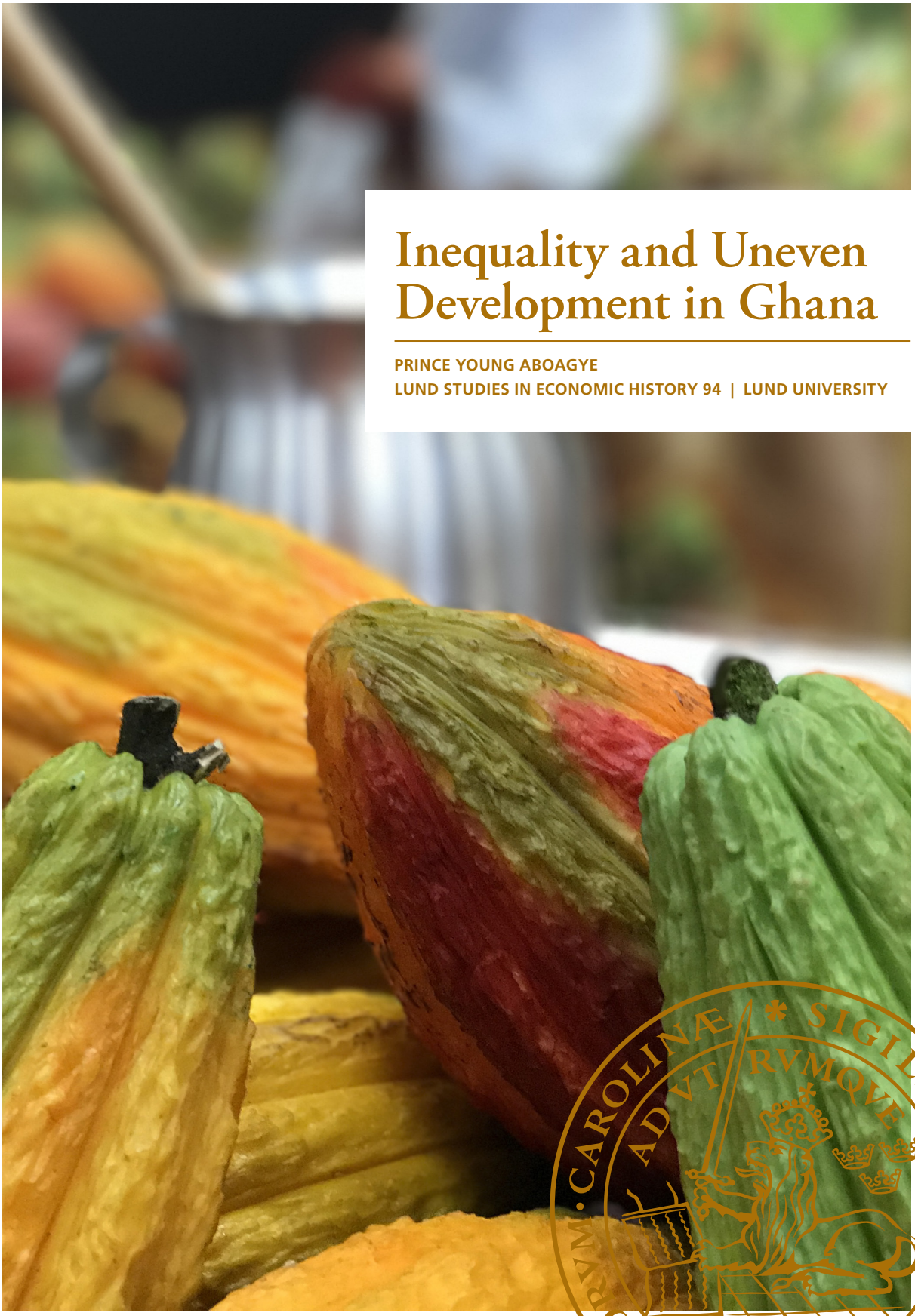

Inequality and Uneven Development in Ghana

PRINCE YOUNG ABOAGYE

LUND STUDIES IN ECONOMIC HISTORY 94 | LUND UNIVERSITY

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Prince Young Aboagye

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Abstract

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Key words

Cocoa, Inequality, Education, Expenditure, Fiscal Capacity, Taxation

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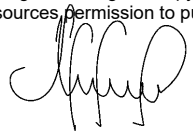
Signature  Date 2020-02-27

Inequality and Uneven Development in Ghana

Prince Young Aboagye

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To Asher, Mabel, Charles and Adwoa

Content

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Prince Young A.

Lund, 27 February 2020.

List of papers

I Aboagye, Prince Young and Bolt, Jutta (2020). Long-Term Trends in Income Inequality: Winners and Losers of Economic Change in Ghana, 1891-1960. *Unpublished manuscript.*

II Aboagye, Prince Young (2020). Inequality of Education in Colonial Ghana: European Influences and African Agency. *Unpublished manuscript.*

III Aboagye, Prince Young (2020). Government Tax and Expenditure Policies and Inequality in Ghana, 1891-2000. *Unpublished manuscript.*

IV Aboagye, Prince Young and Hillbom, Ellen (2020). Tax Bargaining, Fiscal Contracts and Fiscal Capacity in Ghana: A Long-Term Perspective. *African Affairs.*

Introduction

Motivation

"Why are some countries rich and some poor?" is one of the central questions in economic history and economics. Given the large inequalities of income in both rich and poor countries, a more obvious question should probably be "why are some people rich and some poor?" (Sandmo 2015:6). Until recently, income inequality was out in the cold,[1] confined to the periphery of economic theory and debates. To be sure, it was an important subject for classical economists, although they were concerned with the functional distribution of income, that is, the distribution of income between the main factors of production; land, labour, and capital. While factor shares are important (Milanovic 2017; Bengtsson and Waldenström 2018), they are insufficient for understanding the distribution of income between persons (Atkinson 1983; Lindert 2015). Explaining why wages and salaries constitute a large share of national income says little about why the capitalist earns substantially more than the labourer.

With the growing gap between the world's haves and have-nots, latter-day economic historians and economists have set out to understand the nature and causes of the differences in income between people over the long run. Still, studies on the evolution, levels, causes and effects of uneven distribution of income have primarily focused on the developed world (Kuznets 1955; Lindert 1986; 2000; Piketty and Saez 2001; Piketty 2014), and some on Asia and Latin America (Chen and Fleisher 1996; Yang 1999; Bourguignon et al. 2005; Frankema, 2008; Gasparini and Lustig 2011). Yet, to understand the mechanisms that shape the distribution of income globally, a cross-regional perspective is needed.

Until lately, sub-Saharan Africa (henceforth SSA) was yet to feature in longitudinal studies that examined the patterns and causes of income inequality. The reasons for this are not difficult to find. One, scholars considered income inequality to be a

[1] A reference to A.B. Atkinson's 1996 presidential address to the Royal Economic Society, 'Bringing Income Distribution In from the Cold', where he bewailed the marginalization of income distribution in economic analysis.

consequence of unequal distribution of key economic assets, especially land. Most of SSA did not appear to have the problem of land inequality and landlessness as was understood to be the case in Latin America and East Asia. The presumption was therefore that income inequality was low. Southern Africa was the outlier and scholars expected that sub-region to be highly unequal. Two, as a corollary to the famous Kuznets hypothesis that income inequality rises during initial stages of economic development and decreases in advanced stages of development, scholars argued that SSA being relatively poor with a large share of agricultural population, will have lower levels of income inequality (Milanovic 2003; van de Walle 2009). Three, the region's alleged "statistical tragedy" (Devajaran 2013) undermined the assessment of long-term inequality trends. Data on population, wages and incomes were scattered and figures from national accounting statisticians were purportedly "poor numbers" (Jerven 2013). For these reasons, debates on the distribution of income in SSA-both past and present, had been, borrowing from Piketty (2014:2), "debate(s) without data", based on "an abundance of prejudice and a paucity of fact".

Refreshingly, however, with the 'renaissance' of the field of African economic history characterized by the innovative use of previously neglected data and unconventional methods, we now know a little more about trends in living standards and inequality in some African states during the nineteenth and twentieth centuries (Moradi 2008; Bowden et al. 2008; Cogneau and Rouanet 2011; Frankema and Waijenburg 2012; Bossuroy and Cogneau 2013; Bolt and Hillbom 2016; Alfani and Tadei 2019). Further, over the last two decades, a number of household surveys of consumption, income, and expenditure have become increasingly available. With data limitations still stringent, we have a picture, however fuzzy, of the extent of income disparities in contemporary SSA. Nonetheless, we still have limited knowledge about how the distribution of income has developed over time. An understanding of the mechanisms and factors that have shaped income inequality trends in the region is in dire need. Not only to satisfy our intellectual curiosity; understanding the trends and drivers of income differences between people in SSA will also guide us on the pathway to finding solutions.

This thesis builds on, relates to and adds to recent efforts to investigate the nature and causes of inequality in SSA over the long term. The thesis focuses on Ghana, called the Gold Coast until 1957. Using a variety of underused published and unpublished data sources, the thesis analyses the extent and drivers of income inequality in colonial and post-colonial Ghana, regional and gender disparities in education and government's tax and expenditure policies. On one hand, Ghana is neither unique nor representative of SSA in terms of the levels and trends in income inequality, both past and present. On the other hand, colonial Ghana was archetypical of the so-called 'peasant' colonies of tropical Africa. In such colonies, there was no large-scale expatriate land expropriation and productive resources

generally remained in African hands. Expansion of export agriculture was driven by African initiatives, and was marked by a mishmash of the emergence of 'capitalist' institutions and the persistence, and sometimes modification of pre-colonial institutions related to land, labour and capital. A historical analysis of how indigenous Africans employed these factors of production is central to our understanding of inequality and welfare in the long-run (Austin 2005:2).

At a time when the study of global inequality is in vogue, one risks courting for one's self the label of a "methodological nationalist" by taking the nation-state as a unit of analysis (Milanovic 2016:235). Methodological nationalism risks becoming either irrelevant or incapable of explaining inequality trends as nations become more integrated (Milanovic 2016:236). Even so, inequality remains primarily a national concern. People are generally more concerned about inequalities in their own countries and public policies are typically designed to reduce income disparities within national boundaries (Alvaredo and Gasparani 2015:699). Scholarship on global inequality remains important for hypotheses testing, theory building, and observing general trends but "sometimes we simply have to keep our eyes open and look carefully at individual cases-not in the hope of proving anything but rather in the hope of learning something!" (Eysenck 1976:9).

Aim and Contribution

The overall aim of this thesis is to contribute to an emerging strand of literature on the trends and drivers of inequality in SSA today. This is done by investigating the extent and evolution of income and educational inequality in Ghana over the long-term as well examining continuities and changes in governments' tax and expenditure policies and their implications for inequality. Additionally, the thesis scrutinizes political contestations over taxation and analyses a long-standing problem of the Ghanaian state's inability to raise sufficient tax revenues. Four thematically-related papers discuss these matters.

Specifically, Paper I addresses the research question: *how has inequality evolved in Ghana over the long run?* Using a social tables approach, the paper measures the extent of inequality in the colonial era and in the early years of Ghana's independence. It provides the first quantitative estimates of inequality in colonial Ghana. The paper discusses the income distribution effects of the growth of a cocoa-export economy from the late 19th century and the extent to which capital accumulation before the spread of cocoa cultivation affected income inequality. It also analyses long-term developments in prices, wages and incomes and changes in occupational structures and their impact on inequality trends.

Paper II focuses on educational inequalities in colonial Ghana and assesses how economic constraints affected educational demand and the diffusion of education. The paper engages with the literature on educational expansion broadly and in colonial SSA in particular and argues for the need to examine interactions between supply and demand factors in order to understand variations in human capital formation. The specific questions that guide this paper are: *what were the determinants of educational demand and how did they affect the diffusion of education in colonial Ghana?*

Paper III is guided by the research question: *how have government tax and expenditure policies affected the distribution of income?* The paper is concerned with the effects of colonial and postcolonial policy choices on inequality in Ghana. It crosses the colonial and postcolonial divide and analyses the extent to which colonial-era inequality spilled over into the post-colonial period.

Paper IV examines *why the Ghanaian state is unable to raise sufficient tax revenues for public expenditures?* While this paper appears somewhat distinct because it does not explicitly relate to the thesis' broader theme of inequality, it is connected with Paper III since taxes themselves or when used for transfers can have intended or unintended redistribution consequences. Therefore, an analysis of the nature of tax bargaining and fiscal contracts helps us understand why government fiscal policies have limited redistributive effects.

Overall, the thesis deepens our understanding of the evolution of inequality trends in Ghana and how different external factors and local conditions interacted to influence those trends. The specific contributions of the thesis are as follows. First, the thesis pushes back our knowledge of measurable inequality levels in one African country into the late 19th century, which is to the best of our knowledge, unprecedented. The thesis presents the first long-term estimate of inequality in Ghana covering a period of 70 years, all the way to the early years of Ghana's independence. Second, it adds to the growing economic history literature using social tables to estimate long-term trends and levels of income inequality across and within countries. The data series the thesis presents opens up opportunities for new international comparisons between income inequality levels and trends in SSA and other regions. Third, with inequality estimates from the colonial era, the thesis bridges the colonial and post-colonial divide that has often characterized the study of Ghanaian economic history and presents a single coherent narrative of inequality trends in Ghana over the long-term. While there is a vast literature on Ghana's economic development path, welfare and inequality developments, they are fragmented. Some studies focus only on short-time frames and others tend to be speculative, based on anecdotal evidence. Four, the thesis contributes to the literature on educational expansion in colonial SSA. Although recent literature has stressed the importance of local factors in educational diffusion, this thesis

highlights specific contextual economic and social determinants of indigenous agency and how they affect educational development over the long-term. By doing this, the thesis contributes to our understanding of the reasons for differences in human capital acquisition within and between countries. Finally, the thesis shows the varied and complex ways in which fiscal contracts and state reciprocity affect the extent of taxation. Although it is generally argued that politics shapes governments' ability to tax, not much is known about how this relationship takes place in practice. Through a historical analysis of major tax reforms in Ghana this thesis contributes to filling that gap in the extant literature.

It is worth mentioning that while the thesis builds on efforts to investigate the nature and causes of inequality in SSA and more broadly, studies that focus on Africa's past, it departs from these efforts in a number of ways. Until recently, it had been commonplace for economists and economic historians of Africa to attribute the existence of progressive institutions and the development of egalitarian foundations in some erstwhile colonies to the benevolence of colonial authorities. This view did not only exaggerate the beneficence of colonial authorities but its power and influence on indigenous Africans (Wiener 2013; Austin and Broadberry 2014). While this benign view of colonial authorities has been rejected in recent times, it has been inverted and many colonial and contemporary development challenges in Africa have been attributed to the errors and evils of colonial authorities, to the malignant choices, decisions and policies of the metropole (Wiener 2013). Both accounts understate the agency of the colonized people themselves and treat the long centuries before colonialism as irrelevant. This thesis instead adds to a still incipient but expanding literature that emphasizes the crucial role of Africans themselves and indigenous social and economic conditions in shaping divergent development outcomes.

Further, the thesis tells a story of continuity as well as change. As much as possible, it bridges the chronological 'dead zone' (McCaskie 1986:19) between pre-colonial, colonial and post-colonial historiographies to give a comprehensive account of trends and drivers of inequality in Ghana. The intellectual dead zone in time, especially between pre-colonial and colonial Africa, underlies the narrative that African societies were egalitarian at the start of colonialism and became severely unequal at the end. Also, that income and wealth differences were clearly marked before colonial rule and shrunk in the course of the twentieth century due to colonialism and the advent of the market economy. The thesis shows that changes and continuities in economic and social institutions across epochs are crucial for our understanding of inequality dynamics over the long run.

Another point of departure is methodological. This is a case study of Ghana. Many previous attempts at studying Africa's past have often focused on cross-country

aggregates. 'Compression of cases'[2] under analytical typologies such as British or French colonies, peasant and settler colonies, West, East, Central or Southern Africa, masks within country differences and drivers of income and educational inequalities and determinants of fiscal capacity. Such drivers may be context-specific and explained by differences in the historically determined characteristics of the areas and societies in question.

The rest of this introductory chapter is organized as follows. The first section explores the geographical and historical context. The second section discusses the concept of inequality and explains why its study is worthwhile. The third section presents relevant theories on inequality drivers and causes and introduces previous literature on inequality in colonial and post-colonial SSA. The fourth section covers the data and methods I use in the dissertation. The fifth section presents a summary of the results and the final section outlines the dissertation's main conclusions and provides directions for future research.

Context

In economic history, the specifics of place and period are of crucial importance (Austin 2005:1). This section first delineates the geographical context of the dissertation and thereafter sketches Ghana's history from the fifteenth century until independence and ends with the post-colonial era.

Geography

Ghana's geographical features determine(d) the location of economic activities both prior to and during the colonial era and in present times (Szereszewski 1965:2-3), and as we shall see, differences in natural endowments partly influenced inequality dynamics and the state's fiscal policies. Ghana consists of three main vegetation zones: the forest belt, the coastal strip and savanna. The Western, Central, Eastern, Ashanti and Volta regions (see Figure 2) lie almost entirely in the forest zone. The forest belt has the most commercially valuable natural resources. Ghana's most important cash crop, cocoa, grows in the forest belt. The country's mineral resources: gold, diamonds, manganese, and bauxite are located in the forest belt. The coastal belt is noted for fishing and serves as a gateway to the interior. The savanna is generally semi-arid and has a relatively poor soil quality as compared to the rich top-soil of the forest area.

[2] This is based on Gareth Austin's coinage, "Compression of history".

The country's name and internal borders have seen changes over time from the colonial era until now (see figures 1 and 2). In some cases, throughout the thesis, the 'Gold Coast' (the country's colonial name) will be used interchangeably with 'Ghana' (the country's name after independence in 1957), following previous practice in the literature. Howard (1978) outlines a threefold reason for this practice. First, for stylistic reasons, particularly to avoid the use of 'Gold Coasters' when the colony's residents are referred to. Second, to highlight continuity between the pre-(colonial) and post-colonial periods. Third, because neither Ghana nor the Gold Coast is an accurate name for much of the time this thesis covers. Gold Coast refers only to the Gold Coast Colony, which was until 1936 administered separately from Ashanti and the Northern Territories.

Figure 1: Colonial Ghana, 1920

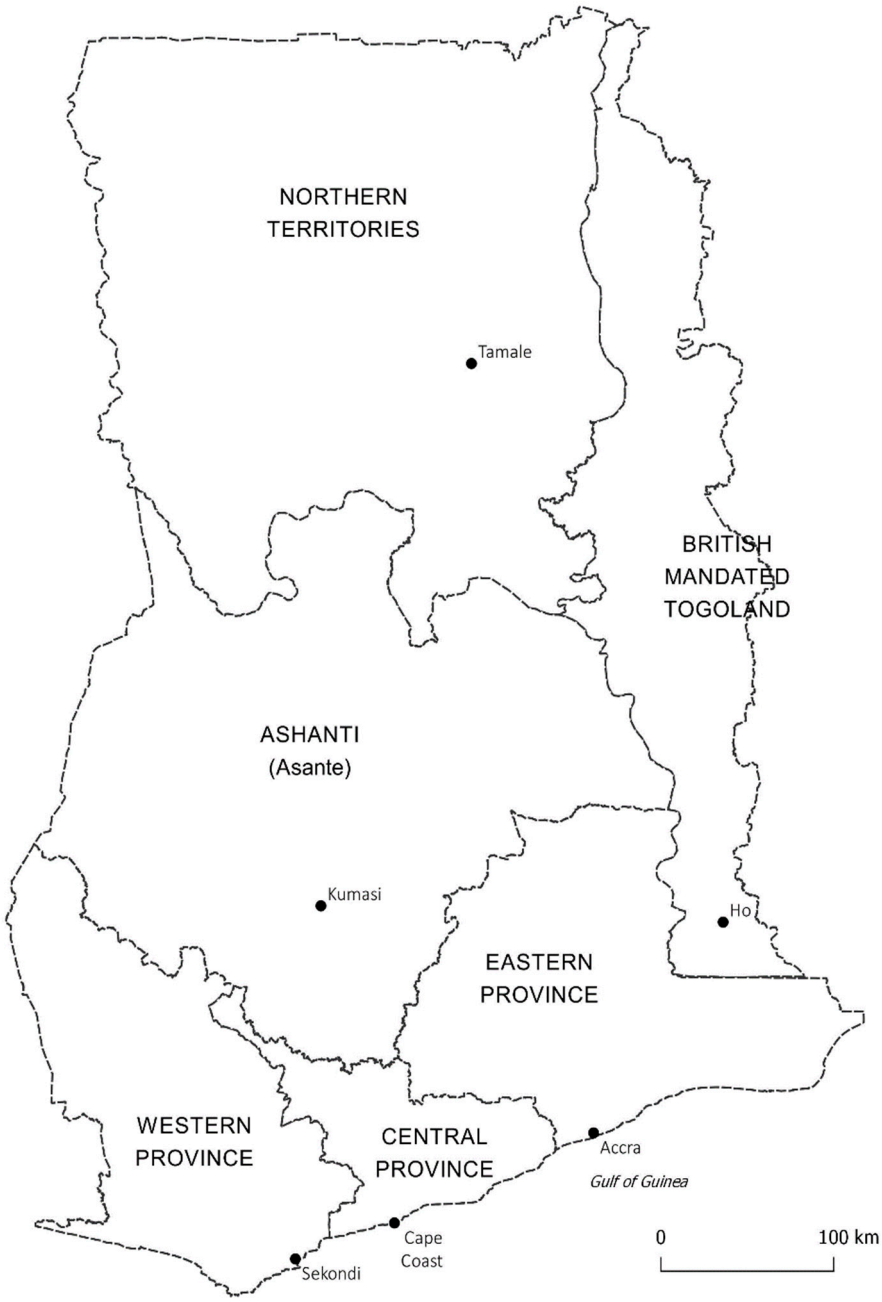
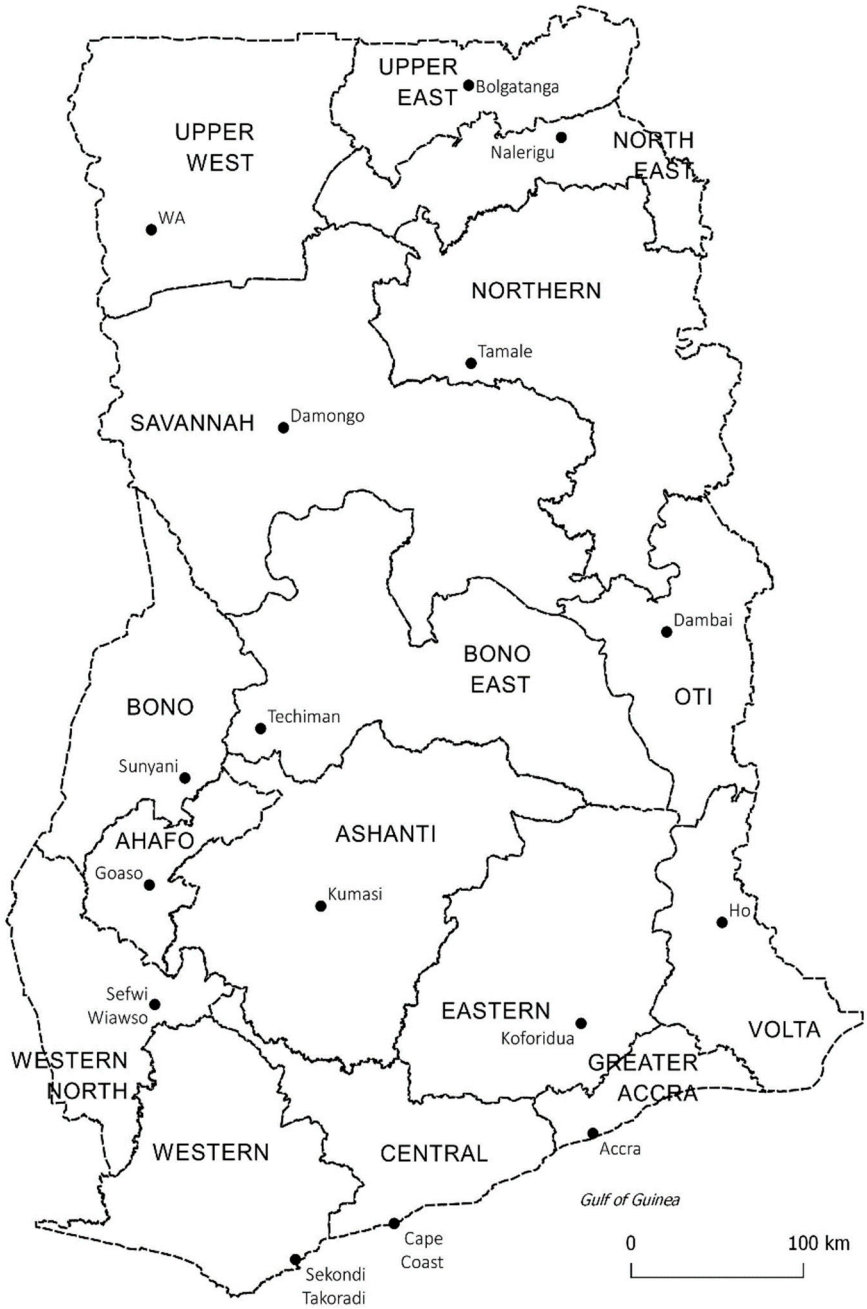


Figure 2: Current Map of Ghana



Sources: Drawn by Jeanne Cilliers.

