9.
- Musisi, N.B., 'Gender and the cultural construction of 'bad women'', in D.L. Hodgson and S.A. McCurdy, eds., *'Wicked' women and the reconfiguration of gender in Africa*, (Portsmouth, N.H., 2001), pp. 171-87.
- Musisi, N.B., 'The politics of perception or perception and politics? Colonial and missionary representation of Baganda women, 1900-1945' in J. Allman, S. Geiger, and N.B. Musisi, eds., *Women in African colonial histories* (Bloomington, IN, 2002), pp. 95-115.
- Mutibwa, P., *Uganda since independence: a story of unfulfilled hopes* (Trenton, N.J., 1992).
- Myint, H., 'The 'classical theory' of international trade and the underdeveloped countries', *The Economic Journal*, 68, 270 (1958), pp. 317-37.
- Nayenga, P.F.B., 'Commercial cotton growing in Busoga District, Uganda, 1905-1923', *African Economic History* 10 (1981), pp. 175-95.
- Nelson, R.E., *A baseline survey of Uganda agriculture* (n.p., 1970).
- Newbury, C., *The cohesion of oppression: clientship and ethnicity in Rwanda, 1860-1960* (New York, 1988).
- Nixon, F. I., *Economic integration and industrial location - an East African case study* (London, 1973).
- Nunn, N. and L. Wantchekon, 'The slave trade and the origins of mistrust in Africa', *American Economic Review*, 101, 7 (2011), pp. 3221-52.
- Nunn, N., 'The long-term effects of Africa's slave trades', *Quarterly Journal of Economics*, 123, 1 (2008), pp. 139-76.
- Nunn, N., 'Religious conversion in colonial Africa', *American Economic Review: Papers & Proceedings*, 100 (2010), pp. 147-52.

- Nyambara, P.S., 'Colonial policy and peasant cotton agriculture in Southern Rhodesia, 1904-1953', *The International Journal of African Historical Studies*, 33, 1 (2000), pp. 81-111.
- Nye, G.W. and H.R. Hosking, 'History and development of the cotton industry in Uganda' in J.D. Tothill, *Agriculture in Uganda* (London, 1940).
- Nye, G.W., 'Some results from Bukalasa Experiment Station', *East African Agricultural Journal*, 5 (1940), pp. 460-5.
- Obbo, C., *African women: their struggle for economic independence* (London, 1980).
- Obikili, N., 'Social capital and human capital in the colonies: a study of cocoa farmers in western Nigeria', *Economic History of Developing Regions*, 30, 1 (2015), pp. 1-22.
- O'Connor, A.M. *Railways and development in Uganda: a study in economic geography* (Nairobi, 1965).
- Officer, L.H., 'Exchange rates between the United States Dollar and forty-one currencies' MeasuringWorth Online Database (2017).
- Oliver, R.A., *The missionary factor in East Africa* (London, 1965).
- Olmstead, A.L. and R.W. Rhode, 'Hog-round marketing, seed quality, and government policy: institutional change in U.S. cotton production, 1920-1960', *The Journal of Economic History*, 63, 2 (2003), pp. 447-88.
- Oloya, J. J. and Poleman, T.T., *The food supply of Kampala: a study in the marketing of basic food-stuffs in an African metropolitan area* (Kampala, 1970).
- Omolo-Okalebo, F., T. Haas, I.B. Werner and H. Sengendo, 'Planning of Kampala city 1903—1962: the planning ideas, values, and their physical expression', *Journal of Planning History*, 9, 3 (2010), pp. 151-69.
- Pallaver, K., '“The African native has no pocket”: monetary practices and currency transitions in early colonial Uganda', *International Journal of African Historical Studies*, 48, 3 (2015), pp. 471-99.
- Papaioannou, K.J., 'Climate shocks and conflict: evidence from colonial Nigeria', *Political Geography*, 50 (2016), pp. 33-47.
- Papaioannou, K.J., '“Hunger makes a thief of any man”: poverty and crime in British colonial Asia', *European Review of Economic History*, 21, 1 (2017), pp. 1-28.
- Papaioannou, K.J. and E.H.P. Frankema, 'Rainfall patterns and human settlement in tropical Africa and Asia compared. Did African farmers face greater insecurity?', *Centre for Economic Policy Research CEPR* (2017).