Ghana: From the Earliest Times to Colonialization

International trade was as important to pre-colonial Gold Coast economy as it is now. The resources of the forest belt: gold, kola nuts and slaves attracted Europeans to the territory's shores from the fifteenth century: the Portuguese in 1482, the Dutch in 1642, the Danish in 1661 and the British in 1672. Before the advent of the Portuguese, the Gold Coast traded extensively through inland routes with other parts of Africa, especially with the Mande traders to the north and to the east, by sea, with the Benin state, in present-day Nigeria (Wilks 1993). Impressed by the quantity of gold available on the Gold Coast, the Portuguese established themselves in Elmina in 1482 to facilitate export. Within a few years, the former fishing village had become a major exporter of gold to the world market. At the same time, a well-developed gold extractive industry and a well-organized distributive trade existed in the Gold Coast's hinterland (Daaku 1970; Garrad 1980; Kea 1982 Wilks 1993). That was why large quantities of gold were readily available at the coast with the opening up of new maritime markets after 1471 (Wilks 1993:5).

From the late 17th century, the Gold Coast became an exporter of slaves with the increasing demand for slave labour for plantation agriculture in the West Indies and North America. In the 1780s when the transatlantic slave trade was at its peak, annual slave exports from the Gold Coast were 10,000 (Hopkins 1973:102). The Gold Coast contributed between 8 and 22 percent of British slave exports from West Africa, from 1700 to 1807 when the slave trade was abolished (Richardson 1989:13).[3]

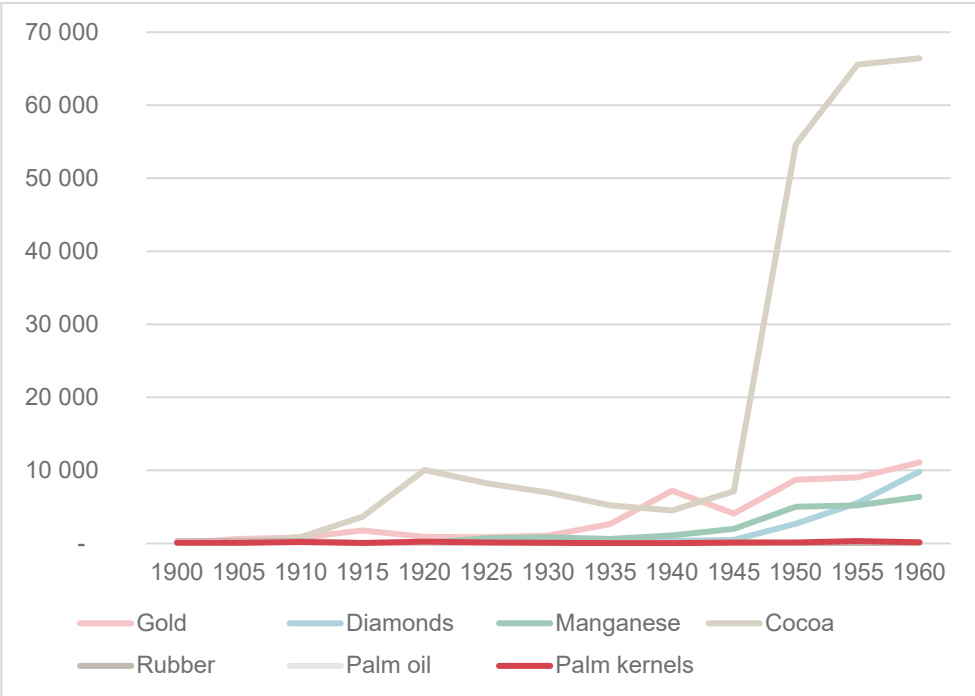
By 1874, the coastal towns which had hosted European forts and factories had become the Gold Coast Colony under British rule. Several factors accounted for this transition from an equal relationship between Europeans and the coastal people of the Gold Coast based on trade into one where one European state exerted political dominion over an area larger than the previous sphere of commercial activities. These factors include: British attempts to abolish the slave trade, the coastal states acquiescing to British protection from the powerful Asante (Ashanti) state, the Danes and Dutch abandoning their footholds in the Gold Coast economy, the search for an alternative 'legitimate' export stable, and European scramble for Africa towards the end of the 19th century (Fage 1959:57-8). By 1902, the Colonies of the Gold Coast, Ashanti and the Northern Territories were formally constituted under British rule, and in 1922 the Mandated area of British Togoland joined.

A major economic change that occurred during the first four decades of colonial rule was the adoption and spread of cocoa cultivation (Hill 1963). In 1892, the Gold Coast exported no cocoa beans, yet with 40,000 tonnes in 1911 it overtook Brazil

[3] Domestic trade in slaves and pawning continued in the Gold Coast well into the 20th century.

as the world's largest exporter of the commodity (Austin 2014:1035). Cocoa farming spread rapidly in the forest belt of the Gold Coast and as Figure 3 shows, cocoa became the country's major export crop. Output continued to increase until the 1936/37 crop year when it peaked at over 300,000 tonnes.

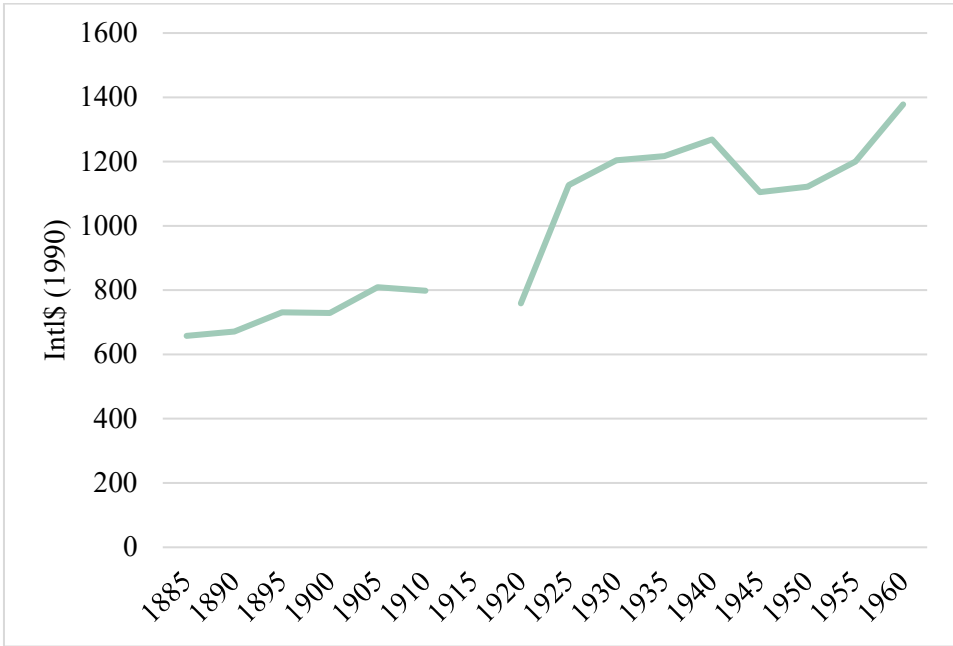
Figure 3: Value of Major Exports, 1900-1960 (£ 000s)



Source: Gold Coast Blue Books, 1900-1930; Gold Coast Trade Reports, 1930; 1945; 1950; 1955; Kay and Hymer (1972).

The transformation of the export economy between 1891 and 1911 was duly reflected in the growth of the country's Gross Domestic Product (GDP). Szereszewski (1965:73; 91) estimates that GDP at 1911 prices went up from £11.1 million to £19.5 million over twenty years, resulting in a 43 percent increase in the GDP per capita. The average yearly per capita GDP growth was 6.5 percent over the two decades. GDP growth continued after 1911 following the high rates of capital formation in cocoa-farming, mining and construction. Recent estimates by Broadberry and Gardner (2019) show that GDP per capita increased from 732 Intl$ in 1891 to 811 Intl$ in 1911. As Figure 4 shows GDP per capita continued to increase in the 1920s and 1930s, declined in the 1940s and picked up again in the 1950s.

Figure 4: GDP per capita, 1885-1960 (1990 International dollars)



Source: Broadberry and Gardner (2019:41-43)

Falling producer prices during the 1930s Great Depression and the early years of World War II discouraged further planting. When cocoa prices increased again, cocoa cultivation picked up pace in the 1950s, but this boom petered out after the mid-1960s as a result of government's excessive taxation of the cocoa sector (Austin 1996:557-558). Undoubtedly, the growth of the export sector resulted in broader welfare development although scholars differ on the extent to which this 'cash crop revolution' and the colonial government's interventions in the cocoa sector affected the distribution of income, matters I take up in papers I and III.

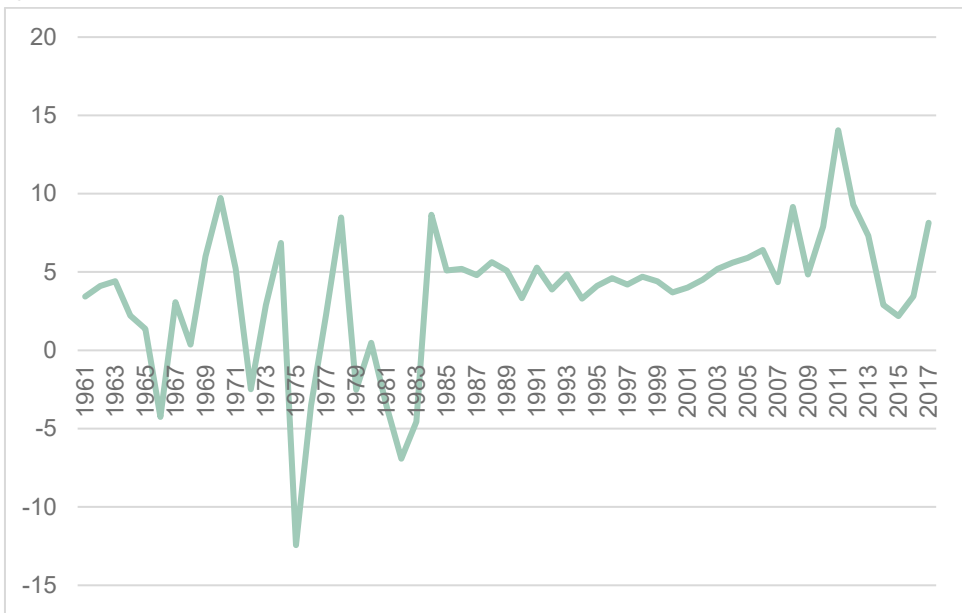
Ghana since Independence

On March 6, 1957 the former British colony of the Gold Coast became the modern nation Ghana, becoming the first SSA country to gain independence. Its economic structure was still based on the export of natural resources. Ghana exported cocoa beans, gold, diamonds, manganese and timber. At independence, it was the world's largest producer and exporter of cocoa, and exported a tenth of the world's gold. There was rapid economic growth primarily based on increasing the exports of crops and minerals. Annual average GDP growth rate was over 6 percent between 1957 and 1960 (Huq 1989:2). In 1957, Ghana's per capita income of £50 was at par with

that of South Korea, and it was securely placed in the group of middle-income countries (Konadu-Agyemang 2000:473). Ghana had a "promising start as one of the richest, most successful and politically mature regions of black Africa" (Leith 1974:1).

However, Ghana's luster did not last for long. By the late 1960s, its economy was teetering at the brink of collapse. GDP growth rate fell to 0.4 percent, foreign reserves had dried up and its external debt reached unsustainable levels (Aryeetey and Fenny 2017:45). Living standards fell, poverty levels increased, as the minimum wage was at half the level it was at independence (Frimpong-Ansah 1991). Ghana's economic decline continued throughout the 1970s and early 1980s, partly as a result of economic mismanagement and political instability. Import volumes fell by 33 percent between 1970 and 1983. Within that same period, real export earnings halved, and domestic savings and investments fell to almost zero from 12 percent of GDP in 1970. Inflation rate was more than 100 percent by the early 1980s. Per capita GDP fell from its 1960 level of US $1009 to $739 (Konadu-Agyemang 2000:473). Ghana's economy contracted during these "lost decades", recording unstable and low, and sometimes negative annual 'growth' rates.

Figure 5: Ghana Annual GDP Growth Rates, 1961-2017



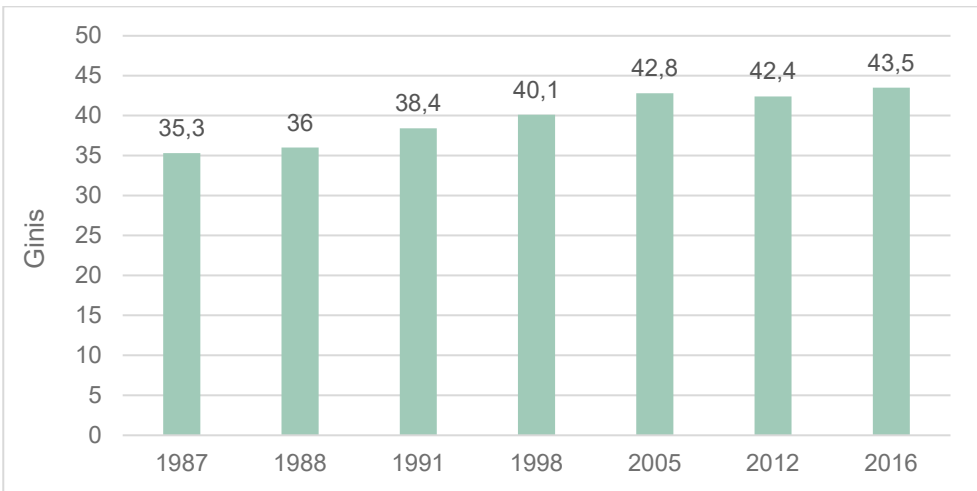
Source: World Bank (2019)

As Figure 5 shows, growth was negative in 1966, 1972, 1975-76, 1979, 1980-1983. Years of negative growth mostly coincided with changes in government and sometimes with policy changes or reversals (Aryeetey and Fosu 2003). In 1975, the

lowest growth rate of -12 percent was recorded at a time of oil price shocks and policy shifts from a moderate market-oriented position to inward-looking protectionism (Aryeetey and Fosu 2003). Nonetheless, positive growth rates were recorded in between periods of economic stagnation and decline, with a high rate of 9.7 percent in 1970 and 8.4 percent in 1978. Economic decline reversed from 1983 when Ghana implemented the IMF and World Bank's supported structural adjustment reform programme. Growth rates picked up, stabilizing around 5 percent, averaged 7.2 percent between 2000 and 2013, reaching an all-time high of 14.1 percent in 2011. Oil (discovered in 2007) and gas production have driven recent growth trends.

The last three decades of resource-driven growth has been characterized by rising inequality (Coulombe and Wodon 2007; Osei-Assibey 2014; Cooke et al. 2016). Between 1987 and 2016, inequality as measured by the Gini coefficient rose by 8 percentage points (Figure 6). Given that these estimates are based on consumption, the extent of inequality is underestimated.

Figure 6: Inequality in Ghana, 1987-2016.



Source: World Bank (2019)

Between 2006 and 2013, the consumption share of the wealthiest 10 percent rose marginally from 32.1 percent of national consumption to 32.5 percent. The bottom 10 percent increased their consumption share from 1.67 percent to 1.72 percent over the same period. Meanwhile, spatial or regional inequality among the country's administrative regions has widened (Cooke et al. 2016). The Northern, Upper East and Upper West regions (often simply called 'the north') continue to lag behind the rest of the country in terms of economic development. A decomposition of Ghana's inequality estimates shows that in 2013, differences in average living conditions between regions accounted for 15.5 percent of national inequality. In the same year,

the difference between the north and south accounted for 17.6 percent of Ghana's inequality (Cooke et al. 2016:15). Inequality is also exacerbated by inequality within regions. Other indicators tell a similar story of uneven development. In 2014, the Upper West region recorded a poverty incidence of 71 percent compared with the national average of 24 percent (Ghana Statistical Service 2014).

Given that Ghanaian governments have prioritized redistributive expenditures, the rising inequality is somewhat surprising. From the colonial era, the pursuit of economic growth has been tempered with equity considerations and "no government has sought a larger GDP to the exclusion of the considerations of income distribution" (Rimmer 1992: 10-11). Whitfield (2018) shows that Ghana's political economy has been characterized by governments involved in "distributive, consumption-driven expenditures across a broad spectrum of society as well as targeted distribution (or patronage) to specific groups linked to the ruling political elites" (Whitfield 2018:36).

In paper III, we will see that governments' tax and expenditure policies have had limited redistributive effects because of the limited coverage of progressive taxation and low levels of government spending. When redistribution has occurred, it has often resulted from the impoverishment of the rich. In paper IV, I discuss why successive Ghanaian governments have been unable to raise sufficient taxes to redistribute income. I emphasize state-societal relations and their implications for fiscal capacity. This is a theme also found in paper II where I discuss how African agency influenced educational diffusion and by a stretch, income distribution.

Inequality

This section defines the concept of inequality and highlights differences between "inequality of opportunity" and "inequality of outcomes". It also explores various reasons why we should be concerned about inequality.

What is Inequality?

Like many other economic concepts, 'inequality' is not self-defining. Depending on the training and prejudice of a reader or listener, the word may connote a number of different ideas. Evidently, inequality suggests a departure from some idea of 'equality', which may connote the fact that two or more given quantities are of the same size and that inequality simply refers to differences in these quantities (Cowell 2009:1). The term inequality is commonly used in a general sense to refer to income differences, which are normally more easily observable. To quote Simon Kuznets

(1953: xxvii): "When we say 'income inequality' we mean simply differences in income, without regard to their desirability as a system of reward or undesirability as a scheme running counter to some ideal of equality". Such representations of inequality relate to 'inequality of outcomes', some of which may be due in part to a market economy's normal functioning, such as the extent to which people take advantage of their opportunities. Yet, inequality in people's circumstances may reflect 'inequality of opportunity'. People may be advantaged or disadvantaged because of their gender, ethnicity, where they were born or live, or their family background (Roemer 1998).

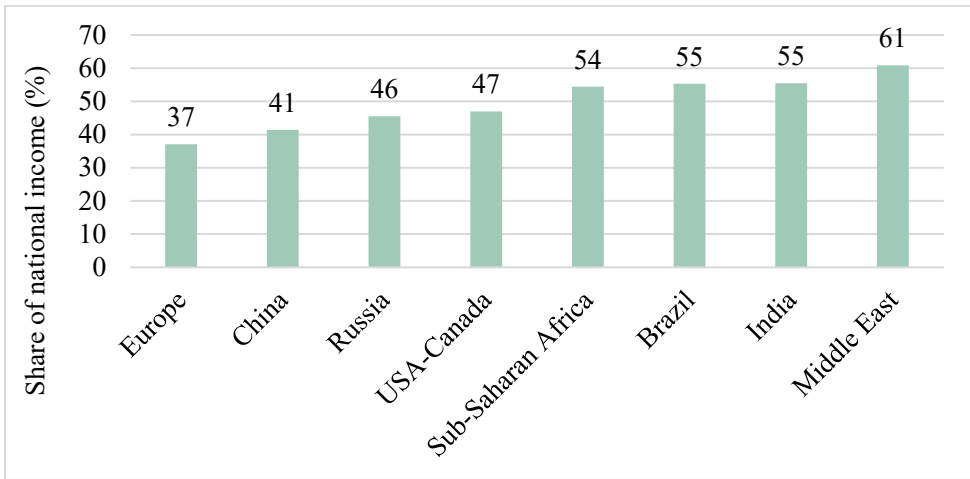
Some scholars have therefore argued that instead of ensuring 'equality of outcomes', 'equality of opportunity' should be the ultimate objective of economic and social policies (Dworkin 1981; Arneson 1989; Cohen 1989; Roemer 1993; 1998; Lefranc et al. 2008). Equal-opportunity theorists identify two main sources of inequality among individuals: 'circumstances' which are beyond a person's control and outside the scope of individual choice such as family background, and 'effort', for which a person can be held responsible. When circumstances do not determine outcome, equality of opportunity is achieved (Roemer and Trannoy 2015). As Atkinson's (2015:10) has pointed out, however, although equality of opportunity is an attractive concept, it does not make inequality of outcome unimportant. His distinction between inequality of opportunity and inequality of outcome helps us understand why inequality of outcome is still relevant. Inequality of opportunity, Atkinson (2015:10) argues, is an *ex ante* concept, that is, there should be an equal starting point for everyone, while redistribution is concerned with *ex post* outcomes. For advocates of equality of opportunity, once a level playing field has been created, concern for ex post outcomes is needless. Still, this view is defective because even when equality of opportunity exists, some people would fall on hard times and it would be morally unacceptable to ignore them and leave them to pull themselves up by their own bootstraps. Further, for succeeding generations, inequality of outcome affects equality of opportunity because those who benefit from inequality of outcome today "can transmit an unfair advantage to their children tomorrow", therefore "if we are concerned about equality of opportunity tomorrow, we need to be concerned about inequality of outcome today" (Atkinson, 2015:10).

In this thesis, I analyse both inequality of outcome and inequality of opportunity. In paper I and III, I discuss income inequality as an aspect of inequality of outcome and in paper II, I investigate inequalities in education, an often-studied aspect of inequality of opportunity. In addition, inequalities embedded in regional divides and gender differences are recurring themes of this thesis.

Why Inequality Matters?

In recent years, income inequality has increased across world regions and in almost all countries, albeit at different paces. In 2016, the share of total national income accounted for by top 10 percent earners was 37 percent in Europe, 41 percent in China, 46 percent in Russia, 47 percent in the United States and Canada. In sub-Saharan Africa, Brazil and India, the top 10 percent income share was 55 percent, while in the Middle East, the top 10 percent captured 61 percent of national income (Figure 7).

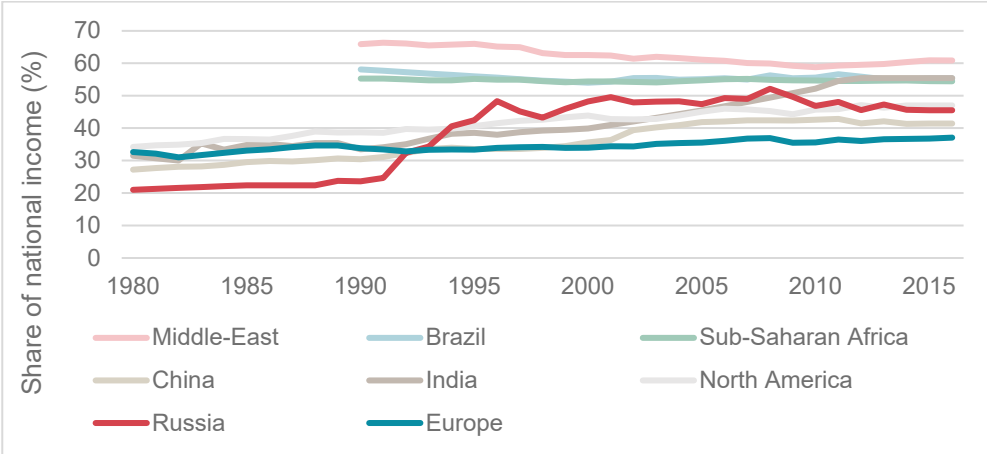
Figure 7: Top 10 percent national income share across the world, 2016



Source: WID.world (2018)

Income inequality has increased rapidly in North America, China, India and Russia since the 1980s. In Europe, inequality has grown modestly. Income inequality has remained relatively stable at extreme high levels in the Middle East, sub-Saharan Africa, and Brazil (Figure 8).

Figure 8. Top 10 percent income shares across the world, 1980-2016



Source: WID.world (2018)

Some scholars argue that the current levels of inequality globally are excessive and there is a widely shared ethical basis for concerns that there should be a reasonable degree of equality between individuals although there is a lack of consensus on what is reasonable (Atkinson 2015:12). Discussions on tolerable and intolerable inequality levels border on a broader theory of justice. Utilitarian theory of justice assesses social welfare by simply adding the utilities of different individuals, and argues that extreme inequality reduces the sum of total utility because the value of an extra unit of income was lower for the well-off. Amartya Sen (1997:16; 2000:62) critiques utilitarianism for being only concerned with the sum of individual utilities and being "supremely unconcerned with the interpersonal distribution of that sum". It is therefore an "unsuitable approach to use for measuring or judging inequality" (Sen 1997:16). John Rawls' (1971) concept of justice allows for incentive-based income inequality where the highly skilled receives payments to stimulate productivity and thereby increase revenue that could be used to increase the incomes of the least-well-off group in society. Rawls (1971:210) argues that inequalities of wealth and income are "just only if they result in compensating benefits for everyone, and in particular for the least advantaged members of society".

Nevertheless, as Cohen (1997) and Atkinson (2015) argue, Rawls' view is inadequately egalitarian. Atkinson (2015:13) points out that Plato's view that "no one should be more than four times richer than the poorest member of the society" might be sufficiently egalitarian as per this assessment inequality matters because of the gap between the haves and have-nots and attempts to reduce inequality is justifiable even when there is no advantage to the least well-off. Another important aspect of Rawls theory of justice stressed access to "primary goods" such as "rights and liberties, powers and opportunities, income and wealth" (Rawls 1971:214). However, as Sen (2008:334) maintains not everyone is able to "convert primary

goods into good living". Sen (1999) therefore suggests that we move beyond primary goods to "capabilities" where social justice is defined by the opportunities people have given their functioning. With Sen's capability approach income matters only for instrumental purposes because, like wealth, it "is evidently not the good we are seeking; for it is merely useful and for the sake of something else" (Aristotle 350 B.C.E., cited by Sen 2000:81). Even so, income differences are still a major source of injustice and therefore we should be concerned about income inequality (Atkinson 2015:13).

Additionally, we should be concerned about inequality because it matters for growth. Despite earlier intellectual disagreements on the impact of income inequality on growth (Alesina and Rodrik 1994; Persson and Tabellini 1994; Partridge 1997; Li and Zou 1998), there is a seeming consensus now that income inequality is inimical for growth and institutional development and remains at the core of many development problems. The adverse effects of inequality on growth has been explained in various ways. Political economy models show that more unequal distributions of income encourage distortionary interventions which may impede growth. In a bid to redistribute incomes, politicians and policy-makers in unequal societies may tax investment and growth-enhancing activities (Persson and Tabellini 1994). Inequality can cause people to resist growth-enhancing economic liberalization reforms. Protectionist pressures against globalization and market-oriented reforms are consequences of income inequality (Claessens and Perotti 2007). Further, from models of risk-market failure, we know that in unequal societies, many people lack access to credit and hence are unable to take up productive investment opportunities and this impedes economic growth (Ravallion 1997).

Further, we should be concerned about inequality because it potentially leads to crimes, social unrest or violent conflict (Lichbach 1989; Pickett and Wilkinson 2010; Stiglitz 2012; Dabla-Norris et al 2015:9; Bourguignon 2015:133-134). Extreme inequality undermines trust and social cohesion and leads to conflicts which discourage investments. Nafziger and Auvinen's (1997) analysis of humanitarian emergencies show that high income inequality is associated with political conflict and complex humanitarian emergencies. Admittedly, the links between economic inequality and civil conflict may not be as direct as it is sometimes assumed. One needs to focus on how inequalities are managed by societies and the significance of varying kinds of inequality (Cramer 2003).

We should also be concerned about inequality because it matters for poverty reduction. Prospects for escaping poverty are lower in high inequality developing countries than in low inequality countries (Ravallion 1997; Easterly 2000; Bourguignon 2003; Fosu 2008; 2009). To illustrate this, Fosu (2009), based on a global sample of 1977-2004 unbalanced panel data for SSA and non-SSA countries,

finds that higher rates of increases in inequality exacerbate poverty and the magnitude of this effect rises with initial income. Ravallion (1997) and Easterly (2000) also find that income-growth elasticity of poverty is a decreasing function of inequality. Notwithstanding the effects of income inequality on poverty levels, some wonder why we should be bothered about rising income differences given that poverty is a greater evil than inequality. The poor do not suffer because others have more material resources, or some have far too much. They suffer because they do not have enough. For this reason, the moral philosopher Harry Frankfurt argues that our primary focus should be on reducing poverty and excessive affluence (2015:5). However, poverty is fundamentally dynamic: "instead of a fixed stock of the poor there is a changing cast of characters" (Krishna 2007:1948). People who were poor in the past may have escaped out of poverty now. Conversely, people who at the present time are poor may have newly fallen into poverty. Poverty is a "moving target", as the poor in developed economies need not seem so in developing economies (Scheidel 2017:19). Poverty may also be defined as a function of income, with the poverty line set as a threshold of median income, although absolute measures are more common.

Other studies have also found that high levels of inequality correlate with lower levels of self-reported happiness (van Praag and Ferrer-i-Carbonell 2009:374). Others suggest that inequality has adverse effects on subjective well-being and attitudes and on health (Clark and D'Ambrosio 2015; O'Donnell et al. 2015). For these and the afore-mentioned reasons, we must be concerned about reducing inequality. Still, some suggest that inequality is a necessary evil. To the extent that inequality provides incentives for people to save, invest, compete and excel, we can excuse some degree of inequality (Dabla-Norris et al. 2015:6). Although returns to education and differences in labour earnings are associated with high income inequality, they can stimulate human capital accumulation and economic growth. Inequality has positive effects on growth because it provides incentives for innovation and entrepreneurship (Lazear and Rosen 1981; Barro 2000). However, inequality of outcomes does not provide the right incentives when they are based on rents (Stiglitz 2012). In that case, people are encouraged to divert their efforts towards securing preferential treatment and protection. The consequences are corruption, nepotism, misallocation and mistrust of public institutions (Dabla-Norris et al. 2015:6).

If we reach a consensus that inequality does matter, we may still wonder why its history is worth studying. While inequality has risen in recent years in many countries, the trend has not always been upwards. That is why we need to look back in time and examine the historical record on inequality. When in the past has inequality fallen? When did it rise? What lessons can we learn from such periods for now and for the future? (Atkinson 2015:45). A historical perspective allows us to understand better, political, social and economic factors that have wrenched or

levelled inequality in the past and provides a guide to policy options for reducing inequality.

Previous Research: Theoretical and Empirical

This section presents theoretical and empirical explanations for inequality trends in the long run. I discuss theories that relate to the relationship between economic growth and income inequality, and the effects of politics, government taxation and expenditure policies, education, geography and natural resource abundance on inequality. I have selected these themes based on the study context and on current debates on the historical roots of inequality in Ghana in particular and in SSA more generally.

Economic Growth and Income Inequality

Simon Kuznets' (1955) famous inverted U-curve is still the workhorse of inequality research. In his seminal work on the relationship between economic growth and inequality, Kuznets (1955) hypothesized that inequality tends to follow an inverted U-shaped pattern, first increasing and then decreasing with economic growth. Two main factors accounted for increasing inequality in developed economies. First, the concentration of savings in the upper-income brackets. Inequality in the distribution of savings was higher than in the distribution of property incomes, and hence of assets. Where there is inequality in savings, income-generating assets would be concentrated in the hands of the upper groups. This would mean larger income shares for the upper groups and their descendants. Second, rising inequality stemmed from the industrial structure of income distribution. Economic growth perforce implies an inter-sectoral shift away from agriculture. Incomes are generally lower in the rural sector than in the urban sector and inequality in the distribution of income is narrower in the rural sector than in the urban sector. As the size of the unequal urban sector increases, there is an upward pressure on inequality. Further, given that per capita productivity increases faster in the urban sector than in rural areas, inequality tends to increase even further (Kuznets 1955:7-8).

Kuznets (1955:8-9; 17) argues that one major force that counteracts factors that account for rising inequality and ensures declining inequality in developed economies is "legislative interference and political decisions". Inheritance taxes and capital levies limit the accumulation of property. Government-permitted or induced inflation reduces the economic value of accumulated wealth. Legal restrictions on the yield of accumulated property in the form of rent controls or of artificially low long-term interest rates would have similar effects on property accumulation.

Kuznets further noted that even if all these interventions are not directly aimed at restraining the effects of accumulation of past savings in a few hands, "they reflect the view of society on the long-term utility of wide income inequalities". This view is an essential force that would operate in democratic societies to check rising inequality. This "egalitarian philosophy that accompanies modern economic growth exercises continuous pressure to limit income inequality as much as considerations of productivity and the resistance of tradition permit" (Kuznets 1966:215).

For underdeveloped countries, Kuznets conjectured that income inequality was high because of the absence of the counterbalancing forces related to rapid growth that checked the rising inequality in developed economies. In such countries, the political and social systems fail to initiate policies that cushion lower-income classes (Kuznets 1955:24). In colonies such as Kenya and Rhodesia where there were small enclaves of non-native, privileged minorities and large indigenous populations, the income shares of the privileged minority were even higher (Kuznets 1955:2). Colonialism encouraged stratification and in many erstwhile colonies export-oriented enclaves unconnected to a large section of the population developed.

Many empirical studies that have been undertaken to assess the veracity of the 'Kuznets Curve' have shown mixed results (see for example, Ahluwalia, 1976; Adelman and Morris, 1973; Ravallion, 1995), leading one researcher to conclude that: "The Kuznets Curve is neither a law nor a central tendency. The pattern is that there is no pattern" (Fields, 1999:23). Paper I of this dissertation can also be seen as an empirical 'test' of the Kuznets mechanism. As we will see, although the Gold Coast economy experienced sectoral change away from agriculture towards formal wage employment, overall, the size of this occupational shift was too small to affect the levels of inequality. However, as Paper III will also show the absence of redistributive tax and expenditure policies during the closing decades of the colonial era ensured that inequality stayed at relatively high levels, which is in line with Kuznets' (1955) assessment for the underdeveloped countries he observed.

Political Redistribution of Income

Recently, attempts at theory-building on income distribution have increasingly placed political factors at the centre. Acemoglu and Robinson (2002) have famously argued that political factors and institutional transformations are important for understanding the patterns of inequality observed especially in the West during the nineteenth century. Industrialization leads to increased inequality; this leads to political mobilization of poorer classes of the society who are concentrated in urban centres and factories. The threat of political unrest or even revolution is heightened and political elites are compelled to undertake reforms. Under such circumstances, elites face several options which range from redistribution, to repression or to

political change. Fundamental political change in the form of extending the franchise was the best option of elites. It signals a commitment to future redistribution and prevents unrest. The extension of franchise led to changes in labour market institutions, and mass education, which in turn contributed to reducing inequality in Britain and France. Capitalist industrialization increases inequality but it induces political change towards redistribution (Acemoglu and Robinson 2002:184).

Piketty (2014) argues that in industrialized economies incomes from capital increase faster than GDP growth and that the only way to 'bend the Kuznets curve' is by political action. This is what happened in the Western world in the 20th century and in the absence of political will, income inequality will increase again. The relative power of economic, social and political actors and their collective choices shape inequality trends. Between 1910 and 1950 inequality declined in rich countries because of political forces such as war, taxation to finance the wars, socialist ideology and movements. Likewise, rising inequality after 1980 is due essentially to political shifts of the past several decades, especially related to taxation and finance (Piketty 2014).

Therefore, an important aspect of political economy theories of income distribution is the use of fiscal policies to reduce income inequality. Fiscal policies can have direct effects on inequality through taxes, transfers and public expenditure. Fiscal policies also affect inequality indirectly through their effects on factors that lead to increased inequality (Odusola 2017a, b). Taxes affect inequality in two main ways. First, governments use taxation to mobilize revenue (Musgrave 1959) which are used to finance social spending to support the have-nots and vulnerable groups of society. Tax-funded public investments in education, health care, and infrastructural development raise incomes of the poor in the long run (Jacoby and Minten 2008). Second, progressive taxes on incomes (particularly on top income earners), capital and wealth and indirect taxes on luxury consumption items reduce inequality (Kaldor 1963; Piketty 2014; Milanovic 2016; Odusola 2017b). Tax policies have an almost 'mechanical' effect on inequality because they usually take a larger income share of the rich than the poor (Leigh 2008).

It has been argued that redistributing income through progressive taxation can lower incentives to work and invest and therefore undermine growth and adversely affect the poor (see for example Okun 1975). However, there need not be a trade-off between redistribution and growth especially when redistribution involves reducing tax expenditures or sealing tax loopholes that are beneficial to the rich (Ostry et al. 2019). Additionally, when taxes finance public investments and social insurance expenditure enhances the welfare of the poor or when health, education and infrastructural spending benefits the poor, redistribution has no harmful effects on growth (Benabou 2000; Lindert 2004; Ostry et al. 2019). Not only does government

social spending provide immediate benefits such as expanded access to health and education services, but also affects the distribution of earning capacities of individuals and households and consequently the long-run distribution of incomes (Chu et al. 2000).

Having said the above, the relationship between fiscal policies and inequality is not linear or automatic as is often assumed (Odusola 2017b). Taxes must be progressive and have a wide coverage, and government expenditure must be efficient and well-targeted to make redistribution through taxes and transfers effective. Further, where inequality is structural or largely institutional and fiscal policies do not alter economic structures and institutions that cause unequal distribution of income, progressive taxation and government spending may be ineffective in reducing inequality (Apps 1982). Powerful interest groups may also block the way to tax reforms and limit governments' ability to mobilize revenues through taxation for redistributive expenditures (Kaldor 1963; Levi 1988). I will argue in paper III that government tax and expenditure policies have historically had limited effects on inequality in Ghana partly because of the afore-mentioned reasons. Paper IV will examine the constraints on the state's fiscal capacity.

Education and Income Inequality

One of the commonest ways of approaching the study of inequality is to analyse differences in access to education. This is because such differences have been identified as one of the major factors that affect the degree of income inequality. Human capital models of income distribution based on the work of Theodore Schultz, Gary Becker and Jacob Mincer, argue that the distribution of education across the population determine the distribution of earnings (or income) in the long run. This is because education helps to develop physical and cognitive abilities and those who have these abilities are more likely to earn higher remunerations for their productive efforts. Further, educated people are in a better position to participate in the market economy and in the political process where a large share of national resources is (re) distributed (Bolt and Frankema 2006). Improved access to education is likely to raise the earning opportunity of the poor and thereby, lower inequality. For all the above reasons, where education is unequally distributed, incomes will be unequally distributed as well.

Although human capital models predict a clear positive association between educational inequality and income inequality, empirical studies on the effects of education on inequality find mixed results. While some studies find a negative association between education and inequality, others find that education increases inequality (Adelman & Morris 1973; Psacharopoulos 1977; Ram 1989; Castello and Domenech 2002; Gregorio and Lee 1999). However, the seeming contradictory

evidence on the effects of education on inequality reflect data limitations, misspecification biases and the likelihood of selectivity in the reporting of results (Bolt and Frankema 2006; Abdullah et al. 2015). The overall evidence does suggest that increased access to education is indeed an equalizer.

Though educational expansion may have an initial disequalizing effect, it eventually leads to a decline in inequality. Knight and Sabot (1983) argue that education has both "composition" and "wage compression" effects on income distribution. The composition effect occurs when the change in the share of the labour force with more education increases which tends to initially increase income inequality, but ultimately to lower it. As the supply of educated workers increases, the premium on education declines, thereby lowering income inequality; this is the wage compression effect.

Therefore, given the role of education in equalizing economic rewards and opportunities in a society, policy makers have been concerned with expanding access to education. At the same time, scholars have also focused on investigating the causes of educational expansion. This literature can be crudely divided into two, highlighting either supply or demand factors. 'Supply-side' theories emphasize the role of the state, policy makers, political or religious leaders and other corporate actors in educational expansion (Easterlin 1981; Lindert 2004; Go and Lindert 2010; Gallego 2010). The distribution of political power and the role of political elites and their perceptions of the likely benefits of an educated populace affect investments in education (Engerman and Sokoloff 2002). Elites may promote the diffusion of elementary education to maintain social order, foster national integration or benefit from the economic returns of an educated workforce (Andersson and Berger 2018).

Demand-side explanations centre the spread of education on the decision-making of families and individuals and view educational expansion as a voluntary response to increasing payoffs to education. Governments merely implement or sanction public decisions through public action (Easterlin 1981:11). Families and individuals invest in education only when the private benefit from doing so exceeds the private cost (Clemens 2004). When the cost is high or when the benefit is insufficient, they will stop investing. In paper II, we will see that both supply and demand factors interacted to influence the course of educational expansion in colonial Ghana. Until the late 1930s, the economic benefits of colonial education were limited and the opportunity costs of enrolling children were high. Many parents were therefore disinclined to educate their children. Differences in educational supply mirrored differences in demand.

Geography

Geography might have fallen on hard times. However, it has contributed substantially to our understanding of inequality in the developing world. One of the recurrent themes throughout this thesis, is how differences in natural endowments within and between regions contributed to the uneven distribution of incomes, uneven allocation of government expenditure and divergent development outcomes between and within regions. As we shall see especially in paper I, areas where soil quality did not favour cocoa growing fell behind in terms of living standards.

Endowments in natural resources and land concentration in agricultural exports are major determinants of differences in income inequality across developing countries (Bourguignon and Morrisson 1990). Engerman and Sokoloff (2000, 2005), for instance, argue for Latin America that it was characterized by extreme inequality largely because of its factor endowments. Soils and climate suited for exotic crops grown on plantations, sugar in particular, coupled with opportunities of imports of slave labour facilitated wealth amassment by the elites and led to unequal distributions of wealth, human capital and political power.

Within the geography school, cash cropping is often thought of as a cause of uneven distribution of income. Not that cash cropping itself causes initial maldistribution of incomes, but it acts as the mechanism by which initial inequalities are worsened (Maxwell and Fernando 1989:1685-6). Using anthropometric measures from 28 less developed countries from 1950 to 1980, Moradi and Baten (2005) find that monoculture cash cropping increases inequality. Maxwell and Fernando (1989:1685-6) outline three ways by which cash cropping can cause greater inequality. First, the adoption of cash crop cultivation is uneven. Early adopters are large farmers, men, foreign plantation owners and ecologically endowed regions or countries. Within regions that cultivate cash crops, inequality is said to be high due to delayed or differential adoption which is as a result of crop or technological characteristics (for instance economies of scale) or from farmer characteristics such as access to inputs or markets and ability to take or withstand risk. Early adopters are able to leverage commercial relations and buy more fertile land to capture economies of scale when land prices are still low, especially at the introductory phases of cash crop cultivation. Second, state policies on pricing, research, input supply, wages, taxation and trade may encourage differential adoption. Third, the poor may be deprived of free access to land to the benefit of large-scale farmers and commercial plantation owners. Loss of usufruct in land, dispossession, and exploitation of marginal lands and emigration from rural areas make the poor absolutely worse off (Maxwell and Fernando 1989:1685-6). Nevertheless, natural resource based and export-led growth can also provide opportunities for poverty alleviation and human capital formation, indirectly driving inequality through endogenous growth processes.

The Impact of Colonialism

As mentioned earlier, for a long time, a stylized fact among scholars held that income inequality was low in SSA. As more income distribution data became available in the late 1990s, it became apparent that SSA had high income inequality levels, almost at par with the highly unequal regions of the world then (Deininger and Squire 1996; 1998). Recent studies show that SSA is host to countries with the highest inequality levels in the world (Table 1). SSA is also heterogeneous in terms of the patterns and levels of inequality. As table 1 shows out of the 40 classified countries, 10 have "very high" Ginis of between 0.5 and 0.7 while 14 have "high" Ginis of between 0.4 and 0.5. Further, a divergence in inequality trends exists in the region. Between 1991 and 2011, 17 countries (mainly agricultural economies from West Africa and a few from other sub-regions) experienced falling inequality while 12 countries mainly in Southern and Central Africa recorded an increase in inequality (Odusola et al. 2017).

Table 1: Classification of countries by level of inequality and by region, developing countries, 2010

	Very High (50-70)	High (40-50)	Middle (30-40)	Low (20-30)	Total
East Asia & Pacific	0	3	8	0	11
Eastern Europe & Central Asia	0	5	16	7	28
Latin America & the Caribbean	2	17	6	0	25
Middle East & North Africa	0	1	10	0	11
South Asia	0	0	7	0	7
Sub-Saharan Africa	10	14	16	0	40
Total	12	40	63	7	122

Note: Countries are classified according to the value of the Gini coefficient for the distribution of household consumption per capita.

Source: Alvaredo and Gasparini (2015:710)

Many scholars have become dissatisfied with many of the explanations given in the existing literature on the causes of the high and heterogeneous levels and trends of inequality in SSA such as uneven factor endowments, ethnic fractionalization, globalization, and differences in policy approaches (Milanovic 2003; Anderson and McKay 2004; Van de Walle 2009; Odusola et al 2017). They have now turned to history, and in particular, the impact of colonialism. This is because the effects of the afore-mentioned drivers on inequality are mediated by prior factors of which colonial legacies are prime (Van de Walle 2009).

For economists and economic historians of Africa, it is commonplace to use typologies based on the identity of the colonizer and the extent and form of

European appropriation in their analyses of the impact of colonialism on divergent development outcomes in SSA. African economic historians often distinguish between three types of colonies: "settler", "concession" or "plantation", and "peasant colonies" (Amin 1972; Austin 2008; Hopkins 2009). In Acemoglu et al.'s (2002) famous "reversal of fortune" thesis, they argue that in relatively rich and densely settled areas, Europeans extracted from African economic enterprise whereas in poorer and sparsely populated areas "Europeans themselves settled in large numbers, and created institutions of private property, encouraging commerce and industry" (2002:1279). In contrast to their positive portrait of the performance of settler colonies, Austin (2008:1008) argues that these were the most unequal societies. Sara Berry (1993:148-158) had earlier observed that socioeconomic mobility was greater in peasant-export economies and incomes were more equal than in settler economies. Further, in an important study on measuring poverty levels in 20th century SSA, Bowden et al. (2008) find that settler colonies (South Africa, Zimbabwe and Kenya) were more unequal than non-settler colonies such as Uganda, Ghana and Ethiopia.