- Papaioannou, K.J. and M. de Haas, 'Weather shocks and agricultural commercialization in colonial tropical Africa: did cash crops alleviate social distress?' *World Development*, 94 (2017), pp. 346-65.
- Paton, B., *Labour export policy in the development of Southern Africa* (London, 1995).
- Pedersen, S., *The guardians: the League of Nations and the crisis of empire* (Oxford, 2015).
- Perlman, M.L., 'Law and the status of women in Uganda: a systematic comparison between the Ganda and the Toro', *Tropical Man*, 2 (1969), pp. 60-106.
- Peterson, D.R., 'The politics of transcendence in colonial Uganda', *Past & Present*, 230, 1 (2016), pp. 197-225.
- Pingali, P.L. and M.W. Rosegrant, 'Agricultural commercialization and diversification: processes and policies', *Food policy*, 20, 3 (1995), pp. 171-85.
- Pirouet, L., *Black evangelists: the spread of Christianity in Uganda, 1891-1914* (London, 1978).
- Pitcher, M.A., 'From coercion to incentives: the Portuguese colonial cotton regime in Angola and Mozambique, 1946-1974', in A.F. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 119-46.
- Pitcher, M.A., *Politics in the Portuguese empire: the state, industry, and cotton, 1926-1974* (Oxford, 1993).
- Porter, P.W., 'Note on cotton and climate: a colonial conundrum', in A.F. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 43-9.
- Poulton, C., J. Kydd and A. Dorward, 'Overcoming market constraints on pro-poor agricultural growth in Sub-Saharan Africa', *Development Policy Review* 24, 3 (2006), pp. 243-77.
- Poulton, C., P. Gibbon, B. Hanyani-Mlambo, J. Kydd, W. Maro, M. Nylandsted Larsen, A. Osorio, D. Tschirley, and B. Zulu, 'Competition and coordination in liberalized African cotton market systems', *World Development*, 32, 3 (2004), pp. 519-36.
- Powesland, P. G., *Economic policy and labour, a study in Uganda's economic history* (Kampala, 1957).
- Powesland, P.G., 'History of the migration in Uganda' in Audrey Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 17-51.

- Prados de la Escosura, L., 'Human development in Africa: a long-run perspective', *Explorations in Economic History*, 50 (2013), pp. 179–204.
- Prados de la Escosura, L., 'Output per head in pre-independence Africa: quantitative conjectures', *Economic History of Developing Regions*, 27, 2 (2012), pp. 1–36.
- Prunier, G., *The Rwanda crisis. History of a genocide* (New York, 1994).
- Ranger, T., 'African attempts to control education in East and Central Africa 1900-1939', *Past & Present*, 32 (1965), pp. 57-85.
- Reid, R.J., *A history of modern Uganda* (Cambridge, 2017).
- Reid, R.J., *Political power in pre-colonial Buganda: economy, society and welfare in the nineteenth century* (Oxford, 2002).
- Richards, A.I., 'Methods of settlement in Buganda', in A.I. Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 119-40.
- Richards, A.I., 'The assimilation of the immigrants', in A.I. Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 161-93.
- Richards, A.I., 'The problem and the methods', in A.I. Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 1-16.
- Richards, A.I., 'The problem for Buganda', in A.I. Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 194-223.
- Richards, A.I., 'The travel routes and the travellers', in A.I. Richards, ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973), pp. 52-76.
- Richards, A.I., ed., *Economic development and tribal change: a study of immigrant labour in Buganda* (Cambridge, 1973).
- Richards, A.I., F.G. Sturrock and J.M. Fortt, *Subsistence to commercial farming in present-day Buganda: an economic and anthropological survey* (Cambridge, 1973).
- Richards, P., *Indigenous agricultural revolution: ecology and food production in West Africa* (Boulder, Colorado, 1985).
- Roberts, A.D., 'The sub-imperialism of the Baganda', *The Journal of African History* 3, 03 (1962), pp. 435-50.



- Roberts, R.L., 'The coercion of free markets: cotton, peasants, and the colonial state in the French Soudan, 1924-1932', in A.F. Isaacman and R.L. Roberts, eds., *Cotton, colonialism and social history in Sub-Saharan Africa* (Portsmouth, N.H., 1995), pp. 221-46.
- Roberts, R.L., *Two worlds of cotton: colonialism and the regional economy in the French Soudan, 1800-1946* (Stanford, Calif., 1996).
- Robertson, A. F. and Hughes, G. A., 'The family farm in Buganda', *Development and Change*, 9 (1978), pp. 415-38.
- Robins, J.E., *Cotton and race across the Atlantic: Britain, Africa, and America, 1900-1920* (Rochester, N.Y., 2016).
- Rodney, W., *How Europe underdeveloped Africa* (Washington, D.C., 1972).
- Rodrik, D., 'An African growth miracle?' *National Bureau of Economic Research* (2014).
- Rönnbäck, K., 'Living standards on the pre-colonial Gold Coast: a quantitative estimate of African laborers' welfare ratios', *European Review of Economic History*, 18 (2014), pp. 185-202.
- Rowlett, R., 'Statistical bale weights for cotton' in *How many? A dictionary of units of measurements* (University of North Carolina, 2000).
- Rutabajuuka, S.P., 'The conditions of migrant labour in Masaka District, 1900-1962: the case of coffee shamba labourers' in M. Mamdani, ed., *Uganda: studies in labour* (Dakar, 1996), pp. 11-52.
- Rutabajuuka, S.P., 'Colonial capitalism and labour regulation in Uganda: 1900-1953' (Unpub. Ph.D.thesis, Queen's University, 2000).
- Ruthenberg, H., *Farming systems in the tropics* (Oxford, 1971).
- Said, Y.H., 'The role of agriculture in the economic development of Sudan' (Unpub. Ph.D. thesis, University of Wisconsin, 1980).
- Schneider, E. B., 'Real wages and the family: adjusting real wages to changing demography in pre-modern England', *Explorations in Economic History*, 50 (2013), pp. 99-115.
- Schoenbrun, D.L., *A green place, a good place: agrarian change, gender, and social identity in the Great Lakes Region to the 15th century* (Portsmouth, N.H., 1998).
- Schoneveld, G.C., 'The geographic and sectoral patterns of large-scale farmland investments in Sub-Saharan Africa', *Food Policy*, 48 (2014), pp. 34-50.
- Scoones, I., 'Sustainable rural livelihoods: a framework for analysis', *Institute of Development Studies Working Paper Series 72* (1998).
- Sender, J. and S. Smith, *The development of capitalism in Africa* (London, 2013).