Several reasons account for the differences in income distribution between settler and non-settler colonies and not least of them is the decision by European colonizers to allow or not to allow the appropriation of majority of agricultural land by white settlers. In colonies where land was appropriated for European use, indigenes lost out on income-generating opportunities and a highly unequal income distribution evolved (Bowden et al. 2008; Austin 2008; 2010). In non-settler colonies where colonial authorities did not allow European settlers to occupy agricultural land. The legacy was a floor under the labour market which allowed labourers to migrate into export-crop producing areas to share in the gains from exports (Bowden et al. 2008). Further, the "pro-African ethos" of colonial authorities in the peasant-export economies made them invest in the human capital base of low-income Africans within and outside agriculture, much more than in settler colonies (Bowden et al 2008).

Arne Bigsten (1986) in a pioneering attempt to assess long-term trends in income inequality in Kenya, a settler colony, found that inequality remained high throughout the colonial period. Kenya recorded a Gini coefficient of 0.50 in 1914, rising to 0.70 in 1950 and only falling to 0.63 in 1964. He argues that structural changes in the economy-the bifurcation into traditional and modern sectors at the beginning of the 20th century led to high levels of inequality in Kenya. He concedes though that land alienation programs and the denial of Africans of productive resources and income generating opportunities exacerbated income disparities. Although, Europeans appropriated to themselves, approximately 7 percent of the land, these were the "high-potential areas", and the natives, barred from owning land in the White Highlands, were restricted to only "reserve lands" which were unsuitable for grazing (Mosley 1983; Bowden et al. 2008). Similar trends could be

observed in Southern Rhodesia and in Africa's prime settler colony South Africa (Arrighi 1966; Bundy 1979).

Aside land appropriation and the general squeezing of income generating opportunities for Africans which led to skewed income distribution in settler colonies, it has been argued that other colonial government policies, such as labour, taxation, expenditure policies led to the impoverishment of the African population (Austin 2008; Bowden et al. 2008; Frankema and van Waijenburg 2012; Fibaek and Green 2019). On expenditure policies for example, health, education and road and railway infrastructure were sited in areas Europeans settled and to support white settler production (Bowden et al. 2008; Bowden and Mosley 2012). Ultimately, "dual economies" with high levels of inequality were created. Colonialism encouraged stratification and in many colonies export-oriented enclaves unconnected to a large section of the population developed.

While these studies help us understand the historical origins of the high levels and heterogeneity of inequality in SSA today, many gloss over within sub-region inequality and inequality between Africans in both settler and non-settler colonies. Moreover, with their overemphasis on the impact of colonial policies, they underplay the diverse nature of local conditions and colonial experiences, and the roles of the colonized themselves in shaping divergent development outcomes. Papers II and IV stress on the role of African agency in the spread of education and the development of the fiscal capacity of the state.

Regional Inequality

Inequality between regions affects overall national inequality (Kanbur and Venables 2003). Although this thesis does not focus explicitly on regional inequality, the country's long-standing north-south divide is a recurring theme in Papers I, II and III. A discussion of theories on the drivers of spatial inequality is therefore useful. Economists, economic geographers and development planners have built on the above theories to theorize on the drivers of regional or spatial inequality. These propositions are usually classified under two principal schools of thought: the spatial equilibrium/convergence and the spatial disequilibrium/divergence perspectives (Lipshitz 1992). Following in the tradition of Kuznets (1955), the convergence school of thought considers regional inequality as an inevitable but temporary consequence of the initial stages of economic growth which stem from market failures. With increased mobility of production factors such as labor and capital between the regions in the long run, the market mechanism will be equilibrating and any disparities in regional wages will tend to disappear over time (McCombie 1988). The assumption is that in a free market economy, labor moves in search for areas with higher wages while capital tends to move in the opposite direction in search

for areas where production costs are low. Thus, this process will continue over a period of time when the income per worker in both metropolitan and backward regions would be virtually equal, eventually leading to convergence in incomes (Borts and Stein 1964; Williamson 1965).

Williamson (1965) gives four reasons why income generating opportunities tend to be concentrated in a few hands in the early stages of development and a subsequent extensive dispersion of development in the latter stages. First, the selective migration of the most skilled and productive labor force from the backward regions into the rich ones give rise to regional income disparities. Increased labor participation rates in the more developed regions will rise and as more human capital move from the poor regions into the richer ones, resource endowments per capita become more lopsided. Second, owing to the benefits of the agglomeration of capital projects, the interregional flow of private capital may be unbalanced as well and more capital may move from the poor regions to developed ones. The high-risk premiums and underdeveloped capital markets in the poor regions prevents capital accumulation in the poor regions, thus further exacerbating the rich-poor schism. Third, the lack of or at best undeveloped interregional linkages at the early stages of growth may diminish the spread effects of technological and social changes and income multipliers. Lastly, central government policies may tend to aggravate the extent of regional inequality as greater public investments may be made in developed regions, further generating even more rapid growth there to the detriment of the poorer ones (Williamson 1965:5-10). In Williamson's view, these factors also tend to reduce inequality at the latter stages of development, as new resources are discovered in the less developed regions, labor and capital move back to these regions and government policies may also be redirected to develop the poorer regions, thereby reducing income inequality in the long run.

This theory has however been challenged on two main grounds. First, historical and contemporary trends have shown that regional cleavages are not a short-term phenomenon but rather, a permanent and rising phenomenon in many countries. Second, given that the theory implicitly assumes perfect market conditions, it betrays its inapplicability to many developing countries where the market is anything but perfect (Lipshitz 1992; Abdulai 2012). Opponents of this theory are mainly proponents of the spatial disequilibrium/divergence perspective based on the new economic geography school and endogenous growth models (Krugman and Venables 1995; Milanovic 2005). This stance comprises two different theories: the planned economics or government intervention theory and the radical theory. From this perspective, spatial movement of production factors increases interregional inequality and the market has no endogenous mechanism to ensure automatic stability. While the planned economics approach argues that an exogenous influence in the form of government intervention or by a central planning authority is therefore

required to reduce regional income inequality, the radical approach faults the state for the problem of regional inequality (Lipshitz 1992).

Myrdal (1957:26) maintains that if market forces are unhindered by any policy interferences, almost all economic activities such as industrial production, commerce, banking, insurance, shipping, which have a bigger than average return in developing economies, and "science, art, literature, education and higher culture generally would cluster in certain localities and regions, leaving the rest of the country in a backwater". And although the development of a region may have "backwash effects" in other regions, the movements of factors of production in themselves cannot reduce regional inequality as they only act as the channels through which the cumulative process advances- "upwards in the lucky regions and downwards in the unlucky ones" (Myrdal 1957:27). Albeit, Hirschman (1958) largely agrees with Myrdal, he is more optimistic of the 'polarizing' and 'trickling down' effects of the movements of capital and labor and the essential role of government in correcting the imbalances in interregional development and income disparities.

From a neo-Marxist perspective, the radicals place the roots of uneven spatial income distribution squarely within the nature of the capitalist system. Generally, they view the current underdevelopment of certain regions as a result of the exploitation of developed capitalist regions. They argue that the dynamics of capital accumulation creates a centre-periphery production structure, where the role of the periphery (the lagged regions) is basically to serve as a labor reserve to facilitate production and market place for absorbing the commodities produced (Amin 1972; Harvey 1975). In the words of Amin (1972:171), cheap labour becomes available to capital where capital requires it, and "it is only 'the ideology of universal harmony' which sees in these migrations anything other than migrations which impoverish the departure zones".

Methodology

Having discussed the theories this thesis builds on, this section gives an overview of the methods used in operationalizing the theories and in answering the research questions of the thesis. The data sources and methods for each paper are different and I discuss them in detail in each of the papers. We begin, here, with the methods and subsequently, the data sources.

Methods

In paper I where we assess long term trends in inequality in colonial and early post-colonial Ghana, we use a social tables approach. We identify social classes based on occupation, estimate the share of population per class and compute mean incomes for each class. Based on this we compute Gini coefficients and trace inequality trends. The construction of social tables goes back to Gregory King who estimated incomes and expenses for several families in England for 1688 (Lindert and Williamson 1983:5). Recently, many scholars have used this method to increase our understanding of inequality in pre-industrial societies (Alvarez-Nogal and Prados de la Escoura 2007; Milanovic et al. 2010; López-Jerez 2014; Alfani and Ryckbosch 2016; Bolt and Hillbom 2016).

Social tables are particularly useful for estimating inequality for societies for which information on individual wages and occupations are non-existent (Milanovic et al. 2011; Milanovic 2016:248). Social tables provide a straightforward way of estimating the distribution of incomes over social classes as they provide both the share in total population and an average income for each social class. Yet, social tables are not without their problems. Calculating inequality based on average wages per group accounts only for between group inequalities and hence underestimates overall inequality (Milanovic et al. 2011:260; Modalsli 2015). Further, the existence of many social tables with similar incomes, and the high dispersion of income within individual social classes may result in underestimation of Ginis (Modalsli 2015). Social tables are useful in evaluating societies where classes are clearly defined and income differences between them are significant (Milanovic et al. 2011:259). In colonial Ghana, income spans sometimes overlapped, and we cannot always assume that all individuals within a higher social class earned a higher income than those in a lower social class. This is especially challenging when the changing nature of the category means that the distribution within the group must vary.

In papers II, III and IV, we adopt an analytical narrative approach to analyse the diffusion of education and the effects of governments' policies on inequality and

the development of fiscal capacity in Ghana. The approach combines the historian's narrative approach with the economists and political scientists' rational choice analytic tools in order to identify possible causal processes and patterns (Bates et al. 1998, 2000; Mongin 2016). The analytical narrative approach is therefore suitable because these papers do not seek to quantify the effects of European supply and African demand on educational inequalities, or of government tax and expenditure policies on inequality or of political contestations on state's fiscal capacity. Instead, they aim at explaining the processes- the social "cogs and wheels", by which these relationships came to exist (Elster 1989:3; Hedström and Swedberg 1998:7).

The analytical narrative approach as described by Bates et al. (1998:10) is narrative because "it pays close attention to stories, accounts, and context" and it is analytic because it "extracts explicit and formal lines of reasoning, which facilitate both exposition and explanation". The approach's careful attention to contextual minutiae attracts the criticism that it is too descriptive and it cannot produce general knowledge (Goertz and Mahoney, 2012; Lange 2012). However, narratives can be analytical and help to logically explain how and why events occur when evidence is examined within a theoretical framework (Lange 2012; López-Jerez 2014:32). To this end, each of the papers in this thesis builds on theory and empirical evidence and identifies the potential causes of events in theoretical terms.

Earlier applications of the analytical narrative approach also tend to be more micro than macro and focus solely on the choices and decisions of individuals (see for example, Bates et al. 1998). Differently from that approach, this thesis examines the interactions between the macro and micro and evaluates the behaviour of actors, their preferences and perceptions, their options, and the strategies they adopt against the backdrop of structural constraints. This approach is particularly evident in papers II and IV and is guided by the fact that human action is rationally bounded by factors that change over time (Simon 1957; López-Jerez 2014:33).

Data Sources

I have already alluded to the fact that data on population, wages, incomes, and prices in pre-colonial, colonial and post-colonial SSA is patchy. Ghana is no exception and there is limited data for the pre-colonial, colonial and post-colonial periods. McCloskey (2014:74) advises scientists against using someone else's *data* ("things given"). Instead, they should deal in *capta*, "things seized". Unfortunately, we are unable to rely solely on capta. As much as practicable, the thesis uses "things seized", and complements them with "things given". I discuss the data sources and their limitations in some detail in the individual papers. It would suffice here to present the main data sources.

The thesis is primarily based on data I retrieved from colonial archives in the United Kingdom (LSE and Kew) and Ghana (Accra and Kumasi). The British Online Archives was another valuable source of data. For paper I, the colonial Blue Books, colonial annual reports, 'provincial' reports colonial and early post-colonial census reports, colonial agricultural surveys and reports, trade reports, digest of statistics, and other secondary sources provided data on prices, population, occupations, wages, farm sizes, crop production and export volumes. My assessment of educational inequalities in paper II is based on regionally disaggregated educational statistics (enrollment and number of schools), provincial annual reports, and colonial and post-colonial census reports, colonial economic and social surveys. I supplemented these with Lee and Lee's (2016) dataset on long-run enrollment ratios and educational attainment. Paper III is based largely on secondary sources, complemented by reports from the colonial Income Tax Department. Income Ginis for the colonial era are from the first paper and consumption inequality Ginis for the post-colonial era were obtained from the World Bank. Analysis of fiscal contracts and fiscal capacity in Ghana in paper IV is based on data from colonial correspondences, tax reports, digest of statistics, colonial Blue Books, Treasury Department Reports, colonial and post-colonial parliamentary reports, and post-colonial budget statements. In addition to these primary sources, the UNU-WIDER's "Government revenue dataset" was an important source of data on total tax revenue between the 1990s and 2015. The data sources are summarized in Table 2.

Table 2: Main Data Sources

Data	Sources
Paper I	
Population; Occupations	Census Reports (1891-1960), 'Provincial' Reports (1897-1939); Kay and Hymer (1972)
Food & cocoa producer prices	Blue Books, 1891-1939; Frimpong-Ansah (1991); Hill (1956, 1963)
Crops cultivated, farm sizes, yields & production.	Shephard (1936); Lynn (1937); Cardinall (1931); Beckett (1944); Birmingham et al. (1966); Beckman (1970); Nyanteng (1978); Gold Coast Economic Survey (1955)
Incomes	Blue Books, 1891-1939; Census Report (1911); Fisheries Department Report (1955); Economic Surveys (1948; 1954; 1955); Surveys on cocoa producing families (1956; 1958; 1960)
Paper II	
Enrollment, number of schools	Department of Education Reports (1897-1956); Census Reports (1921; 1931; 1948; 1960); 'Provincial' Reports; (1897-1939); Lee and Lee (2016).
Occupations	Census Reports (1911; 1921; 1931; 1948; 1960); Acquah (1958)
Costs of education	Busia (1950); Hill (1958)
Paper III	
Income Ginis	Aboagye and Bolt (2020)
Consumption Ginis	World Bank (2019)
Paper IV	
Tax negotiations	Colonial Correspondences; Parliamentary Debates; Budget Statements;
Tax revenue	Colonial Blue Books; ICTD/UNU-WIDER
Government expenditure	Treasury Department Reports (1905-1935)

Results

The results of this dissertation are presented in four papers, summarized below.

Summary of the Papers

Paper I: Long-Term Trends in Income Inequality in Ghana: Winners and Losers of Economic Change in Ghana, 1891-1960. This paper is coauthored with Jutta Bolt. Both authors contributed equally in producing this manuscript.

This paper forms the basis for the empirical discussions throughout the thesis. It quantities the evolution of income inequality in colonial Ghana for the first time and

pushes back our understanding of measurable inequality levels into the late 19th century. By so doing, the paper contributes to the growing literature on understanding long-term trends in inequality in SSA, and for colonial Ghana, in particular, the debate on the role of cocoa and sectoral changes in driving income inequality trends.

A major theme in the cross-disciplinary literature of the 1970s and 1980s on Ghana's development, was that pre-colonial Ghana was egalitarian and that economic changes associated with the advent of colonialism resulted in marked inequalities. It is often argued that export agriculture led to growing differentiation among Ghanaians as between north and south. Others hold a different view: there were marked inequalities before colonialism which collapsed under colonialism as a result of the development of a market economy. On cocoa-farming, the popular argument is that the introduction and cultivation of cocoa caused an increase in inequality and the continuous expansion of output was associated with progressive income differentiation among cocoa farmers. So far, because of data limitations, it has been difficult to systematically quantify the development of inequality in pre-colonial and colonial Ghana to examine these issues. We take a shot at filling this gap in the literature by constructing social tables for each decade from 1891 to 1960 and compute Ginis.

We find that income inequality was relatively high prior to the advent of cocoa cultivation and remained stable thereafter until the global depression years of the early 1930s when it declined. Inequality increased during the closing decades and reached a high of 0.50 in 1960. Our inequality trends are driven first by rapidly increasing incomes for government employees and skilled and commercial workers after the 1930s. Although the economy experienced occupational changes, the overall size of these changes alone was not large enough to affect the levels of income inequality. Further, in spite of wide income differences between the top and the rest, the shares of total incomes earned by the rich were too small to influence the overall distribution of income. Additionally, the cocoa sector did not affect inequality trends but the overall level of income inequality. This was not because of increasing polarization in the cocoa sector itself but rising cocoa prices and therefore incomes after the 1930s. Concerning the country's enduring north/south divide, we find that the historical roots of this divide preceded the adoption of cocoa cultivation. However, income differences between the north and south grew after the rapid expansion of cocoa cultivation.

Paper II: Inequality of Education in Colonial Ghana: European Influences and African Agency.

Paper II on the spread of education was motivated by our observation from paper I that alongside cocoa farmers, educated Africans who were employed by the colonial administration were winners of economic change during the colonial era. Their status and living standards were higher than many of their compatriots. There were few educated Africans employed by the colonial government and on a regional level, there were even fewer skilled and educated workers in the north of the Gold Coast. We suspected that this reflected disparities in educational attainment between north and south and potentially between males and females. We were curious to understand the nature of educational development in colonial Ghana and to tease out factors that accounted for educational inequalities.

In the existing literature on educational development in colonial SSA, commonly invoked explanations for the uneven diffusion of education emphasize supply-side factors such as colonial educational policies and practices and the nature of missionary expansion. Areas where the colonial administration allowed missionary entry and were suitable for missionary settlement took the lead in educational development. However, this account implicitly assigns a passive role to Africans in the spread of education and ignores the fact that human capital formation is not just the consequence of policy decisions but also of investment decisions made by families and individuals. This paper therefore sought to reconstruct the history of educational development in Ghana and to center it on the interactions between European supply and African demand.

The paper finds that the demand for education throughout colonial Ghana was limited until the 1930s because the monetary and opportunity costs of educating children were prohibitive. Costs of schooling were particularly deterring in the north. With low income levels, many parents could not afford to provide food and clothing for their households in addition to enrolling their children. Even in the relatively prosperous cocoa producing south, education was looked upon as a luxury. Additionally, in a society where children, especially girls were seen as a source of labour, income and capital and a store of wealth, the opportunity costs of education were high. The benefits of education were however limited and insufficient. Undoubtedly, the expansion of the colonial economy opened up new labour market opportunities but they were not enough to absorb the increasing number of educated Africans. Unemployment of educated Africans was a major social problem throughout the colonial era and beyond. In comparison with unskilled labour, the demand for skilled labour remained considerably low in the colonial era. Due to prohibitive costs and insufficient benefits many Ghanaian parents especially in the north were disinclined to school their children.

Differences in the supply of education reflected differences in demand. Although, increased investments in education could have potentially eradicated schooling disparities, parents' evaluation of the potential benefits and costs of schooling was one of the determinants of educational development. The paper argues that in order to understand variations in human capital formation in colonial Africa, empirical analyses should focus more on the interactions between colonial policies and African responses than has been done so far. Further, as long as other social and economic factors are unequally distributed between social and economic groups, the provision of school facilities alone would not equalize educational opportunity. In colonial Ghana, the educational sector mirrored existing socio-economic inequalities, it did not change them.

Paper III: Government Tax and Expenditure Policies and Inequality in Ghana, 1891-2000.

Paper III investigates how government tax and expenditure policies have changed over the long-term and how they have affected inequality trends over time. While the role of taxation and government expenditures in alleviating economic inequality has been long acknowledged, there has been limited empirical examination of this issue in SSA (Odusola 2017b). Inequality estimates from paper I, allowed me to cover a period of more than a century to identify continuities and changes, and differences and similarities in governments' fiscal policies and priorities, and their implications for inequality.

Although many scholars have argued that successive Ghanaian governments from the colonial era till date have prioritized redistributive policies over ensuring economic growth, the paper finds that government taxation and spending have had limited redistributive effects. From 1891 to 1940, the levels and coverage of government's taxes were low and narrow. Custom duties were the main sources of government revenue and no direct taxes were collected until the mid-1940s. High earning private sector workers and cocoa farmers, and highly paid government officials did not pay any direct taxes and though the burden of trade taxes fell on them, the tax burden was not punitive. Therefore, not much redistribution of incomes occurred on the tax side of the budget. Not on the expenditure side either as government spending was biased towards prodding up the cocoa export sector. The widely held benign view of the effects of government's policies is therefore somewhat exaggerated.

The government took a more active role in development between 1941 and 1960 but overall, government investments were still biased towards the export sector and the 'dual economic structure' from earlier decades was reinforced and inequality increased rapidly. Income taxation was finally introduced in 1943 but it fell largely

on non-African sources of income and the tax rate was low. From 1961, the post-colonial government adopted fiscal policies that were different from the British colonial government. The government extracted resources from the rich and reallocated expenditures in favour of the poor. Inequality declined but equity was served only the extent of making the former rich, less rich. Subsequently, general economic deterioration and some redistributive expenditures held inequality down. However, between 1983 and 2000, structural adjustment reforms led to increasing inequality. Tax reforms affected the distribution through price changes that were more disadvantageous to the poor but also more directly through tax cuts for the rich. User fees and other charges introduced in the health, education and water sectors adversely affected low-income earners. Government expenditures were also biased against rural areas and the northern regions.

All in all, the paper shows that the relationship between government tax and expenditure policies is not mechanic as is often assumed. In Ghana, fiscal policies have only been short-term palliatives. Instead of encouraging governments to tax and spend well to reduce inequality, examining why fiscal policies have had limited redistributive effects on income inequality is more urgently needed.

Paper IV: Tax Bargaining, Fiscal Contracts and Fiscal Capacity in Ghana: A Long-term Perspective. This paper is coauthored with Ellen Hillbom. Prince Young Aboagye was the lead author.

Many sub-Saharan African governments are unable to raise sufficient tax revenues for public investments. Although it is generally accepted that governments' ability to tax is shaped by politics, the specific mechanisms through which this relationship takes place remain unclear. In this paper, we conduct a historical analysis of four state-led tax reforms in Ghana aimed at increasing government tax revenues. The paper examines the colonial state's botched attempt to introduce direct taxation in the form of a poll tax in 1852 to complement indirect tax revenues and income tax reforms initiated in 1931 and completed in 1943. In addition, the paper analyses the processes of cocoa taxation and imposition of several taxes between 1951 and 1966 to finance the industrialization efforts of the new self-governing state. Finally, we consider the introduction of Value Added Tax (VAT), first in 1995 and then its successful implementation in 1998.

Our conclusion is simple: the Ghanaian state's inability to mobilize public support for its tax mobilization efforts account for its low fiscal capacity. Taxation establishes a fiscal contract between taxpayers and the state. A stronger fiscal capacity depends on the efficiency of the state in fulfilling its part of the fiscal contract. When states impose taxes by consensus and fulfill their part of the fiscal contract by providing public goods in exchange for the payment of taxes and citizens

perceive the state and its institutions to be legitimate. As a result, they accept to give the state the taxes it needs to govern. In Ghana, a history of embezzlement of tax revenues, corruption and wastefulness has diminished citizens' support for government's tax efforts. Interest groups have embarked on violent protests against the state's tax reforms. Overall, we point to the fact that reciprocity and fiscal contracts between governments and the governed are the foundation of effective taxation.