- Sheriff, A., *Slaves, spices and ivory in Zanzibar: integration of an East African commercial empire into the world economy, 1770-1873* (London, 1987).
- Simson, R., 'Patronage or meritocracy? public sector employment in postcolonial Kenya, Tanzania and Uganda', *African Economic History Network Working Paper Series*, 26 (2016).
- Singiza, D., *La famine Ruzagayura (Rwanda, 1943-44): causes, conséquences et réactions des autorités* (Bruxelles, 2011).
- Skocpol, T., 'Doubly engaged social science', J. Mahoney and D. Rueschemeyer, eds., *Comparative historical analysis in the social sciences* (Cambridge, 2003), pp. 407-28.
- Smith, D.R., A. Gordon, K. Meadows, and K. Zwick, 'Livelihood diversification in Uganda: patterns and determinants of change across two rural districts', *Food Policy* 26, 4 (2001), pp. 421-35.
- Sofer, C. and R. Sofer, *Jinja transformed; a social survey of a multi-racial township* (Kampala, 1955).
- Southall, A. W. and Gutkind, P. C. W. *Townsmen in the making* (Kampala, 1956).
- Sunseri, T.R., *Vilimani: labor migration and rural change in early colonial Tanzania* (Portsmouth, N.H., 2002).
- Ssekamwa, J.C., *History and development of education in Uganda* (Kampala, 1997), pp. 59-70.
- Steiger-Hayley, T. T., 'Wage labour and the desire for wives among the Lango', *Uganda Journal*, VIII (1940). pp. 15-18.
- Stephens, R., '“Whether they promised each other some thing ? is difficult to work out”: the complicated history of marriage in Uganda', *African Studies Review*, 59, 01 (2016), pp. 127-53.
- Straus, S., *The order of genocide race, power, and war in Rwanda* (Ithaca, 2013).
- Stürzinger, U.C., 'The introduction of cotton cultivation in Chad: the role of the administration, 1920-1936', *African Economic History*, 12 (1983), pp. 213-25.
- Summers, C., 'Force and colonial development in Eastern Uganda.', in J.M. Bahemuka and J.L. Brockington, eds., *East Africa in transition: communities, cultures and change* (Nairobi, 2002), pp. 181-207.
- Suret-Canale, J., *French colonialism in tropical Africa, 1900-1945* (London, 1976).
- Swindell, K., 'Labour migration in underdeveloped countries', *Progress in Geography*, 3, 2 (1979), pp. 239-59.
- Swindell, K., *Farm labour* (Cambridge, 1985).

- Swindell, K. and A. Jeng, *Migrants, credit and climate the Gambian groundnut trade, 1834-1934* (Leiden, 2006).
- Szereszewski, R., *Structural changes in the economy of Ghana, 1891-1911* (London, 1965).
- Tadei, F., 'Measuring extractive institutions: colonial trade and price gaps in French Africa', *European Historical Economics Society Working Paper Series*, 109 (2017).
- Taylor, J.V., *The growth of the church in Buganda* (London, 1958).
- Taylor, T.F., 'The struggle for economic control of Uganda, 1919-1922: formulation of economic policy', *The International Journal of African Historical Studies*, 11 (1978), pp. 1-31.
- Taylor, T.F., 'The role of the British cotton industry in the establishment of a colonial economy in Uganda, 1902-1939' (Unpub. Ph.D. thesis, Syracuse University, 1981).
- Taylor, T.F., 'The establishment of a European plantation sector within the emerging colonial economy of Uganda, 1902-1919', *The International Journal of African Historical Studies*, 19, 1 (1986), pp. 35-58.
- Thompson, G., 'Colonialism in crisis: the Uganda disturbances of 1945', *African Affairs*, 91 (1992), pp. 605-24.
- Todd, J.A., *The world's cotton crops* (London, 1915).
- Tosh, J., 'Colonial chiefs in a stateless society: A case-study from northern Uganda.', *The Journal of African History* 14, 3 (1973), pp. 473-90.
- Tosh, J., *Clan leaders and colonial chiefs in Lango: the political history of an East African stateless society c. 1800-1939* (Oxford, 1978).
- Tosh, J., 'Lango agriculture during the early colonial period: land and labour in a cash-crop economy', *Journal of African History*, 19 (1978), pp. 415-39.
- Tosh, J., 'The cash-crop revolution in tropical Africa: an agricultural reappraisal', *African Affairs*, 79 (1980), pp. 79-94.
- Tosh, J., 'The northern Interlacustrine Region', in R. Gray and D. Birmingham, eds., *Pre-colonial African trade: essays on trade in central and eastern Africa before 1900* (London, 1970).
- Tothill, J.D., ed., *Agriculture in Uganda* (London, 1940).
- Tripp, A. M., 'A new look at colonial women: British teachers and activists in Uganda, 1898-1962'. *Canadian Journal of African Studies*, 38, 1 (2004), pp. 123-156.
- Tripp, A.M. and Ntiro, S., 'Women's activism in colonial Uganda', in A.M. Tripp and J.J. Kwesiga, eds., *The women's movement in Uganda: history, challenges and prospects* (Kampala, 2002), pp. 23-39.

- Tuck, M.W., 'Women's experiences of enslavement and slavery in late nineteenth and early twentieth century Uganda', in H. Médard, and S. Doyle, eds., *Slavery in the Great Lakes Region of East Africa* (Oxford, 2007), pp. 174-88.
- Tucker A., *Eighteen years in Uganda & East Africa* (London, 2013).
- Turyahikayo-Rugyema, B., 'The British imposition of colonial rule on Uganda: The Baganda Agents in Kigezi (1908-1930)', *Transafrican Journal of History*, 5, 1 (1976), pp. 111-33.
- Twaddle, M., 'Ganda receptivity to change', *Journal of African History*, 15, 2 (1974), pp. 303-15.
- Twaddle, M., *Kakungulu and the creation of Uganda, 1868-1928* (London, 1993).
- Vail, David J., *A history of agricultural innovation and development in Teso District, Uganda* (Athens, Ohio, 1972).
- Van Beusekom, M.M., 'Disjunctures in theory and practice: making sense of change in agricultural development at the Office du Niger, 1920-60', *The Journal of African History*, 41, 1 (2000), pp. 79-99.
- Van Beusekom, M.M., *Negotiating development: African farmers and colonial experts at the Office du Niger, 1920-1960* (Portsmouth, NH, 2002).
- Van Melkebeke, S., 'More continuity than change. Arbeid en arbeidsrelaties in the koffieplantagesector van Kivu tijdens het interbellum' (Unpub. M.A. thesis, Ghent University, 2012).
- Van Melkebeke, S., "'Changing grounds": The development of coffee production in the Lake Kivu region (1918-1960/62): the colonial state, labor, land and production for the world market' (unpub. Ph.D. thesis, Universiteit Gent, 2017).
- Van Zwanenberg, R.M.A., and A. King, *An economic history of Kenya and Uganda, 1800-1970* (London, 1975).
- Vansina, J., *Antecedents to modern Rwanda: the Nyiginya kingdom* (Oxford, 2005).
- Vaughan, M., 'Food production and family labour in Southern Malawi: the Shire Highlands and Upper Shire Valley in the early colonial period', *The Journal of African History*, 23, 3 (1982), pp. 351-64.
- Vincent, J., 'Colonial chiefs and the making of class: a case study from Teso, Eastern Uganda.' *Africa: Journal of the International African Institute*, 47, 2 (1977), pp. 140-59.
- Vincent, J., *Teso in Transformation: the political economy of peasant and class in Eastern Africa* (Berkeley, Calif., 1982).