Our conclusion has implications for existing literature that accounts for the weak fiscal capacity of African states. While some studies have shown that weak tax institutions and systems inherited from the colonial era account for the weak fiscal capacity of African states, this paper shows that historically it is the inability of states to fulfill their side of the fiscal contract that undermines their fiscal capacity. Moreover, it is usually argued that African states' ability to tax is constrained by their weak administrative structures-inadequate tax personnel and administrative incompetence. We argue in this paper that this view abstracts from the more complex state-societal interactions that shape fiscal capacity. While we concur with the need to need to develop administrative capacity and fix institutional lapses to increase tax revenues for public purposes, overcoming tax resistance requires an understanding of how tax bargaining works in practice and people's perceptions of their governments over the long term.

Conclusion

This thesis contributes to our understanding of historical trends and drivers of inequality in SSA. When I started this project, the French economist Thomas Piketty had just published his *magnum opus*, "Capital in the Twenty-First Century". Piketty's work drew attention to the increasing concentration of income and wealth in the hands of a few. It brought the question of distribution back into economics and its allied disciplines and gave momentum to the study of inequality in the longer run. Nonetheless, as in previous short cycles when income distribution courted some attention, scholars continued to focus on analyzing inequality trends in the developed world. Asia and Latin America featured slowly. Sub-Saharan Africa lurked in the shadows. While scholars fiercely debated whether Africa's rapid growth at the time was a miracle or mirage, inequality was left on the back burner.

To deepen our understanding of global inequality trends, a cross-regional perspective was needed. Africa had to enter the fray. Inspired by Bolt and Hillbom's (2016) pioneering attempt to trace long-term trends in inequality in Botswana, I joined the effort to bring Africa into the debate. I chose to focus on Ghana, not for the sake of nationalism. The first reason for my choice had to do with data

availability. Relative to other SSA countries, there was ample wage, price, exports, census and survey data to study inequality trends over the long term. There was a large literature (both qualitative and quantitative) on Ghana's long 20th century economic development, to guide the novice researcher. Gareth Austin's monumental "Labour, Land and Capital in Ghana: From Slavery to Free Labour in Asante, 1807-1956", provided a solid foundation on which I could build. Second, Ghana epitomized the so-called peasant colonies of tropical Africa- those colonies where Africans retained the control over cultivable land and other productive resources. I thought it would be interesting to examine how Ghanaians under colonial rule used these resources to better their fortunes, in the context of changing global circumstances, and its implications for inequality.

My third reason was that there was increasing talk of rising inequality in Ghana. From the 1990s, Ghana began to record sustained economic growth rates and declining poverty levels, but inequality was rising fast. How could one explain this phenomenon? Instead of carefully examining the past, it was assumed to be contrary to the present situation. I felt, however, that Ghana's inequality had a lengthy ancestry. A study that transcended the traditional divide between pre-colonial, colonial and post-colonial Ghana was needed to understand how inequality has evolved over the long-term and what have been its major drivers.

Three major contributions of this thesis to African economic history and to Ghanaian economic history, in particular, are worth reiterating. First, the thesis fronts the role of Africans themselves and the interactions between local and external processes, and the state and society, in determining diverse development outcomes. While previous studies from the late 1950s to the early 1980s on Africa's past had stressed the critical role of Africans in making their own economic history, even under colonial rule, thereafter, historical scholarship became obsessed with examining the role of colonial authorities and their constraining legacies on Africa's present development (Wiener 2013; Austin & Broadberry 2014). Throughout the thesis, my aim was to address this imbalance in the literature. This quest undergirds all four papers, but especially my analyses of educational inequality and long-term trends in fiscal capacity in papers II and IV respectively. In these papers, I argue that to understand variegated development trajectories, we should focus more on African agency and the interactions between the state's ambitions and local reactions, than has been done so far.

Second, the thesis provides the first long-term estimate of inequality covering the period of nearly 70 years, from 1891 to the early years of Ghana's independence, by using social tables. The use of the social tables approach to measure and trace inequality trends in both the formal and informal sectors of the economy is still in its infancy. There are only two other published efforts for Africa-Bolt and Hillbom (2016) for Botswana and Alfani and Tadei (2019) for Senegal and Ivory Coast. Our

Gini estimates from the construction of social tables allows us to contribute to a long-standing debate on the role of cocoa in driving inequality trends in colonial Ghana. While there was a consensus among economic historians of Ghana that the distribution of capital, output and income among cocoa farmers was unequal, they disagreed about whether inequality increased over the decades following the adoption of cocoa or whether inequality was high at the start. Data limitations had inhibited a careful examination of this issue. Our quantitative estimates allow us to identify the drivers of inequality in colonial Ghana, and more broadly in export-dependent economies. We show, contrary to what had been previously assumed, that the cocoa sector itself did not affect the overall trend, but rather the levels of income inequality, especially towards the end of the colonial era. We also find no effect of rising top incomes and sectoral changes away from agriculture towards formal wage employment on inequality levels.

Finally, the thesis bridges the colonial and post-colonial historiographical divide that characterizes the study of Ghana's past, to analyse the effects of changing government policies on inequality for a period of more than a century. The quantitative estimate of inequality in the colonial era allowed me to identify continuities and changes in governments' fiscal policies from the 1890s to 2000 in paper III. The analyses show that historically, governments' taxation and spending have had limited redistributive effects because their levels and coverage have been low and narrow.

While this thesis builds on an extensive literature on pre-colonial, colonial and post-colonial Ghana, and itself contributes to this literature, there is still ample scope for further research. One, further work is needed to understand how control over land, labour and access to credit affected (affects) the distribution of income in colonial and post-colonial Ghana. Austin's work focuses on changing labour, land and credit institutions in precolonial and colonial Asante. A broader analysis that covers other Ghanaian regions and stretches to the post-colonial era could generate a deeper understanding of the commonalities and differences in land, labour and credit institutions across regions. This might help explain Ghana's long-standing north-south divide. Two, to enhance our understanding of inequality trends and economic development in Ghana, it will be useful to trace the development of African elites in the agrarian sector, how they fared during the pre-colonial, colonial and post-colonial era and the extent to which they shaped and continue to shape Ghana's development. Three, on taxation, a key dimension of the political economy of taxation in Ghana and other low-income countries has been the extreme difficulty of getting high income groups to pay adequate taxes, particularly those whose primary income sources are not through salaries (e.g. professionals, property, business owners and owners of capital). It would be worth exploring the historical roots of this phenomenon.

To be sure, data limitations are still stringent and the study of Africa's past is daunting. However, this thesis is evidence in itself that rather than being deterrent, data constraints should serve as impetus for employing ingenious ways of studying Africa's past. To the extent that our small breakthroughs can serve as useful pointers for further research, we can take solace in that.

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Paper I

Long-Term Trends in Income Inequality: Winners and Losers of Economic Change in Ghana, 1891-1960

Prince Young Aboagye

Jutta Bolt

Abstract

This paper contributes to a growing literature on long-term trends and drivers of pre-industrial inequality by constructing social tables and calculating inequality for seven consecutive decades from 1891 – 1960 for Ghana. We find that inequality as measured by the Gini coefficient was relatively high prior to the major economic change in Ghana between 1891 and 1960: the adoption and spread of cocoa cultivation. Inequality remained fairly stable in the decades that followed until it declined during the years of the global Great Depression in the early 1930s. In the closing decades of the colonial era, income inequality increased reaching a high of 0.50 in 1960. Increasing production before the 1930s, with rising cocoa incomes, and rapidly increasing incomes earned by government employees, skilled and commercial workers, account for the trend we observe.

Introduction

The adoption of the 2030 sustainable development goals has drawn considerable attention to income inequality in Africa. Although the average unweighted Gini for sub-Saharan Africa (henceforth SSA) decreased by 3.4 percentage points since 1990, this masks the great variety in inequality between countries. Indeed, ten of the twenty most unequal countries globally in 2011 were in SSA, while half the countries in the region had a Gini lower than 0.45 (Odusola *et al*., 2017: 9-11). Due to limited research on long-term developments of African inequality trends, however, we currently know little about the factors that affected the evolution of inequality and how they differed across time and space.

This paper aims to contribute to understanding the origins and drivers of income inequality in Africa by providing the first quantitative estimates of income inequality in Ghana between 1891 and 1960 using social tables. Colonial Ghana exemplified the 'cash crop revolution' of the late 19th and early 20th centuries tropical Africa (Austin 2014:1035). Exports of cocoa expanded rapidly, mainly at African initiative and cocoa has dominated the economy since. A generally accepted view in the literature is that in such 'peasant' economies, where factors of production remained in the hands of Africans, inequality was lower than in settler and concessionaire economies where much of the factors of production were expropriated by settlers (Bowden, *et al.*, 2008).

Currently, Ghana is classified as an 'intermediate inequality' country with a national Gini coefficient of 0.41 in 2013. Meanwhile, regional inequality between the richer south and the poorer north has been consistently very high (Odusola *et al*., 2017: 30; Aryeetey, *et al*., 2009). This regional divide has received ample attention in contemporary literature on drivers of inequality in Ghana, and is often attributed to the structure of the Ghanaian economy, which has changed very little since the colonial era (Aryeetey, *et al*., 2009). There is, however, a much wider historical literature that discusses how both wealth and income inequality in Ghana have developed in response to both pre-colonial and colonial factors.

One strand of literature suggests that pre-colonial Ghana was egalitarian and that economic changes associated with the introduction and subsequent expansion of cocoa, and to some extent mining in the south, during the colonial period resulted in growing differentiation among Ghanaians in general and among cocoa farmers in particular. This caused social and regional inequality to grow over time (Rhodie, 1968:105; Kay and Hymer, 1972:5-8; Howard 1978:193-206; Beckman, 1976:156; Gunnarsson, 1978:48; 109-110; Plange, 1979; Konings, 1986:75-78; Van Hear, 1982:98-109; Brukum, 1998).

In contrast, Hill (1963a) and Austin (2005; 2013) argue that there were marked inequalities even prior to the advent of cocoa cultivation, both between different groups in society and between different regions. It was those who accumulated dependent labour and capital during the pre-cocoa era, and those who earned trading profits from trade in palm produce and rubber, who had capital to invest and took the lead in cocoa cultivation (Hill, 1963a:203; 1963b:163-167, 210; Arhin, 1970:369; 371-372; 1972:41-43; 1979:14-15; Dumett, 1971:95-96; Austin, 1996:27). Additionally, Austin (2013: 8-9) argues that there is very little evidence of increasing polarization within the cocoa sector, and therefore of increasing inequality due to the growing cocoa sector, at least until the third planting boom during the early years of the 21st century. Finally, the country's long-standing north/south divide in terms of economic development preceded the adoption of cocoa cultivation, contrary to what earlier authors had assumed (Austin 2005:11; 59).

We contribute to the literature on inequality in Africa in general and Ghana in particular in three ways. First, we provide the first attempt ever to quantify the evolution of inequality for the whole economy in colonial Ghana. Second, we explore the drivers of inequality trends, and establish how the importance of individual factors change over time. Third, by combining contribution one and two, we are able to add a new perspective to the debate on the role of cocoa in driving inequality trends in Ghana.

Using social tables, we chart changes in occupational structure and incomes and calculate Ginis for the whole economy between 1891 and 1960. We find that income inequality was relatively high already prior to the introduction of cocoa with a Gini of 0.40 in 1891. Inequality remained fairly stable in the decades that followed until it declined during the years of the global Great Depression in the early 1930s. During the second half of the colonial period, income inequality increased to reach a high of 0.50 in 1960.

We explore three possible drivers of this inequality trend. First, following Kuznets' (1955) argument that structural change in the economy explains changes in inequality, we analyze the effect of changes in the occupational structure. Second, we consider the effect of top incomes earned by European government officials on overall inequality. Even though the Gini tends to be most sensitive to changes in the center of the distribution, top income groups are capable of significantly affecting overall inequality (Atkinson, 2007; Alvaredo, 2011). Further, Bowden et al. (2008) argue that especially in former settler colonies inequality was high due to high incomes earned by Europeans. Third, we explore the effect of the expanding cocoa sector on income inequality aiming to contribute to the discussion outlined above. In a last section, we also compare income and occupational developments between

the north and the south of the country to understand how the regional divide developed after the introduction of cocoa in the south.

We find that even though the economy experienced sectoral changes away from agriculture towards formal wage employment, the overall size of the employment shifts alone remained too small to affect inequality levels. However, the rapidly increasing incomes earned by especially the government employees and skilled and commercial workers did lead to increasing income inequality after the 1930s. Second, we find no effect of rising top incomes on the level of inequality, as despite large income difference between the top and the rest, the share of total incomes earned by the top remained too small to affect the overall distribution. Third, our results suggest that the cocoa sector affected the overall level of income inequality (but not the trend) by increasing the Gini by 4 percentage points on average. However, this was not due to increasing polarization within the cocoa sector as, for example, Rhodie (1968:105), Kay and Hymer (1972:5-8) and Gunnarsson (1978:48) argue. Rather, it was the result of a combination of expanding production especially before the 1930s, with rising cocoa prices and thus cocoa incomes after the 1930s. The expanding export sector enabled an increasing number of farmers to earn higher incomes, moving out of the less profitable food farming and therefore the increase in inequality went hand in hand with economic development.

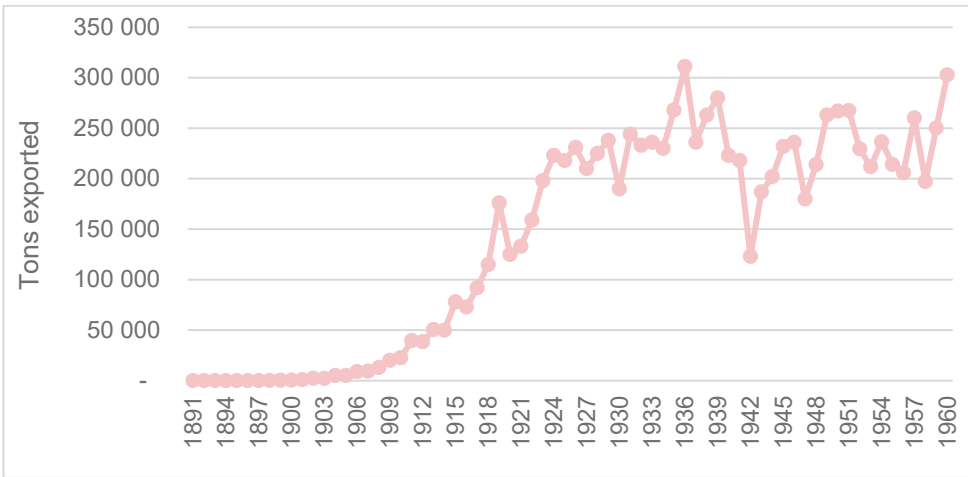
Regarding the north/south divide, we find that from the earliest observations onwards, there was a marked difference in income and occupational structure between the two parts of the country. This supports the argument by Austin (2005:11, 59) that the historical roots of the divide preceded the adoption of cocoa. However, in line with Van Hear (1982:98-109), we find that these differences grew after the introduction and rapid expansion of cocoa farming. Subsistence levels were consistently lower in the north and rose less, the share of people living at subsistence was much larger and declined less, and occupational differentiation was limited as the north had a much smaller formal economy and hosted fewer government officials. The ecology of the north did not allow for cocoa farming and the trickle-down effects of rising welfare levels due to rising cocoa incomes in the south was restricted mostly to the limited remittances that agricultural labourers working on cocoa farms sent home.

The paper proceeds as follows. The next section discusses the literature on long-term inequality in Ghana. The third section presents our data sources, methods and income classes for the social tables. Subsequently, we discuss our social tables and chart welfare developments for all social classes. In section five, we estimate Ginis based on our social tables and map trends in inequality in the colonial era. Here, we also discuss potential drivers of inequality, relating them to economic developments in colonial Ghana. The last section concludes.

Literature review

The major economic change in Ghana during the period under study was the adoption and diffusion of cocoa cultivation (Austin 2005:236-237). From the late 19th century, cocoa cultivation spread rapidly in the forest zone of southern Ghana in areas where the soil quality was favourable. While Ghana exported no cocoa beans in 1892, it became the world's largest exporter at 40,000 tons a year, 19 years later (Austin 2014:1035). Export volumes continued to increase and in both 1936 and 1960 Ghana exported above 300,000 tons (see figure 1).

Figure 1: Total Cocoa Exports, 1891-1960.



Source: Hill (1963b:177; Kay and Hymer, 1972:336-337, Table 21b).

The effects of this cash crop revolution on welfare developments and inequality have been the subject of much research and controversy. A large body of literature argues that the introduction and expansion of cocoa production gave rise to a process of economic differentiation among Ghanaians generally and cocoa producers in particular (Rhodie, 1968:105; Kay and Hymer, 1972:5-8; Hopkins, 1973:238-239; Beckman, 1976:156; Gunnarsson, 1978:48; 109-110; Howard 1978:193-206; Konings, 1986:75-78). Gunnarsson argues that various types of rural classes emerged in the 1930s and this process of stratification was uncharacteristic of the cocoa industry from the beginning (1978:110). The production of cocoa for a distant market, led to the commercialization and individualization of land, which eventually led to the concentration of land into the hands of large-scale landowners. Additionally, the marketing and financing systems of cocoa production reinforced the process of concentration. Large-scale cocoa farmers and middle-men were creditors to smaller farmers (Hopkins, 1973:239; Gunnarsson 1978:110). When real

incomes declined, small-scale farmers accumulated debts and control of the cocoa industry moved into the hands of larger-scale farmers, creditors and brokers (Gunnarsson 1978:113).

Further, there was economic differentiation between the south and the savanna north from where men migrated to find work on cocoa farms. Colonial policy welcomed migration to the labour-starved south and deferred the development of the local resources of the north so it could function as a labour reserve in the colonial economy (Van Hear, 1982:98-109; Plange, 1979; Brukum, 1998). Until the mid-1930s when cocoa prices rose and migrant workers negotiated for better contracts, many of them were impoverished (Van Hear, 1982: 136; 153; Berry, 1993:149).

However, the above view does not represent a consensus. Several studies on pre-colonial Ghana point to evidence of accumulated wealth and economic stratification prior to the adoption of cocoa cultivation in the 19th century (Wilks, 1975; 1993; Latorre; 1978; Kea, 1982; Austin, 2005:88-94; 2013). In this literature, it was the farmers who had already managed to accumulate capital from the production and trade in palm produce for export using dependent labour and slaves, who took the lead in cocoa cultivation in the 1890s. They also took the lead in investing in land, labour and transport infrastructure (Hill, 1963b:15; 38-53; 164-167; Austin 1997: xix; Dumett, 1971:95-96; Arhin, 1970:369; 371-372; 1972:41-43; 1979:14-15; 1980; Austin, 1994; 1996:27; 2005:181-194; 215).

The argument is that while pre-cocoa inequalities were reinforced during the initial stages of cocoa adoption, there was nothing inherent in the production that would drive inequality upwards or downwards over time among cocoa farmers. Austin (2005: 94; 2013: 8-9) outlines five reasons for the relative stability in inequality trends over time. First, cocoa is a case where the neoclassical assumption of constant returns to scale applied (Austin, 2005:94), at least until later when high-yielding and faster-maturing cocoa varieties, insecticide sprays and chemical fertilizers were adopted (Austin, 2005:85-86; 2013:8). The absence of net economies of scale are understood to indicate that although the distribution of ownership of cocoa output was always unequal, there was no trend towards concentration (Austin, 2005: 94). Second, many cocoa farmers did not expand their cocoa holdings, partly due to the absence of scale advantages. Instead, large-scale farmers invested in housing, cocoa-broking, moneylending and transport ownership (Hill, 1956:101; Garlick, 1971:145; Austin, 1988: 67-69). Third, land was available (both physically and institutionally) throughout the period, and this reduced the possibility of unsuccessful farmers being forced out of production (Austin, 1993:127-130). Fourth, inheritance might have concentrated cocoa farm ownership in some families and communities, but in many others the reverse occurred. Although in some areas matrilineal inheritance gave way to inheritance by wives and children, this did not lead to greater inequality than before. Finally, during the colonial era and since

independence, governments' fiscal policies hindered a continuing process of economic differentiation between large and small-scale farmers. (Austin, 2013: 9).

With respect to regional inequality, or more specifically the country's north/south divide, Austin (2005:11; 59) maintains that this inequality also preceded the cocoa era and cocoa cultivation did not lead to increasing inequality between the two regions. In the 19th century, the savanna north was a major source of slave labour for the elites of the forest-zone, who had a near-monopoly control over the "broad forest rent", which included all commercially-valuable natural resources (Austin 2005:11; 59). Regional inequality was therefore already built-in because of uneven factor endowments. After the abolition of slavery and human pawning, migrant labour from the north remained important, now for cocoa production. From the 1930s, immigrant labourers were able to negotiate better contracts and earned a higher share of total cocoa income. Remittances became an important source of income in northern villages and the main channel through which the benefits of the cash crop revolution trickled down to the northern savanna (Austin 2005; Moradi *et al*., 2013).

In relation to the opposing views in the existing debate, whether cocoa expansion was the main driver of inequality or rather a new factor inserted and inflating existing unequal structures, we argue that inequality indeed preceded the advent of cocoa cultivation. Inequality remained stable thereafter but increased towards the end of the colonial era partly as a result of rising cocoa prices. To explore the role of cocoa in driving inequality trends, but also to more broadly identify winners and losers from economic change in Ghana after the adoption of cocoa, we apply a social tables approach.

Methods, social classes and data

The social tables approach

To analyse how income inequality has evolved in Ghana over the long run, and to examine the drivers of trends, we constructed seven social tables, one for every census year between 1891 and 1960. A social table entails dividing the population of a society or country into various more or less homogenous groups according to occupation and/or income, so called social classes. For each social class, the number of individuals or households has to be determined, together with the average income for that group. In combination with the total population of the country, population shares and income shares can be calculated which provide the ingredients for

establishing the distribution of income over the population, summarized, for example, by the Gini coefficient.

Social tables are especially useful to determine the income distribution for societies for which information on individual wages and occupations are scarce (Milanovic, 2016). Recently, this method has been applied to improve our understanding of the roots of inequality in societies across the globe (Alvarez-Nogal and Prados de la Escosura, 2007; Lopez Jerez, 2014; Alfani and Ryckbosch, 2016; Bolt and Hillbom, 2016, Alfani and Tadei, 2019). However, two limitations of the method need to be kept in mind. First, as social tables use average incomes per social class, the method ignores within social class inequality. Therefore, overall inequality might be underestimated. Second, it does not take into account overlapping incomes between the social classes, which may cause both over- and underestimations of inequality (Milanovic *et al.,* 2011; Bolt and Hillbom, 2016).

The basis for all social tables is information on population, occupations and incomes. Unfortunately, colonial population censuses in Africa are generally perceived to be of relatively poor quality. African colonial bureaucracies were severely constrained financially, and counting people, especially in the often sparsely populated rural areas was problematic (Gendreau, 1993; Manning, 2010; Frankema and Jerven, 2014; Tabutin and Schoumaker, 2004). For Ghana, for example, Austin (2005) reports that the 1911 census might have excluded up to 700,000 people on a population of about 1.5 million people. Fortunately, Frankema and Jerven (2014) provide modified population counts for Ghana for all available colonial census years, based on available colonial census estimates, additional secondary literature and census reviews. Table 1 provides a comparison of the original population counts as given by the censuses with the modified estimates from Frankema and Jerven (2014). It shows that, the undercount was substantial for the years prior to 1931. In 1921, the census missed roughly a quarter of the population, in 1901 around 15 percent and in 1891, more than half of the population was not counted in the census.

Table 1: Population estimates for Ghana, 1891-1960

Year	Census	Frankema and Jerven (2014)	Difference (undercount census)
1960	6,727,608	6,727,608	-
1948	4,494,890	4,610,000	115,110
1931	3,161,335	3,227,000	65,665
1921	2,297,395	2,528,000	230,605
1911	1,504,005	2,000,000	495,995
1901	1,549,000	1,800,000	251,000
1891	764,000	1,650,000	886,000

Source: official census 1891-1960 and Frankema and Jerven (2014, table 8, p. 921)

Even though we do not use the official censuses for our population estimates, the census reports are very useful for our construction of social tables as they contain information on the distribution of the population over industries and regions. We therefore use the original shares of regional population sizes from the censuses to redistribute the updated population estimates over the various regions, and we use the sectoral distribution of economic activity from the censuses to place people into different social classes.

The early censuses contain only information on people engaged in wage labour per industry; later censuses also include information on semi-commercial and commercial farming, petty trading and fishery. The difference between total population and those recorded in the census as engaged in economic activity (including cash crop production, fishing and petty trade) are assumed to be engaged in informal farming and subsistence activities. This means that, for example children and non-working adults such as the unemployed, end up in this category. Using the updated (and higher) total population estimates as described above, in combination with the census records on economic activity, leads to an increase in the number of subsistence farmers and semi-commercial food farmers compared to if we use the original population figures from the census. This might affect overall inequality and the level of poverty, especially when subsistence levels are relatively low compared to incomes earned in the formal economy.

One way to avoid overstating the number of people in the subsistence category is to use households as the unit of observation, but then we would also need to have information on household incomes. Unfortunately, the official colonial sources mostly provide individual wages, and except for earlier years hardly distinguish between male and female wages or provide information on child wages. Further, the sources do not allow us to take into consideration the substantial regional variation in the composition of families. Alternatively, one could use only the adult population, or the labour force[4] as total number of people included in the social table. When recorded economic activity is subtracted from the labour force, a much smaller subsistence group remains. In the context of low levels of subsistence incomes, a smaller subsistence group is likely to reduce overall inequality. To enrich the analysis, we use both total population and the labour force as the basis for our estimates and present two sets of social tables.[5]

Finally, we capture people where they live at the time of the census taking. This means, for example, that migrants from the Northern Territories moving south to

4 The labour force is the share of the population over 15 years of age.

5 For full details on sources and social tables construction see appendix

find employment are recorded in the southern regions even though they later might return home with their incomes.[6]

Social classes and data

Formal economy: wage earners

The groups that are easiest to identify are the wage earners as they are consistently recorded in official government publications. Around 5 percent of the population in 1891 was engaged in wage earning employment,[7] which increased to about 10 percent in 1931 and 20 percent in 1960. We distinguish between African and European government employees, skilled workers, mining employees, commercial workers, domestic workers and agricultural and unskilled labourers. The largest wage-earning occupational classes during our period of observation are unskilled workers and agricultural labourers. Jointly they make up two thirds of the wage-earning share of the population. It is only in 1960 that skilled workers account for a substantial group of wage earners, making up a little more than 5 percent of the population. All other wage-earning occupational groups remain small and never constitute more than 1 percent of the population during the colonial period.

Most income estimates for formal employment were obtained from the colonial blue books, colonial censuses and various government reports. We assume that especially the unskilled labourers working in cities, on farms, as domestic servants or in mines, were only working for wages for some months and that they also engage in subsistence farming. Information on mining contracts indicate that mine labourers work for wages 9 months per year on average, and spend the remainder on their farms growing their own foods. We therefore assume 9 months of wage incomes for all unskilled labourers, and add the monetary value of subsistence income to estimate total annual income.

Cocoa farmers

The second cluster of groups in the formal economy that we distinguish are the commercial cash crop farmers engaged in the expanding cocoa sector (Hill, 1963a, b). Censuses from 1931 onwards record the number of cocoa farmers, indicating that employment in the sector increased from close to 220,000 people, or nearly 7 percent of the population, to more than 400,000 (6 percent of the population) in

6 Detailed surveys of remittances indicate that the amount of income sent or taken home by labour migrants is very limited, amounting to on average a pound per year per migrants (Report on a Preliminary Economic Survey of the Northern Territories of the Gold Coast, 1950: page 29, Table 6).

7 Of the population in the Gold Coast Colony until 1911.

1960. Before 1931, we rely on secondary sources to estimate the number of cocoa farmers (see appendix).

There is ample historical evidence that the distribution of production capacity between different groups of farmers was unequal (Hill, 1956: 84-91; Konings, 1986: 76; Austin, 2013: 5-6). However, even though there is a growing number of available surveys on the distribution of farming assets and income from the 1930s onward, there is little consistent evidence on the exact farm sizes, and there are few comparative statistics available over time.[8] Austin (2013) in his detailed discussion[9] of all available empirical material on inequality within the cocoa sector finds no robust evidence that indicates major trends towards polarization. We therefore opt for determining the distribution of total output among different groups of farmers based on the first national comprehensive study of inequality among cocoa-farmers, which was done for the crop year 1963/64 (Beckman, 1970). Thereby, we follow Hill (1956: 1, 84) and focus on the size of the farm in terms of output, and not on land size. Based on the survey, we distinguish between 4 broad groups of cocoa farmers, as indicated in table 2. We keep the share of the farmer groups and their output share constant. As a robustness check we re-construct our social tables using the distribution of output among cocoa farmers for the years of the different regional surveys done between 1925 and 1963/64 (see appendix). However, this hardly affects the main results.

Table 2: Farm sizes and levels of output in the cocoa sector

Farmers Group	Category	% farmers	% output
Small-scale cocoa farmers	less than 20 loads	38	7
Medium-scale cocoa farmers	20 - 100 loads	47	39
Large-scale cocoa farmers	100-200 loads	10	23
Elite cocoa farmers	more than 200 loads	5	31

Source: Author's summarization of Beckman (1970) reproduced in Konings (1986:76).

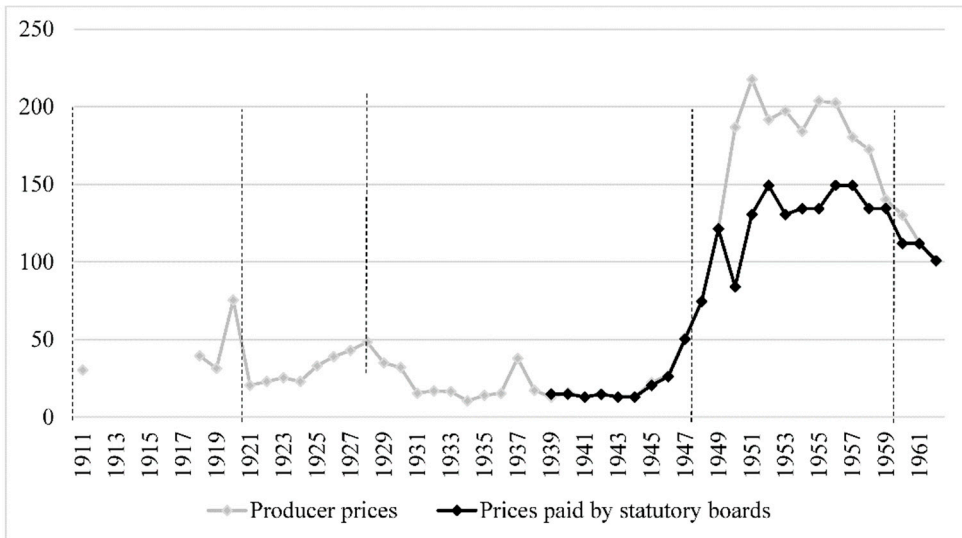
To estimate cocoa incomes, we start from total recorded cocoa exports as a proxy of total production. We then redistribute the total recorded cocoa exports over the different groups of farmers based on their share of total output, as indicated in table 2, for each social table year. Finally, by multiplying production of cocoa for each class of cocoa farmers with the prevailing producer prices for cocoa for that year, we arrive at the average incomes derived from cocoa per class of cocoa farmers. We repeat this procedure for each year we construct a social table. Producer prices were substantially affected by the establishment of the statutory boards, which controlled

[8] See appendix IV for overview

[9] See appendix IV for the main arguments

cocoa purchasing from farmers from 1939 onwards (Alence, 2001). From 1949 onwards, the prices paid by the cocoa marketing board were substantially lower than market prices (see figure 2). Therefore, we use the price paid by the statutory board to calculate cocoa incomes for 1960. Lastly, cocoa prices paid to farmers fluctuated substantially over time, but the fluctuations in prices and incomes between social table years is not captured.

Figure 2: Cocoa prices, 1911-1961 and social table years



Sources: Producer prices are from Frimpong-Ansah (1991) p.57/89; marketing board prices are from Tony Killick (1966), p. 370 (table 15.3)

Informal sector: fishermen and petty traders

The last cluster of social classes are groups engaged in the informal sector, working as petty traders, fishermen, semi-commercial food farmers and in subsistence agriculture. Most of these groups are not (reliably) accounted for in the censuses prior to 1948, and therefore we complement the official sources with secondary sources and in-depth studies of certain sectors. The groups that are recorded in the official censuses for most of the period are fishermen and petty traders. Fishermen constituted an important class, especially in the earlier years of the colonial period and in the coastal regions, but their number was limited throughout the period under study. According to the censuses, there were 16,000 fishermen in 1891, or 2.2 percent of the population. The number of fishermen increased over the years and was around 50,000 in 1960, but their share of total population fell to less than 1 percent after 1891.

Incomes for fishermen were not consistently reported. Fortunately, the census for 1911 gives an income estimate for that year based on the average amount of fish caught, and the prevailing market price for the most common fish. For 1941, Lawson provides an income estimate based on the same information (Lawson, 1968:93). As both estimates indicate the yearly income around 40 pounds, we extrapolate these estimates to obtain incomes for fishermen throughout the colonial period.

Petty traders, including hawkers and peddlers, were mostly engaged in local small-scale trading of food, traditional artifacts of straw and leather, and other consumer goods. All censuses provide at least a rough estimate of their numbers. Our calculations indicate that the share of petty traders in total population fluctuates over the years between 1.5 and 5 percent, but the absolute number of petty traders increases drastically especially after 1948. Between 1891 and 1948, the group nearly doubles in size, from 35,000 to nearly 70,000. Between 1948 and 1960 the number increases five times, to 324,000 petty traders.

To estimate incomes for petty traders, we combine a few direct observations on their average incomes from the colonial official statistics with calculations based on information from household surveys. For 1911, we have direct estimates from the 1911 Census Report for petty traders' weekly incomes. For 1931, we obtain income estimates from Cardinall by using his estimates of trading profits of imports and exports and inland trading, and divided this by the total number of petty traders (Cardinall, 1931: 120). For 1960, we rely on average incomes from several household surveys. We extrapolate these estimates to obtain incomes for petty traders for the other years.

Informal sector: semi-commercial farmers and those living on subsistence level

During our period, a large majority of the population lived in rural areas and were engaged in agriculture. A substantial share of those farmers was able to produce above subsistence and sell the extra produce on local markets to complement incomes. Those we classify as semi-commercial food farmers. We obtain the size of this group from the censuses in 1891, 1948 and 1960. For the years in between, we use estimates provided by Kay and Hymer (1972:316).

To calculate the incomes of food farmers we collected data on food crops cultivated per region, average farm acreages of farms, yields, production and prevailing market prices.[10] Due to the different vegetation types in the country, farming practices differed between different regions as farmers cultivated different crops. An average semi commercial food farmer had about two-and-one-third farms of slightly less than three acres each (Birmingham *et al*.1966). From average gross production per farm, we deduct waste and losses and the seed ratio for each crop. We multiply the

[10] See Appendix for details.

resultant 'net' production by the prevailing average market price for each crop, the sum of which gives food farmers' income per farm. This sum is multiplied by the average number of farms held by a farmer in each region to obtain farmers' total income. As we have the average yield of crops grown in various regions, we can calculate regional incomes.

The last group in our social table is also the largest, namely the subsistence group. This class comprised subsistence farmers, those who were unemployed, who had not started work in a definite occupation, old men and women who had retired, others who were incapacitated for employment and those whose occupations were unclassified. The vast majority of the subsistence group was located in rural areas outside the realm of the colonial government and they tried to scratch a living from their small farms. We obtain estimates about the group size by deducting all those accounted for in other activities from total population or the labour force. When using total population, we include children in our subsistence group, which increases the number significantly. Throughout the period of our study, the subsistence group constitute between 75 and 49 percent of the population when including children in subsistence, and between 20 and 65 percent when we exclude those younger than 15 years old.

Finally, to estimate the earnings of the subsistence class, we collect all available direct estimates of subsistence incomes from secondary sources and colonial records.[11] We compare that to both to the level of subsistence income derived from the bare bones consumption basket taken from the real wage literature (Allen, 2001, 2015; Frankema and van Waijenburg, 2012) and to the monetary value of food production at cocoa farms for various years (Office of Government statistician, 1958, 1960). The direct estimates of the level of subsistence incomes and the value of food produced on cocoa farms give roughly similar estimates, which are substantially higher than estimates resulting from the consumption basket approach. Given that the ecology generally allowed for decent agricultural production and large-scale famines were scarce, we opt for the food value approach to estimate subsistence incomes throughout the period.

Social tables: winners and losers of economic change

As discussed earlier, the broader literature on inequality have looked at occupational structures and wages, and their effects on inequality trends. Meanwhile, the debates on inequality and differentiation in Ghana have focused on changes in the rural economy in general and the cocoa expansion in particular. We address both strands

[11] For a complete overview of subsistence levels, see appendix II.

of literature in our analysis as we begin with looking at the evolution of the incomes for the different social classes in Ghana, starting with the top earners, followed by the rest of the formal economy and ending with the informal sector (see table 3).

The government elite

The absolute elite in terms of incomes were, not surprisingly, the very small group of European government employees. This group increases from 361 in 1901, to close to 800 in 1960, but never made up more than half a percent of the population. They earned on average £200 per annum in 1891, which is 11 times the average African income of £18 in 1891. Their annual income continued to increase and in 1960 it was more than £1900, or 33 times the average income for Africans. Meanwhile, the total number of African executive government administrators grew from around 800 in 1891 to over 1500 in 1960. They also earned relative high incomes throughout the period. In 1891, their incomes were £80 annually, but increased to more than £300 annually in 1960. They earned on average more than five times the African average incomes throughout the period. Together with the European government officials, African administrative and executive government officials belonged to the top 1 percent income earners, a group that received between 6 and 10 percent of total incomes earned between 1891 and 1960.

Table 3: Social table 1891-1960

		1891			1901			1911			1921		
		Population	Pop. share	Annual income £	Population	Pop. share	Annual income £	Population	Pop. share	Annual income £	Population	Pop. share	Annual income £
Wage workers	European government officials	308	0.03%	200	361	0.03%	250	619	0.03%	371	995	0.04%	562
	Government (admin, executive)	792	0.1%	80	927	0.1%	85	1085	0.1%	85	1526	0.1%	110
	Government (other)	1,500	0.1%	32	1400	0.1%	39	11550	0.6%	39	16240	0.6%	57
	Skilled labourers	3,091	0.3%	32	3710	0.3%	32	3832	0.2%	43	10851	0.4%	68
	Commercial workers	4,795	0.4%	32	10794	0.9%	32	11700	0.6%	25	9661	0.4%	68
	Domestic services	2,795	0.3%	30	7665	0.6%	32	2539	0.1%	32	3569	0.1%	62
	Mine workers	2,499	0.2%	24	17000	1.4%	27	18300	0.9%	26	11300	0.4%	33
	Unskilled labourers	25,023	2.3%	20	29306	2.4%	22	34603	1.7%	26	48518	1.9%	39
	Agricultural labourers	17,203	1.6%	13	20148	1.7%	15	134264	6.7%	15	206177	8.2%	25
Cocoa farmers	Elite cocoa farmers	3,267	0.3%	398	4478	0.4%	123	6713	0.3%	185	10309	0.4%	210
	Large-scale Cocoa Farmers	6,533	0.6%	74	8955	0.7%	116	13426	0.7%	150	20618	0.8%	158
	Medium-scale cocoa farmers	30,706	2.8%	36	42090	3.5%	46	63104	3.2%	52	96903	3.8%	72
	Small-scale cocoa farmers	24,827	2.2%	36	34031	2.8%	46	51020	2.6%	47	78347	3.1%	63
Informal sector	Fishermen	16,593	1.5%	36	5930	0.5%	37	6221	0.3%	38	9502	0.4%	38
	Food farmers	16,7528	15.2%	36	196775	16.3%	46	400057	20.0%	45	622380	24.6%	61
	Petty traders	35,313	3.2%	24	27101	2.3%	29	29375	1.5%	24	41505	1.6%	31
	Subsistence group	76,1148	68.9%	9	793606	65.9%	11	1211591	60.6%	11	1339599	53.0%	15
	Total population	1,103,921			1,204,278			2,000,000			2,528,000		
	Labour force	664,188			662,109			1,099,595			1,532,813		

Table 3: Social table 1891-1960 (continued)

		1931			1948			1960		
		Population	Pop. share	Annual income £	Population	Pop. share	Annual income £	Population	Pop. share	Annual income £
Wage workers	European Government Officials	949	0.03%	788	493	0.01%	849	788	0.01%	1908
	Government (admin, executive)	6,120	0.2%	131	11,741	0.3%	276	44,550	0.7%	317
	Government (other)	8,775	0.3%	92	20,873	0.5%	174	63,460	0.9%	301
	Skilled labourers	38,295	1.2%	51	56,629	1.2%	104	366,290	5.4%	185
	Commercial workers	13,296	0.4%	66	30,633	0.7%	121	47,600	0.7%	238
	Domestic services	16,430	0.5%	64	10,410	0.2%	53	39,100	0.6%	72
	Mine workers	14,107	0.4%	26	30,632	0.7%	73	48,430	0.7%	139
	Unskilled labourers	67,449	2.1%	30	94,060	2.0%	44	117,360	1.7%	87
	Agricultural labourers	136,224	4.2%	16	210,898	4.6%	26	625,224	9.3%	47
Cocoa farmers	Elite cocoa farmers	10,941	0.3%	157	10,698	0.2%	474	23,915	0.4%	528
	Large-scale Cocoa Farmers	21,882	0.7%	90	21,397	0.5%	183	49,704	0.7%	211
	Medium-scale cocoa farmers	102,847	3.2%	38	100,565	2.2%	100	185,837	2.8%	97
	Small-scale cocoa farmers	83,153	2.6%	27	81,308	1.8%	52	143,914	2.1%	46
Informal sector	Fishermen	8,429	0.3%	39	43,500	0.9%	41	56,610	0.8%	42
	Food farmers	1,109,372	34.4%	23	1,550,832	33.6%	38	1,088,560	16.2%	63
	Petty traders	57,120	1.8%	38	68,181	1.5%	56	323,900	4.8%	80
	Subsistence group	1,531,611	47.5%	11	2,267,150	49.2%	11	3,501,759	52.1%	17
	Total population	3,227,000			4,610,000			6,727,000		
	Labour force	1,946,361			2,626,465			3,730,343		

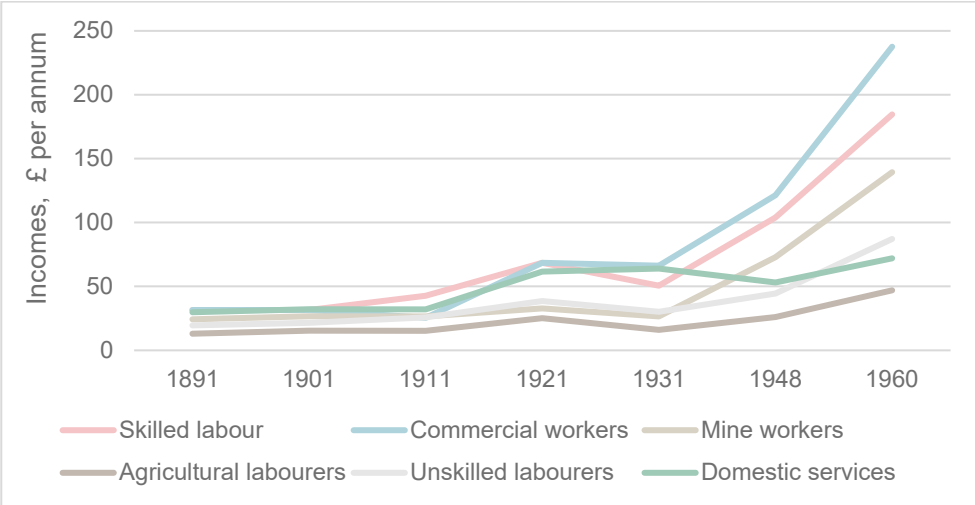
The formal economy: private sector employment and incomes

The private sector expanded substantially between 1891 and 1960. Initially only 5 percent of the population was employed in the private sector, but this increased to over 18 percent in 1960. During the first decades, incomes remained fairly low and stagnant across different occupations (see table 3 and figure 3). From 1931, however, there was a general improvement in incomes. Wages for skilled workers, commercial workers and miners rose to much higher absolute levels than those for unskilled workers in both urban and rural settings, but the skill premium, the ratio between skilled and commercial workers and unskilled urban workers, remained roughly constant at 2.5 throughout the period. This indicates a continued substantial dispersion in private sector incomes.[12] Comparing the highest earning private sector incomes to African government employees, we see a similar premium of 2.5, showing a continued divide between public and private sector enumeration, which increases the overall dispersion of incomes within the formal wage economy.

Mining companies in the south of Ghana offered low wages for labour in the initial years of mine development (Crisp, 2017:16). After the 1930s, there was a 70 percent increase in the price of gold on the world market, which led to a spectacular revival in the mining industry. The income of mine labourers increased substantially, from £30 in 1931 to £139 in 1960. The strengthening of mining capital coincided with a growth in the consciousness and collective action of the labour force, which expanded rapidly from 12,500 men in 1930-31 to around 50,000 in 1960 (see table 3).

[12] Frankema and Van Waijenburg (2012: 903) find similar skill premiums for Accra except for the 1920s and 1930s when they find a skill premium of 3.01 and 3.55 respectively. Part of the difference could be due to us looking at specific years and Frankema and Van Waijenburg averaging over decades.

Figure 3: Nominal income developments in the private sector, 1891-1960



Source: see table 3 and appendix

The most rapidly growing group working for wages were those engaged in agriculture, most of whom found employment in the expanding cocoa sector. While initially demand for labour by cocoa farmers was limited, it increased over time. A migrant-labour system emerged around 1908, which channeled workers from the drier and more remote savanna north to the main cocoa producing areas (Van Hear, 1982:41-53; Austin, 2005:59; 316-320). Wages for agricultural labourers slowly increased throughout the colonial period, with the exception of 1931, when the global crisis affected the whole economy. Agricultural wages were only about half the level of those paid to unskilled urban labourers during the initial years of colonial rule and the gap increased over time due to modest wage increases for the agricultural workers.

The cocoa farmers

The cash crop revolution had a major impact on the colonial economy and society in Ghana. Around 1910, more than 130,000 Africans were growing cocoa on their farms, and at that time, there were probably as many farm labourers as farmers (Hill, 1963b: 17). The sector continued to attract both more labourers and farmers throughout the colonial period, although growth slowed down during the Great Depression in the early 1930s. In 1960, more than one million people earned their incomes from working in the cocoa sector, which was 15 percent of the total population in that year (see table 3).