- Von Braun, J. and E.T. Kennedy, *Agricultural commercialization, economic development, and nutrition* (Baltimore, 1994).
- Von Rotenham, D., 'Cotton farming in Sukumaland', in H. Ruthenberg, ed., *Smallholder farming and smallholder development in Tanzania* (Munich, 1968).
- Vorlaufer, K., *Physiognomie, Struktur und Funktion Gross-Kampalas : ein Beitrag zur Stadtgeographie Tropicisch-Afrikas* (Frankfurt am Main, 1967).
- Walters, S., 'Counting souls: towards an historical demography of Africa', *Demographic research*, 34 (2016), pp. 63-108.
- Warren, B., *Imperialism: pioneer of capitalism* (London, 1980).
- Watts, M.J., *Silent violence: food, famine, and peasantry in Northern Nigeria* (Athens, Ohio, 2013).
- Wiggins, S., 'African agricultural development: lessons and challenges', *Journal of Agricultural Economics* 65, 3 (2014), pp. 529-56.
- Wilson, P.N. and J.M. Watson, 'Two surveys of Kasilang Erony, Teso, 1937 and 1953', *Uganda Journal*, 20 (1956), pp. 182-97.
- Wilson, P.N., 'An agricultural survey of Moruita Erony, Teso', *The Uganda Journal*, 22, 1 (1958) pp. 22-38.
- Woodberry, R. D. and Shah, T. S., 'The pioneering Protestants', *Journal of Democracy* (2004), pp. 47-61.
- Worby, E., "'Discipline without oppression': sequence, timing and marginality in Southern Rhodesia's post-war development regime", *The Journal of African History*, 41, 1 (2000), pp. 101-25.
- Wrigley, C.C., 'Buganda: an outline economic history', *Economic History Review*, 10, 1 (1957), pp. 69-80.
- Wrigley, C.C., 'Four steps towards disaster', in H.B. Hansen and M. Twaddle, eds., *Uganda now: between decay and development* (London, 1988), pp. 27-35.
- Wrigley, C.C., 'The Christian Revolution in Buganda', *Comparative Studies in Society and History*, 2, 1 (1959), pp. 33-48.
- Wrigley, C.C., *Crops and wealth in Uganda, a short agrarian history* (Kampala, 1959).
- Youe, C.P., 'Colonial economic policy in Uganda after World War I: a reassessment', *The International Journal of African Historical Studies*, 12, 2 (1979), pp. 270-76.
- Youe, C.P., 'Peasants, planters and cotton capitalists: the 'dual economy' in colonial Uganda', *Canadian Journal of African Studies*, 12 (1978), pp. 163-84.
- Young, A., 'The African growth miracle', *National Bureau of Economic Research* (2012).

- Young, C., 'Agricultural policy in Uganda: capability and choice', in M.F. Lofchie, ed., *The state of the nations: constraints on development in independent Africa* (Berkeley, Calif., 1971), pp. 141-64.
- Young, C., N.P. Sherman and T.H. Rose, *Cooperatives & development: agricultural politics in Ghana and Uganda* (Madison, Wis., 1982).
- Zimmerman, A., *Alabama in Africa: Booker T. Washington, the German Empire, and the globalization of the New South* (Princeton, N.J., 2010).

## Acknowledgements

This thesis is the culmination of a four-year intellectual and personal journey, involving numerous actual travels across four continents. At the start, I could have imagined neither where this journey would take me, nor how rewarding it would be. The latter is largely due to the many great people who guided, inspired, accompanied, and sheltered me along the way.

First and foremost, my gratitude goes out to Ewout Frankema, my principal advisor. Having worked with Ewout before, my expectations were high, but – as it turned out – in no way excessive. In fact, I could not have wished for a better mentor. Ewout's feedback on my work was always insightful and stimulating, his confidence in my abilities unwavering, and his suggestions for improvement honest and spot on. In particular, I benefitted greatly from his sympathetic yet persistent encouragement to turn my ideas into finalized products. I am also indebted to my second advisor Niek Koning, for his support and feedback, whenever it was needed. I can only aspire to obtain an understanding of long-term rural development as wide-ranging and thorough as his.

At the Rural and Environmental History Group (RHI), Wageningen University, I was fortunate to be part of a close band of colleagues. With Kostadis, I spent innumerable hours in London apartments and libraries, at conferences and seminars, and on long-distance calls to work on our joint papers. The paths we chose were a bit rocky sometimes, but made our shared accomplishments all the more gratifying. Corinne has been my loyal fellow traveller during the long hauls by train and bike from Amsterdam to Wageningen, and the best possible safeguard against the loneliness that preys on PhD students. My roommates Angus, Harm and Kostadis enabled my creative process by tolerating the large piles of papers and books roaming around my desk; Angus by being generally indifferent towards stuff lying around, Harm by being willing to return my due books whenever I was abroad. Special thanks go out to Elise, for her general support and interest in my work; to Anton, for giving me (unsolicited) advice on how to read books properly – advice from which I continue to benefit on a daily basis; to Leandre, for helping me copy tons of material so that I could access it whenever I was away from my desk; and to Carry and Sandra for taking care of so many indispensable practicalities. Kate, Kleoniki, Louella, Dácil, Daniëlle, Jop, Pim, Frans and Piet were all inspiring and supportive colleagues, and great companions during the numerous conference dinners we shared.