Overall, the rapid development of the cocoa sector offered opportunities for many to share in cocoa wealth and raised the standard of material welfare. Initially for the farmers engaged in the sector, but also in the economy at large, which we discuss

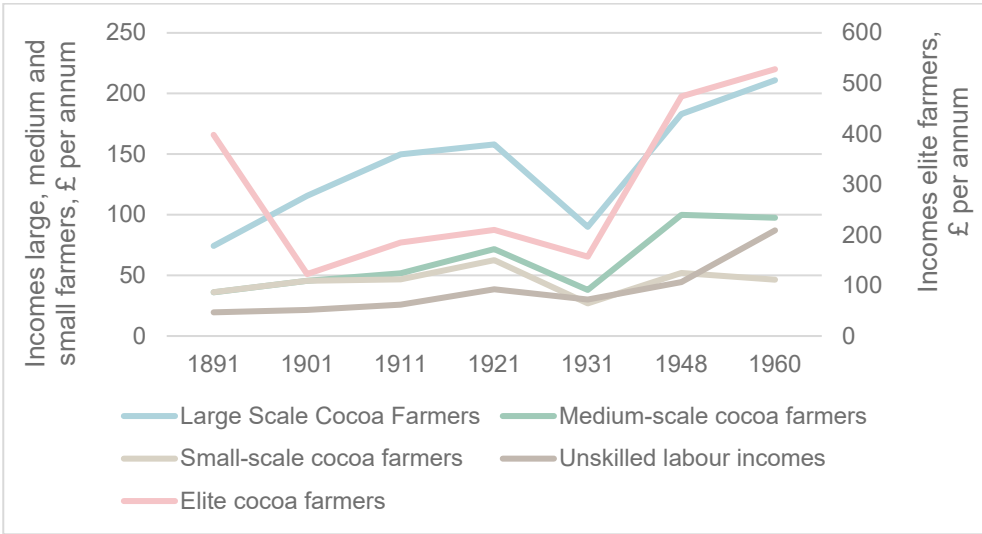
below. The incomes, however, were not equally distributed. Figure 3 shows a significant gap in incomes for the richest cocoa farmers (defined as elite and large-scale farmers) and the rest. After 1930, the gap widened as most of the cocoa incomes accrued to the elite cocoa farmers owning very large farms and reaping a few hundred 60 lb loads per annum (Austin, 2013; Hill, 1956). These rural 'cocoa elites', constituting less than half a percent of the population, were initially mostly pioneering Akwapim farmers, and the Krobo, Shai and Ga migrant farmers of the Eastern Province (Hill, 1963a:203). Soon after, also the rural elite in Ashanti entered cocoa production.

In 1891, incomes for the elite in the then Gold Coast Colony, derived from the export of palm oil and rubber, were substantial (Wilks, 1975; 1993; Latorre; 1978; Kea, 1982). On average, the elite earned around twice the level of income received by European government employees at the end of the 19th century. After the 1890s, during the transition from palm produce and rubber to cocoa as the main source of income, the average income for the African rural elite fell to £123 in 1901.[13] Yet, this was still six times the average African income for that year (see table 3).

By 1911, when cocoa production had also spread to Ashanti and Ghana became the world's largest producer of cocoa, most of the cocoa was still grown by the elite farmers who had accumulated capital from the oil-palm trade in the Eastern province (Hill, 1963b:17). Increasingly however, a new group of large cocoa farmers emerged. These two groups, the old elite farmers and the new large-scale farmers, early on had sufficient resources to invest in planting cocoa trees. They took advantage of relatively high initial prices of cocoa and earned a large share of the country's total incomes (Hill, 1963b:15; 38-53; 164-167; Austin 1997: xix; Dumett, 1971:95-96; Arhin, 1970:369; Austin, 1994; 1996:27; 2005:181-194; 215). In 1911, the elite farmers' income had risen to £185 per annum while the large-scale farmers earned on average £150 per annum. Meanwhile, access to land, especially in Ashanti was easy and cheap during the early decades of cocoa expansion (Austin, 2005:259-270, 325, and 327). This led to a quickly increasing number of small and medium-scale cocoa farmers after 1911 and prevented the concentration of farm ownership (Austin, 1993:127-130).

[13] This is partly due to the fact that after 1891, we have no sources that indicate how much incomes were still derived from palm and rubber. So, from 1901, incomes for the rural elite are only coming from cocoa and food farming.

Figure 4: Nominal income developments for cocoa farmers, 1891-1960



Source: see table 3 and appendix

Figure 4 shows why cocoa farming attracted so many farmers; because also small-scale farmers could earn higher incomes compared to unskilled urban labourers through most of the period. From table 4 below, which shows the relative income of the various classes of cocoa farmers, it becomes clear that cocoa farmers were well off compared to the majority of the African populace. Especially between 1931 and 1948, incomes diverged, while average income also nearly doubled during those years. This is in line with the broad consensus that the expansion of the cocoa sector led to substantial welfare increases for cocoa farmers (Cox-George, 1973:151-156; Rimmer, 1992:30; Austin, 2005; Frankema and Van Waijenburg, 2012). After 1948, incomes converge again, mainly due to rapidly rising private and government wages and lower government regulated prices paid to cocoa farmers from the 1950s onwards.

There are three exceptions to the general trend of increasing incomes of cocoa farmers. First, during the global crisis of the early 1930s, incomes for all cocoa farmers decreased substantially due to very low export prices. For all farmers except the small-scale farmers, this decline was only temporary. Incomes quickly bounce back to a higher level than the pre-crises level. After 1948, incomes remained more or less stable due to lower prices paid by the marketing boards. Second, incomes of small-scale farmers never recovered to pre-crisis levels and actually declined between 1948 and 1960, which explains the widened income gaps between the cocoa farmers post-1930.

Table 4: Incomes cocoa farmers relative to the African average income, 1891-1960

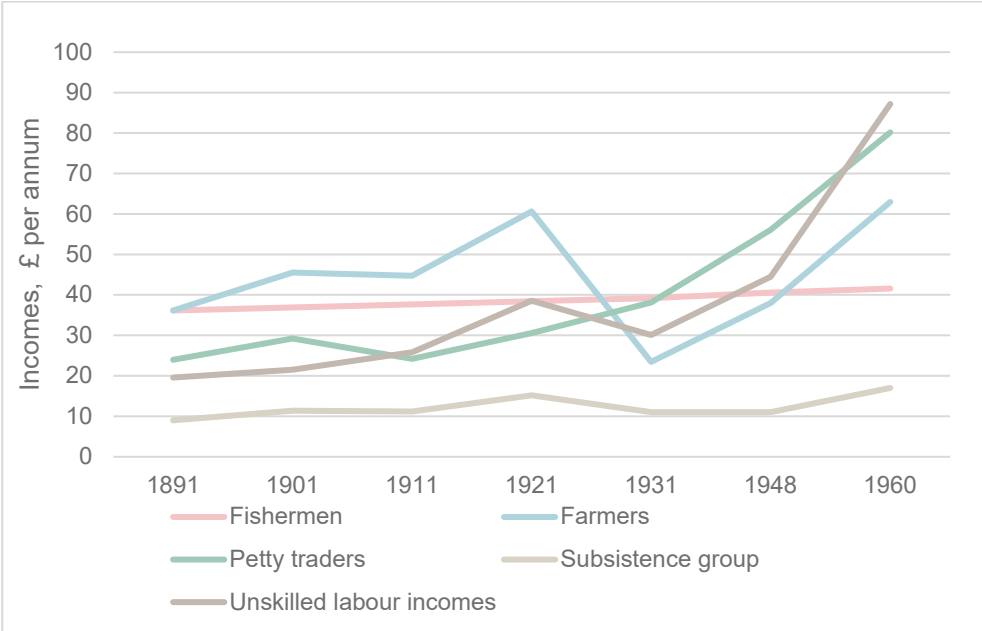
	1891	1901	1911	1921	1931	1948	1960
Elite cocoa farmers	23	6	8	6	6	15	10
Large scale cocoa farmers	4	5	7	5	5	6	4
Medium scale cocoa farmers	2	2	2	2	2	3	2
Small scale cocoa farmers	2	2	2	2	2	2	1

The informal sector

Also, within the informal sector, all groups gained in terms of nominal income. However, where food farmers and petty traders gained substantially, fishermen and the subsistence group saw more modest improvements (see figure 5). The increase in population and urbanization in combination with overall increases in incomes, stimulated demand for goods petty traders offered. This resulted in both substantial increases in petty traders' averages incomes, which more than triple between 1891 and 1960, and a substantial increase in the number of petty traders. In 1891 there were roughly 35,000 petty traders recorded, which grew to over 300,000 in 1960. Incomes earned by petty traders were comparable to those of unskilled urban labourers throughout the period.

Incomes for food farmers fluctuated substantially over time, in response to fluctuations in food prices. Their incomes were especially hard hit by the Great Depression. However, food farmers saw their incomes bounce back fairly rapidly after the 1930s, mirroring the general increase in incomes and prices in the economy during those years. Their incomes nearly doubled over our period, and the size of their group increased more than six times to over one million farmers. Meanwhile, incomes for fishermen remained relatively stable reaching £42 per annum in 1960 (Lawson, 1968). Finally, subsistence incomes doubled over the period despite the dip during the 1930s, reflecting the general rise in food prices. Outside of subsistence, incomes earned within the informal economy were at least similar, if not higher, than those earned by unskilled urban labourers. It is not until the rapid rise of wages after the 1930s that wages of urban labourers surpassed incomes of most in the informal sector, with the exception of petty traders. However, due to differences in prices between the city and the rural areas where most of those in the informal sector resided, the income divide probably overstates welfare differences (De Haas, 2017).

Figure 5: Nominal income developments informal sector, 1891-1960



Source: see table 3 and appendix

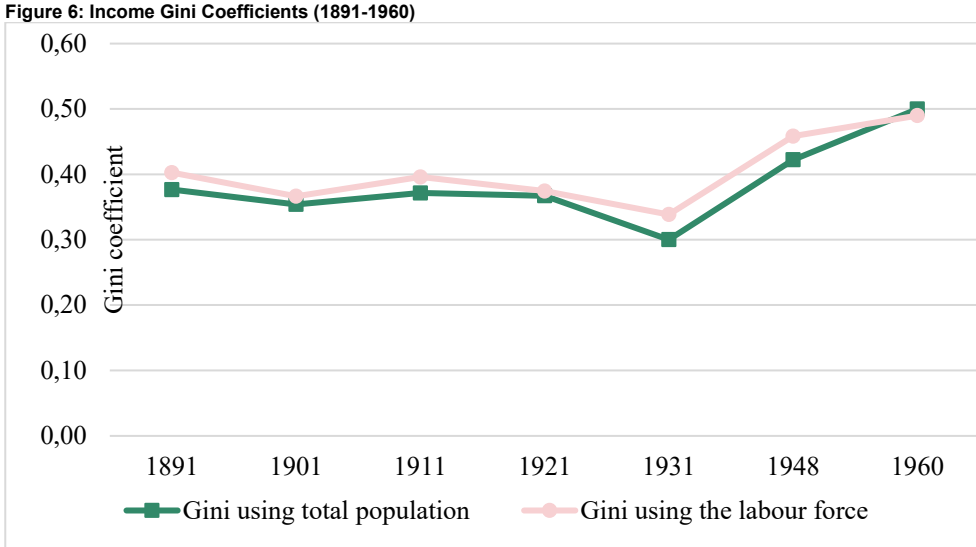
Overall, incomes of all social groups increased between 1891 and 1960. Initially incomes rose slowly, but after the 1930s, the gains were substantial. However, despite the rise in incomes, some gained much more than others. The main winners in terms of income during the period under study where the government employees, the commercial workers and the elite- and large-scale cocoa farmers. Throughout the period, they earned more than other social groups, and their income rose much faster than for the majority of the population, especially after the 1930s. The groups that gained the least were the agricultural labourers, the small-scale cocoa farmers and the fishermen. Especially during the final decades, these groups experienced welfare loses as the cost of subsistence rose faster than their nominal incomes (see table 3). In the following section, we will explore what these developments imply for inequality trends.

Inequality trends over time

A standard measure to summarize the distribution of incomes over different classes is the Gini coefficient. Calculating Ginis for all social table years between 1891 and 1960 allows us to charter the changes in income distribution over time. Due to data limitations and the fact that different parts of Ghana were incorporated into the Gold

Coast Colony at different times, our Gini coefficient for 1891 and 1901 are based on data from the Western, Eastern and Central Provinces. As explained in section 3, we have constructed two social table estimates, one where the whole population is included and one where we only include the labour force. Subsequently, we also have two series of Ginis that show very similar trends (see figure 6). In 1891, the Gini is at 0,4 after which it remains roughly constant until a substantial dip in 1931 due to the Great Depression and the resulting drop in prices. After 1931, inequality rapidly rises to over 0.50 in 1960. Given that 1931 was a year of economic crisis, the increase in inequality was probably less dramatic than figure 6 reveals. Nevertheless, the trend towards increased inequality continue during the last three decades. In the remainder of this section we explore occupational change, the role of top incomes and the expanding cocoa sector as three possible drivers of changes in income inequality. We end this section by discussing the north south divide.

Figure 6: Income Gini Coefficients (1891-1960)



Source: Authors' estimates

Change in occupational structure

The most influential explanation for changes in incomes has been Kuznets' inverted U hypothesis, which argues that inequality first rises and later declines with economic development due to relative changes in a nation's sectoral employment (Kuznets, 1955). As workers move from the traditional agricultural sector to more advanced/urban sectors where productivity and wages are higher, inequality rises. Over time, inequality is expected to decline again when the majority of the population is engaged in the modern sectors of the economy. In Ghana, while the economy increasingly started to diversify during the colonial period, the movement

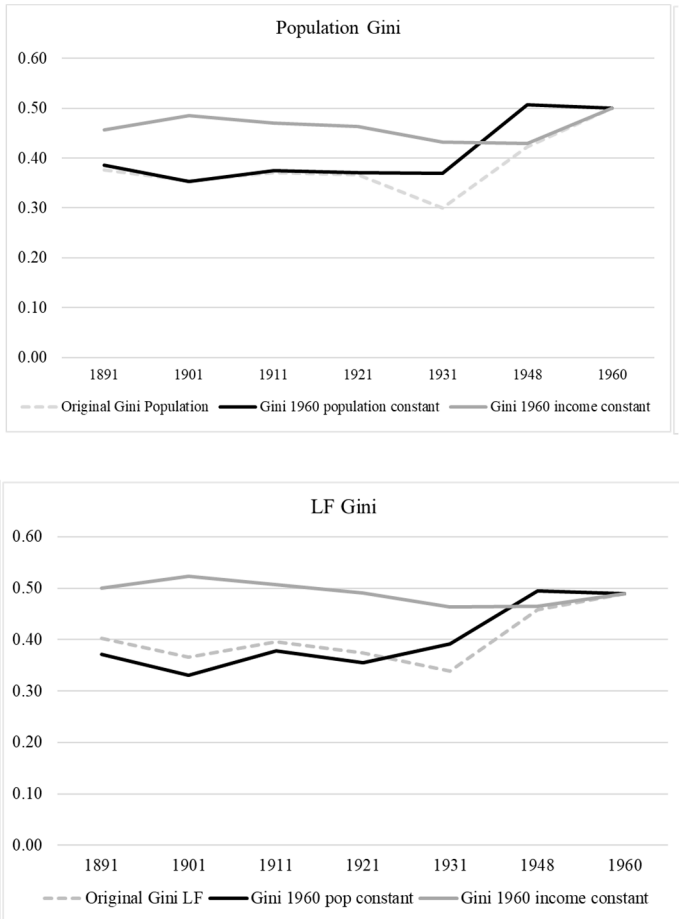
of labour to sectors outside of agriculture remained limited (see also table 3). In 1960, only 10 percent of the population was engaged in formal wage labour.[14] However, defining the modern sector more broadly and include cash crop farmers, the number of people engaged in more modern higher productive sectors increases to 17 percent.[15] This gradual and modest sectoral change would over time lead to increased inequality. On the one hand, the modern sector contained the rising incomes of government officials and successful cocoa farmers, while, on the other hand, the majority of the population experienced lower income increases in the so-called traditional sectors.

To distinguish between the effect of changes in occupational structure and rising wages on the trend in inequality, we recalculate the series of Gini coefficients. First, we hold incomes constant at the 1960 level and only let occupational shares change over time. Second, we keep the occupational shares constant at the 1960 level and let incomes change over time. Figure 7 shows the result for the total population Ginis (left graph) and the labour force Ginis (right graph). Keeping incomes constant at the 1960 level, inequality prior to 1948 is much higher than the original estimates, and it remains more or less constant at the 1948 level. Alternatively, when we keep the occupational structure constant at the 1960 level, the trend in inequality is very similar to the original estimates except for 1931 and 1948, when it becomes substantially higher.

[14] Another 5 percent moved out of agriculture toward petty trading. However, such informal service activities are generally perceived to be of low productivity. At the same time, average incomes earned were similar to unskilled labourers. In the analysis we include all employment shifts so including changes between formal and informal sectors.

[15] This includes government and private sector employment except agricultural labourers, and cash crop farmers.

Figure 7: Trend in inequality keeping population constant (black) and income constant (grey)



Thus, prior to 1948, the changes in incomes clearly played a more important role in driving the inequality trend than changes in occupational structures alone. Towards 1960, it was a joint effect of shifts in the sectoral composition of employment and increases in incomes that affect the level of inequality. Hence, the total number of people finding employment in more productive sectors was too small to make occupational change in itself affect inequality. Instead, it was rapidly rising incomes in the productive sectors that caused the increase in inequality.

Top incomes

Even though the Gini tends to be most sensitive to changes in the center of the distribution, top income groups are capable of significantly affecting overall inequality (Atkinson, 2007); especially when the very top group is very small, their incomes are well reported and the share of total income they earn is substantial

(Alvaredo, 2011: 274). In the case of Ghana, the top incomes during the colonial period were clearly earned by the European government elite (see table 3). Therefore, we analyze the effect of the presence of the European elite on the overall inequality estimates. We do so by comparing the Gini coefficients including respectively excluding the European top incomes (see table 5). Contrary to what Atkinson (2007) and Alvaredo (2011) indicate, we find no real effect in the level of inequality when we exclude Europeans from our social tables.[16] Even though European government employees earned between 11 (1891) and 33 (1960) times as much the average income in society, because of their small numbers the share of total income they earned remained fairly limited with on average less than 1 percent.

Table 5: Inequality with and without Europeans included, 1891-1960

	Total population including Europeans	Total population excluding Europeans	Labour force including Europeans	Labour force excluding Europeans
1891	0.37	0.38	0.40	0.40
1901	0.35	0.35	0.37	0.37
1911	0.38	0.37	0.40	0.40
1921	0.36	0.36	0.37	0.37
1931	0.29	0.30	0.34	0.33
1948	0.42	0.42	0.46	0.46
1960	0.50	0.50	0.49	0.49

Source: authors' calculation based on table 3 and appendix.

The expanding cocoa sector

Within the literature on the drivers of inequality in Ghana, much attention is put on the cocoa sector. As discussed before, some scholars suggest a positive correlation between the expansion of cocoa production and inequality, while others have questioned if it leads to increased levels of income inequality. We assess the effect of the expanding cocoa sector on income inequality by comparing inequality levels including all occupational groups with inequality levels excluding cocoa farmers.

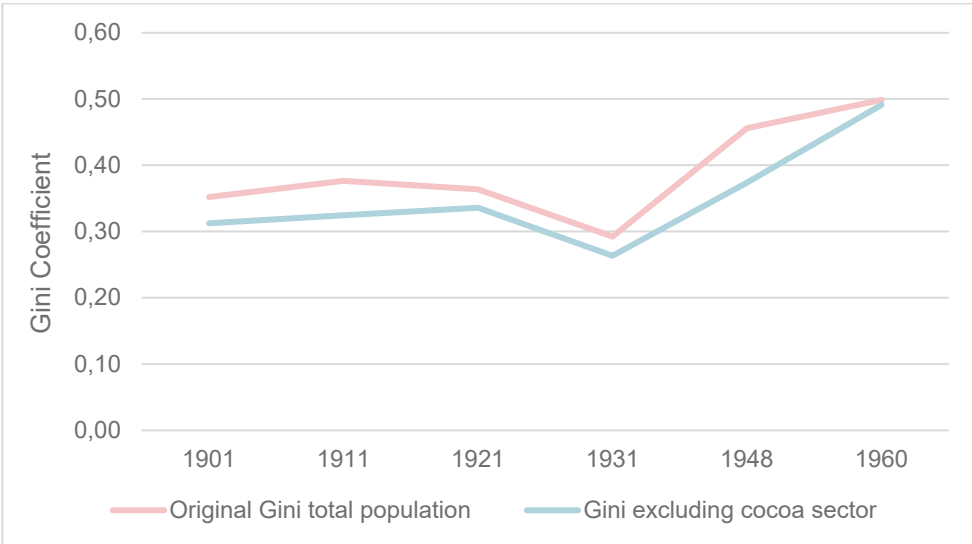
Excluding cocoa farmers from the social tables lowers inequality on average by 4 percentage points, except in 1960 (see figure 8). This suggests that despite the absence of increasing polarization in terms of production capacity, the expanding cocoa sector increased inequality. Thereby, our results seem to provide evidence for the argument that the expansion of cocoa production gave rise to a process of

[16] All differences in the table except for 1931 are due to rounding differences of the third decimal (for example 0.374 versus 0,375 for the total population Gini coefficients in 1891). Only the difference in the labour force Ginis for 1931 is an actual 1 percent difference when we compare the population with and without Europeans.

differentiation in incomes between Ghanaians generally, and cocoa producers in particular (Rhodie, 1968:105; Kay and Hymer, 1972:5-8; Hopkins, 1973:238-239; Beckman, 1976:156; Gunnarsson, 1978:48; 109-110; Howard 1978:193-206; Konings, 1986:75-78). However, in contrast to a simplified polarization story, we argue that the process changes in nature over time. Initially, the rise in income inequality is the result of the expansion of the sector in terms of number of farmers and total export, but after the 1930s, it is due to increasing prices driving up cocoa incomes.

Our results indicate that the cocoa export sector, by providing an increasing share of the population the opportunity of earning substantially more than subsistence incomes, reflected expanding income earning opportunities (Austin, 2005; 2013). A growing share of the population took advantage of these opportunities, which led to increasing incomes to go hand in hand with rising levels of inequality. Results for Botswana, where the colonial economy centered on an African dominated cattle export sector show similar mechanisms (Bolt and Hillbom, 2016).

Figure 8: Inequality trends including and excluding the cocoa sector, 1901-1960



Source: Authors' estimates

The north/south divide

Lastly, we turn to the north/south divide, as it is one of the factors affecting inequality in Ghana that feature prominently in contemporary development literature (Odusola et al., 2017: 30; Aryeetey, et al., 2009). Although the literature disagrees on the origins of this divide. Some argue that the north/south divide finds its roots in the structure of the colonial economy and has changed little since then (Aryeetey, et al., 2009). Related, some have suggested that the advent of cocoa

cultivation and mining in the southern areas of Ghana resulted in inequality between the savanna north and the mostly forest zone (Plange, 1979; Brukum, 1998; Van Hear, 1982:98-109). In contrast, Austin (2005: 2013) has argued that Ghana's long-standing north/south divide in terms of economic development preceded the adoption of cocoa cultivation. In the 19th century, the savanna north with its relatively poor soil quality and the unfavourable climate, was a major source of slave labour for the elites of the forest-zone, who had a near-monopoly control over the "broad forest rent" which included all commercially-valuable natural resources. Therefore, the north/south divide represents the long-term uneven distribution of endowments between the regions (Austin 2005:11; 59). In this section, we compare the level of income and the diversity in occupational structures for the two regions to analyze differences in levels and trends.