Many people and organizations outside this direct circle of RHI colleagues played an important role in my journey as well. A semester at the Graduate Institute in Geneva in Spring 2016 was made possible by Gareth Austin, who gave helpful feedback on my preliminary writings, offered general advice, and provided opportunities to present my work. My desk at the Institute could not have been located better: with a view over the snow-capped Alps, and amongst great colleagues, especially the always hospitable and cheerful Mariusz Lucasiewicz. The final haul of thesis writing was completed in the magnificent Hatcher Library at the University of Michigan in Ann Arbor, and I thank Derek Peterson and the History Department for making this possible.

At Wageningen University, I thank the Wageningen School of Social Sciences for coordinating the PhD programme and awarding me a travel grant; and the staff of the library and IT services for promptly accommodating my many requests. I thank the N.W. Posthumus Institute for organizing helpful and enjoyable training programmes, conferences and workshops. My archival and field research trips in Uganda were made possible by the Makerere Institute of Social Research in Kampala and the Uganda National Council for Science and Technology. In Uganda, Andrew Ocole and Bashil Safali provided excellent research assistance. I am also thankful to the many Ugandans who helped me obtain a more balanced understanding of their history, and appreciate the cultural, culinary and ecological variety that characterizes their nation. I also acknowledge the help of many archivists and librarians in Belgium, the Netherlands, Uganda and the United Kingdom, who satisfied my appetite for old paper, the smell of which I have come to associate with adventure and discovery. During the final stages, I thank Elaine McIntyre for proofreading the completed manuscript and Jacqueline Maatman for designing the cover.

I am fortunate to have so many friends, family members and colleagues who showed an interest in my work and well-being over the past years. A special word of appreciation goes out to Jeroen and Selin for their unrivalled hospitality. They let me stay over at their place in Utrecht on many occasions which cut my long commute to Wageningen. With Felix Meier zu Selhausen, I had numerous stimulating engagements on Uganda's economic history. They were honest and sometimes confronting, but always took place in a spirit of friendship and mutual appreciation. I am also particularly thankful to Roosmarijn and Thijs, for supporting me as 'paranymphs' during my thesis defence. Thijs has been a razor sharp intellectual sparring partner since high school, and Roosmarijn since my undergraduate studies. Both



have helped me gather the confidence required to embark upon the PhD journey in the first place.

Much of my appreciation goes out to my family, especially my parents Arry and Frans and my brother Thijs. I cannot think of a single moment where they could have supported me more than they already have. It is telling that my parents were kind enough to take me back into their home in Bergen in between the many trips abroad, which not only took away a great deal of stress, but also gave me ample opportunity to spend time with them and enjoy their company, for which I am grateful.

Finally, my thesis journey cannot be separated from Doreen and Nino, and meeting them was the best thing that could have happened to me. Soon after Doreen and I first met in Kampala, we both knew our futures were inextricably connected. Since then, Doreen has been my greatest supporter, my most perceptive critic, my most committed motivator and my most engaging companion. The fieldwork we undertook together in Teso and Karamoja for both our projects was an absolute highlight. Nino, with his sense of humour and his unrelenting insistence on play, lightened up even my darkest days during the final stretch of writing.

Michiel de Haas

5 August 2017,

Ann Arbor, Michigan

## WASS Completed Training and Supervision Plan



Wageningen School  
of Social Sciences

Michiel de Haas

Wageningen School of Social Sciences (WASS)

Completed Training and Supervision Plan

Name of the learning activity	Department/Institute	Year	ECTS*
<b>A) Project related competences</b>			
Seminar 'My project in a nutshell'	N.W. Posthumus Institute	2013	2
Seminar 'Work in progress'	N.W. Posthumus Institute	2013	6
Research Design Course	ESTER / N.W. Posthumus Institute	2014	8
Individual Assessment	N.W. Posthumus Institute	2014	1
Organizing and participating in a masterclass with Alexander Moradi	N.W. Posthumus Institute/Rural and Environmental History Group	2014	1
Advanced Seminar	ESTER / Datini	2015	4
Organizing two panels	SSHA Conference (Baltimore, USA)	2015	1
Organizing and chairing a panel	ASA Conference (Cambridge, UK)	2016	0.5
<i>'Measuring rural welfare in colonial Africa: did Uganda's smallholders thrive?'</i>	Swedish Economic History Meeting (Lund, Sweden), Masterclass with James Fenske (Wageningen), Social and Economic History Graduate Seminar (Utrecht University), ESSHA Conference (Vienna, Austria), AEHN Workshop (London, UK), WEHC (Kyoto, Japan)	2013-15	1
<i>'Labour abundance in colonial Africa: poverty, policy and labour migration from Rwanda and Burundi to Buganda, 1923-58.'</i>	Masterclass with Andreas Eckert (Wageningen), IISH Workshop (Amsterdam), Masterclass with Leigh Gardner (Wageningen), SSHA Conference (Baltimore, USA), ASA Conference (Cambridge, UK)	2014-16	1
<i>'Gender, ethnicity and unequal opportunity in colonial Uganda: European influences, African realities and the pitfalls of parish register data.'</i>	Workshop on gender, household labour relations and (post)colonialism (Yogyakarta, Indonesia)	2016	1

<i>'Resource endowments and agricultural commercialization in colonial Africa: did labour seasonality and food security drive Uganda's cotton revolution?'</i>	Rural development seminar (Lund, Sweden)	2017	1
<i>'Was cotton doomed to fail? Local conditions, government policies and variegated outcomes in twentieth century sub-Saharan Africa.'</i>	AEHN Workshop (Wageningen), African Studies Workshop (Geneva, Switzerland), LSE History Graduate Workshop (London, UK), N.W. Posthumus Conference (Wageningen), FRESH Workshop (Geneva, Switzerland), AEHN Conference (Sussex, UK)	2015-16	1

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### **B) General research related competences**

WASS introduction course	Wageningen School of Social Sciences	2013	1
Geographic Information Systems (GIS) training	GeoDesk, Wageningen Department of Environmental Sciences	2013/14	2
Introduction to Econometrics	University Utrecht	2014	4
Member of the organizing committee of the African Economic History Workshop (Wageningen University)	Rural and Environmental History Group	2015	1
<i>'Weather shocks and agricultural commercialization in colonial tropical Africa: did cash crops alleviate distress?'</i>	Historical Ecology Workshop (Uppsala, Sweden), Economics and Business Seminar (Groningen), Graduate Seminar in Economic and Social History (Oxford, UK), Longitudinal Data in African History Workshop (Stellenbosch, South Africa), WEHC (Kyoto, Japan), ESSHA Conference (Valencia, Spain – awarded best graduate student paper presented)	2014-16	1

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### **C) Career related competencies/personal development**

Project and time management	Wageningen School of Social Sciences	2014	1.5
Organizer of Rural and Environmental History Seminar	Rural and Environmental History Group	2015/16	1
Editor of the blog 'Frontiers in African economic history'	African Economic History Network	2016/17	2
<b>Total</b>			<b>42</b>

\*One credit according to ECTS is on average equivalent to 28 hours of study load

## **Funding**

This research was funded by the European Research Council under the European Community's Seventh Framework Programme (ERC Grant Agreement 313114) as part of the project *Is poverty destiny? A new empirical foundation for long-term African welfare analysis*.

## **Cover design**

Jacqueline Maatman