As regional income and price information is very scarce, a direct comparison of incomes between the population in the north and the south over time is difficult. However, there are estimates of subsistence incomes available for both the beginning and the end of the period under study. Szereszewski (1965) provides estimates of subsistence income for the Gold Coast Colony and Ashanti and the Northern Territories between 1891 and 1911. The monetary costs of subsistence are estimated to be initially 3 pence per capita per day in the south and 2 pence in the north. In 1911, incomes had risen to 4 pence and 2.7 pence respectively. Further, for 1961/62, Birmingham et al. (1966:111) estimated that the average value of total food consumption in the southern regions was 215 shillings per 12 weeks, and 84 shillings in the Northern Territories.

When comparing agricultural production and incomes of food farmers between different regions, it is clear that due to differences in vegetation types, farming practices across the country differed and farmers cultivated different crops. Farmers in the northern savannah areas mostly cultivated guinea corn, millet, yams, and groundnuts. In the forest areas, cassava, cocoyams, plantains and maize were instead the main food crops (Wills, 1962; Birminham et al., 1966). When comparing, we find that the food farmers' incomes[17] in the Northern Territories are generally 20 to 50 percent of the national average between 1911 and 1960, even when using national prices.[18]

Looking at occupational structures, we find that the share of population engaged in subsistence activities in the Northern Territories was higher than in the southern regions. There were no significant income earning opportunities besides subsistence agriculture, although the area had prospects for the development of some

[17] For details on how we estimated food farmers' incomes see the section on methods and data and the appendix

[18] Regional prices are not available.

commercial commodities such as cotton and sheanut (Sutton, 1989). Instead, people from the north moved south in search for employment and found it mostly in the expanding cocoa sector. Thereby, the cocoa sector affected the north of the country indirectly, via demand for agricultural labour and the remittances that labourers send home (Van Hear, 1982:41-53; Austin, 2005:59; 316-320; Moradi et al., 2013). However, detailed surveys of remittances indicate that the amount of income sent or taken home by labour migrants was limited, on average £1 per year per migrant in 1948, where the annual cash income of agricultural labourers amounted to £15 per year.[19]

Further, the number of skilled workers, commercial workers and especially government employees was much lower in the north than in the south. In 1960, 5 percent of European government officials were working in the north, and 8 percent of the African government officials. Moreover, the introduction of western and professional education to the Northern Territories was belated and all clerical and skilled work was done by people from the south, who often had to be induced by field allowances to work in the north (Ladouceur 1979:59).

Thus, the large majority of the top income earners, consisting of both government employees and the largest cocoa farmers resided in the southern part of the colony. Further, also most skilled and commercial workers found employment mostly in the southern regions. Consequently, the north had a much larger share of the population living on subsistence. In addition, subsistence incomes and value of consumption and food production was lower in the north, and increased less over time compared to the southern region. The cumulative effects of these circumstances was the slow development of a monetary economy in the north. Throughout the early 1900s, and in some areas into the 1940s, cowries were the major currency, while only some silver coins, copper and brass rods were in circulation. Buying and selling was therefore done only in small amounts (Sutton, 1989: 640). This suggests that overall economic changes: cocoa expansion and uneven development of wages and incomes for off-farm workers throughout the colonial period reinforced pre-existing differences between the north and the south of Ghana.

[19] Report on a Preliminary Economic Survey of the Northern Territories of the Gold Coast, 1950: page 29, Table 6.

Conclusions

This paper aimed at contributing to our understanding of the evolution and drivers of income inequality in colonial Ghana. We constructed social tables that encompass the whole population and calculated Ginis for seven consecutive decades from 1891-1960. During this time, Ghana represented a case of a 'cash crop revolution' mainly driven by African peasant farmers. It therefore constitutes an interesting case for examining how Africans employed their factors of production and exploited opportunities provided by economic changes during the colonial era for their own welfare and how this resulted in long-term economic stratification. It is also an interesting case of how the gradual development of the economy and the growth of the public sector affected the evolution of income inequalities.

We estimate a Gini of 0.4 in 1891, prior to the introduction of cocoa. Income inequality levels subsequently remained stable until they fell during the years of the Great Depression in the early 1930s. In the following decades, inequality increased again to reach a high of 0.50 in 1960. We explored three possible drivers that could explain this trend, namely sectoral or occupational change, the role of top incomes, and the effect of the expanding cash crop sector. We also investigate the north/south divide as a contributor to increasing inequality.

Starting with occupational structure, we find that the economy experienced substantial sectoral change in terms of employment with the share of the population engaged in wage labour employment rising from 5 percent in 1891 to 20 percent in 1960. If we include cocoa farmers participating in the formal economy through cash crop production, the share increased from 11 to 26 percent. However, even though the economy experienced changes in occupational structures away from agriculture towards formal wage employment, the size of the employment shifts alone were not large enough to affect the aggregate estimates. Rather, it was rapidly increasing incomes earned by especially public sector- and higher skilled private sector employees that led to increasing income inequality after the 1930s.

We also find that despite the rapid income increase for the top-income earners and the widening income gap between them and the rest, these changes did not cause increasing inequality. The reason being that the group of top income earners was too small to have an impact on aggregate income levels. Further, the cocoa sector affected the overall level of income inequality by increasing the Gini by 4 percentage points on average. Its impact remained the same throughout the period suggesting that the trend was not due to increasing polarization within the cocoa sector as some scholars have argued. Instead, the rapid expansion in terms of cocoa output until the 1930s, in combination with rapid price increases after the 1930s, enabled an increasing number of farmers to earn higher incomes.

Finally, we find that from the earliest observations onwards, there was a marked difference in income and occupational structure between the south and the north of the country. This suggests that the historical roots of the north/south divide indeed preceded the adoption of cocoa as suggested by some scholars. We also find that these differences grew after the introduction and rapid expansion of cocoa farming. Subsistence levels were consistently lower in the north and rose less, the share of people living at subsistence was much larger and declined less, and occupational differentiation was limited as the north had a much smaller formal economy and hosted less government officials. Regional inequality increased over time, mainly because of the cocoa expansion and the expansion of the formal economy in the south.

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Appendices

In this appendix we provide the details for the data we used and the calculations we made in the construction of our social tables.

Appendix I: Population

The basis for all social tables is information on population and occupations. Colonial population censuses in Africa are commonly perceived to be of relatively poor quality, albeit the quality differed between different countries and time periods (Frankema and Jerven, 2014). In many instances, African colonial bureaucracies were severely constrained financially, and counting people, especially in the often sparsely populated rural areas was problematic (Gendreau, 1993). For Ghana for example, Austin reports that the 1911 census might have excluded up to 700,000 people in a population of about 1.5 million people (Austin, 2005). Therefore, the official censuses for colonial Ghana cannot be relied upon as the only source for total population numbers. Recently however, various scholars have revised population estimates for African countries and regions (Manning, 2010; Frankema and Jerven, 2014). Both sets of estimates are based on extrapolations from the first post-colonial population census held in 1960, using population growth rates from India (Manning, 2010), in combination with growth rates for Indonesia and the Philippines (Frankema and Jerven, 2014). However, in addition to extrapolated population estimates for colonial Ghana, Frankema and Jerven (2014) provide a detailed discussion on colonial population estimates for Ghana. Based on the quality of the sources and available secondary literature and censuses reviewed, they provide modified population counts for all available colonial census estimates.

Given this direct approach, and the detailed discussion of the underlying statistical modifications, we use the revised population estimates for Ghana from Frankema and Jerven (2014). Table A1 provides a comparison of the original population counts as given by the censuses with the modified population estimates from Frankema and Jerven (2014). The undercount was substantial for the years prior to 1931 but it is not constantly increasing further back in time. In 1921 the census missed roughly a quarter of the population, in 1901 around 15% and in 1891 more than half of the population was not counted in the census.

Table A1: Population estimates for Ghana, 1891-1960

Year	Census	Frankema and Jerven (2014)	Difference (undercount census)
1960	6,727,608	6,727,608	-
1948	4,494,890	4,610,000	115,110
1931	3,161,335	3,227,000	65,665
1921	2,297,395	2,528,000	230,605
1911	1,504,005	2,000,000	495,995
1901	1,549,000	1,800,000	251,000
1891	764,000	1,650,000	886,000

Source: official census 1891-1960 and Frankema and Jerven (2014, table 8, p. 921)

We make use of official censuses to redistribute the population over the various regions based on the original regional population shares. Further, we also use the information on sectorial employment to place people in different occupational classes. As the censuses especially for the earlier years do not include information about the number of people engaged in non-wage economic activities, the censuses are complemented with colonial blue books, annual reports, a labour report and secondary sources to also obtain estimates of the size of the non-wage income groups (for details see the individual social tables below). The difference between total population and those recorded as economically active (including non-wage economic activities such as cash crop production, fishing and petty trade) are assumed to be engaged in informal farming and subsistence agriculture. This means that for example children and non-working adults such as the unemployed end up in the informal farming group. To determine the size of the labour force, we used the census to determine the share of the population over 15 years of age.

Appendix II: Incomes

As indicated in the main text of the paper, we obtained wages for those employed in the formal sectors from the colonial blue books, censuses, an annual report and a labour report and secondary sources. We assume that especially the unskilled labourers engage in bi-employment. So, while working for wages for some months, they also engage in subsistence farming. Labourers working in the mines are assumed to be employed for nine months of the year, and work on their farms growing their own foods for the remainder of the year. Therefore, their incomes comprise of nine months mining wages and the monetary value of subsistence income (for a full explanation of subsistence incomes, see below). Similarly, general unskilled labourers are also assumed to work for wages for part of the year, and work on their own farms for the remainder. We assume the average employment

contract for unskilled labour was nine months, similarly to the mining contracts (Sutton, 1983; Konings, 1986). Thus, the total annual urban incomes for unskilled labourers consists of nine months of cash incomes and the subsistence income. Agricultural labourers are assumed to also grow their own foodstuffs, so we add subsistence income to their annual wage income.

For people earning their incomes outside formal wage employment we have no direct wage or income observations from the colonial blue books. In the remainder of this section we will provide details on how we arrived at incomes for the various social groups not working for wages in the formal sector.

Cocoa farmers: We estimated cocoa farmers' incomes based on total cocoa exports and prevailing producer prices for cocoa. In the first step, we distributed total exports over all cocoa farmers. There is ample historical evidence that the distribution of production capacity between different groups of farmers was unequal (Hill, 1956: 84-91; Konings, 1986: 76; Austin, 2013: 5-6). However, even though the number of available surveys on the distribution of farming assets and income increases from the 1930s onward, there is little consistent evidence on the exact farm sizes, and there are little comparative statistics available over time (Austin, 2013: 6). At the same time, there seems to be little evidence that suggests there were major trends towards polarization of production capacity (Austin, 2013).

Therefore, we opted for determining the distribution of total output among different groups of farmers based on the first national comprehensive study of inequality among cocoa-farmers, which was done for the crop year 1963/64 (Beckman, 1970). Based on this survey, we distinguish between elite farmers, large-scale farmers, medium-scale farmers and small-scale farmers. The distribution of total exports over the different categories of farmers is also obtained from the 1963/64 survey, and is given in table A2 below.

Table A2: Farm sizes and levels of output in the cocoa sector, 1963/64

Social group	Category	Share of farmers	Share of output
Small cocoa farmers	less than 20 loads	7%	38
Medium cocoa farmers	20 - 100 loads	39%	47
Large cocoa farmers	100-200 loads	23%	10
Elite cocoa farmers	more than 200 loads	31%	5

Source: Author's summarization of Beckman (1970) reproduced in Konings (1986: 76).

We keep the share of the different categories of farmers (share of farmers) and their output share constant. As a robustness check we collected all available regional surveys on the distribution of output among different categories of cocoa farmers between 1925 and 1963 and used that information to both distinguish between

smaller and larger-scale farms and for the distribution of output between the different groups. For exact details, see the discussion of each individual social table below. To derive incomes for cocoa farmers, we in the final step multiply the production per group of farmers with the prevailing retail price of cocoa to estimate average cocoa incomes for the different category of farmers.

Fishermen: the census for 1911 notes that fishermen made about £3 to £5 a month when fish are in season and at other times their earnings would amount to 6d. or 1s. a day. Further, the census noted that the important fishing season was from July to October, and the small season from January after the harmattan, to May which was the beginning of the rainy season. To arrive at a yearly income for fishermen, we added the incomes earned during the fishing season with incomes earned outside the season. From the lower and upper incomes given for the fishing seasons, we calculated the log average earnings per month, placing more weight on the lower incomes to avoid over-estimation. We multiplied these monthly incomes by 9 months as that was the combined duration of both fishing seasons. To this, we added the log average of daily incomes earned for all days outside the fishing season (November, December and June). Summing both incomes, we arrived at 37.6 pounds per annum in 1911.

Lawson (1968:93) provides a direct income estimate for fishermen for 1941 based on the average amount of fish caught, and the prevailing market price for the most common fish. She estimates that fishermen earned on average 41 pounds per annum. We interpolate the series based on linear growth rates between 1911 and 1941 to obtain fishermen incomes for 1921 and 1931. We extrapolate forwards with the growth rate from 1911 to 1941 to obtain income estimates for 1948 and 1960. We extrapolate backwards from 1911 with the same growth rates to obtain income estimates for the years 1901 and 1891.

Petty traders: To obtain incomes for petty traders, we relied on a combination of direct income estimates, rough estimates and extrapolation between the various years to fill in the gaps. For 1948 and 1960, we are able to calculate separate petty traders' incomes for the Eastern province, for Ashanti and for British Togoland. For 1911, we obtained direct estimates from the 1911 Census Report for petty traders' weekly income. For 1931, we derived petty traders' income from Cardinall (1931) by using his estimates of trading profits of imports and exports, and inland trading and divided this by the total number of petty traders in 1931. For 1960, we relied on average petty traders' incomes from household surveys conducted in Akuse (1954) (British Togoland), Kumasi (1955) (Ashanti) and in the Oda-Swedru-Asamankese Area (1955-1956) (Eastern province). For the other regions and the country as a whole, we use the unweighted average of these incomes as the income for petty traders.

Using the linear growth rate between the petty traders' income for 1931 and the regional estimates for the mid-1950s, we calculate the regional and national petty traders' income for 1948. Using the same growth rate, we extrapolate our mid-1950s estimate to obtain income estimates for 1960. Interpolating between the income estimate for 1931 and 1911 using again linear growth rates gives us income estimates for 1921. Using the growth rate between 1931 and 1911, we extrapolate the 1911 income estimate backwards to obtain income estimates for petty traders in the years 1901 and 1891.

Semi-commercial food farmers: The agricultural sector, particularly the organization of food farming remained the "Great Unknown" of Ghana's economy (Birmigham *et al*., 1966:215). To calculate the incomes of food farmers, therefore, we had to rely on several sources to obtain data on food crops cultivated, farm acreages, yields, production and prevailing market prices.

Farm Sizes

Data on the average farm size of the peasant in each of the regions was derived from the 1963 Agricultural Census. In this census, 2,510 farms across the country were surveyed. According to the census, the average farmer owned a little above two farms (2.34 farms) and each farm was slightly less than three acres. These estimates appear not to be far off from earlier ones by Cardinall (1931) and Lynn (1937) for the Northern Territories. Total farm sizes averaged 4.28 acres in the more congested areas of the Northern Territories and 5.51 acres in areas where there was less population pressure (Cardinall, 1931:105). In North Mamprusi, average area cultivated per man was found to be 2.49 acres (Lynn, 1937:19). Due to the lack of data for earlier periods and given that the 1963 Agricultural Census provides a regional breakdown of average farm sizes we use these instead throughout the period studied.

Table A3: Size of Peasant Holdings, 1963

Region	Average number of acres per farm	Average number of farms per holding
Western	3,8	2,92
Central	1,9	2,43
Accra	1	1,2
Eastern	1,6	2,34
Volta	1,5	2,13
Ashanti	3,3	2,63
Brong-Ahafo	2,7	2,61
Northern	4,4	1,61
Upper	3,3	2,05
Average whole country	**2,7**	**2,34**

Notes: A holding is defined "as a parcel or parcels of land wholly or partly used for agricultural production for the day-to-day operation of which one man is responsible". Source: Birmingham et al. (1966:224).

Crops Cultivated

Due to differences in vegetation types, farming practices across the country differed and farmers cultivated different crops as the natural vegetation would allow. Farmers in the savannah areas (mainly the Northern Territories of the Gold Coast) mostly cultivated guinea corn, millet, yams, and groundnuts (Lynn, 1937). In the forest areas, cassava, cocoyams, plantains, and maize were the main food crops (Wills, 1962; Birmingham et al., 1966). Sometimes, different crops were cultivated on the same parcel of land, albeit the extent of this practice was often exaggerated (Birmingham et al, 1966).

To estimate the share of the acres that farmers devoted to each of the main food crops we looked at only the farms that were used for the cultivation of the main crops in both the savannah and forest area. We grouped the farms together based on the crops they cultivated and estimated the share of farms devoted to each crop. We used this as a proxy for the share of acres under cultivation for each crop. Some crops were increasingly being cultivated more than others, especially in older cocoa-growing areas. Austin (2005:66) notes that in Amansie for instance, cassava became widely adopted both in the diet and on the farm in the 1940s, replacing plantain as the traditional staple food as land availability was reduced. Cassava could grow better on marginal-quality land. We changed the size of farms devoted to cassava and plantain to reflect the increase in adoption of cassava from 1948.

We then multiplied the respective shares by the average farm size in each of the provinces to obtain the share of the same farm size that was used for the cultivation of each crop. Since we do not have estimates for earlier periods, we assume these to be constant throughout our study period.

Table A4: Share of acres devoted to main food crops

Northern Territories			The Gold Coast Colony, Ashanti and British Togoland		
Major crops	Number of farms	Shares of farms (%)	Major crops	Number of farms	Share of farms (%)
Groundnuts	54	11	Plantain	167	20
Guinea Corn	141	28	Cassava	386	46
Millet	141	28	Cocoyams	167	20
Yams	174	34	Maize	120	14
Total	510	100	Total	840	100

Source: Authors' estimates based on Birmingham et al. (1966:219)

Yields and Production

We obtained estimates of average yields per acre from several sources. For 1960 we rely on Birmingham et al (1966) and Nyanteng (1978), for 1948 we use the Report on the Administration of British Togoland, 1948, and for 1931 we obtain our information from Cardinall (1931) and Lynn (1937). As we have no information prior to 1931, we hold the 1931 estimates constant for earlier years.

Table A5: Yields, lbs per acre

	Years		
Crop	1963	1950	1931
Groundnuts	419	493	630
Guinea Corn	600	515	530
Millet	600	493	525
Yams	6720	6400	8000
Plantain	20608	8000	8000
Cassava	6720	5200	8000
Cocoyams	4480	5200	8000
Maize	806	1053	636

Sources: Cardinall (1931); Lynn (1937); Report on the Administration of British Togoland, 1948; Birmingham et al. (1966); Nyanteng (1978).

To arrive at an estimate of net yield per acre, we deducted from the above estimates, farm waste and losses and the seed ratio. As the stems of plantains, cocoyams, and cassava were used for cultivation they required no seed ratio.

Table A6: Farm waste and losses and seed ratio

Crop	Waste and Losses (%)	Seed ratio (%)
Groundnuts	12	10
Guinea Corn	12	10
Millet	12	10
Yams	30	30
Plantain	37	
Cassava	19	
Cocoyams	24	
Maize	12	10

Sources: Birmingham et al. (1966); Nyanteng (1978); De Haas (2017).

Food farmers consumed a large proportion of their own produce and sold any surpluses that may be available. To estimate farmers' income, we calculated the value of own consumption in kind and the value of the surpluses sold at the market. To arrive at an estimate of surplus food crop sold, we multiplied the yield by the prevailing average market price for each crop, the sum of which gave food farmers' income per farm. This sum was then multiplied by the average number of farms held by a farmer (2.3) to obtain total farmers' income.

Food Prices

We derived food prices for each year that we construct a social table from the colonial blue books, census reports and reports on the colonial provinces. These were mostly urban prices. Following De Haas (2017:617), we assume that rural food prices were half (50%) of those of urban areas.

Subsistence: The group of people living at subsistence is the largest income group in our social table. Estimating their average income is not straightforward because this group encompasses many different sub-groups such as subsistence farmers, the unemployed, retired people, and those who were incapacitated for employment. Their incomes were mostly enjoyed in kind so there is no monetary value for subsistence income recorded. Therefore, we collected all available direct estimates of subsistence incomes available from secondary sources and colonial records. We also collected estimates of the monetary value of own food produced by cocoa farmers from various cocoa surveys done in the 1950s. Finally, we calculated how much a family had to pay to buy this basket, i.e. what the costs of living at subsistence were for a family if they needed buy all necessary goods on the market as a monetary proxy for subsistence incomes (Frakema and Waijenburg, 2012; De Haas, 2017).[20] The different approaches yield different results, as indicated in table A7 below.

[20] As the ecology in the Gold Coast generally allowed for decent agricultural production and large-scale famines were scarce, we use the updated subsistence basket providing 2100 calories per person per day from Allen (2015) pp. 4-5. One of the issues with the consumption basket approach is that the majority of available price information in the colonial records reflects price levels in cities and life in the city tended to be more expensive than in rural areas. As the far majority of the population was residing in the countryside, the consumption approach in combination with city prices might overstate the cost of subsistence faced by the average Ghanaian. Based on the table, we actually find the opposite (except for 1960), namely that the consumption basket approach always seems to underestimate the level of subsistence incomes.

Table A7: Estimates of subsistence incomes, £ per annum

	1891	1901	1911	1921	1931	1948	1950s	1960
Szereszewski Southern Ghana	9	9	12					
Szereszewski Northern Territory	5	5	6					
Bare bones subsistence basket	4	5	5	11	4	10		17
Cocoa families Oda Swedru Asamankese, direct budget survey							12	
Population weighted average value food stuffs produced Oda Swedru Asamankese							16	
Population weighted average food stuffs Ashanti							12	
25% of food farmers' income	9	11	11	15	6	9		16

Sources: Szereszewksi (1965:139); Bare bones subsistence basket: following Allen (2015) using prices from Frankema and Van Waijenburg (2012). Using the updated basket and family size from Allen (2015), pp. 4-5. Cocoa families Oda subsistence income: direct estimate taken from the survey of population and budgets of cocoa producing family in Oda-Swedru-Asamankese (1955-1956), table 41, page 90. Population weighted average value of food stuffs produced Oda-Swedru-Asamankese: authors' calculation based on Survey of population and budgets of cocoa producing family in Oda-Swedru-Asamankese (1955-1956), table 22, page 68-69. Population weighted average value of food stuffs produced Ashanti: authors' calculation based on Survey of cocoa producing families in Ashanti (1956-57, table 21, page 54-55). 25% of food farmers' income: authors' calculation, see explanation of food farmers' income above.

The 1960 value of the subsistence basket is very similar to the average value of the foodstuffs produced by cocoa farmers in the mid-1959s in Oda-Swedru-Asamankese. This income level is roughly equal to 25 percent of food farmers' income in 1960. Using this share for all other years, we arrive at similar levels of subsistence incomes compared to the direct estimates from Szereszewski for southern Ghana for the years 1891-1911. For other years, the different approaches suggest substantially different income levels.

Given that the ecology in the Gold Coast generally allowed for decent agricultural production and large-scale famines were scarce, the bare bones consumption basket approach seems to result in too low subsistence income estimates. Given the similarity between the direct estimates from Szereszewks and the food farmers approach for the years 1891-1921. For 1931, we expect subsistence incomes to fall as a result of the global recession (in line with incomes for all other groups). However, both the consumption basket approach and the food farmers approach suggest a fall that lead to too low incomes to properly survive. We therefore assume incomes fell back to the level of 1911. Also, for 1948 all available approaches result in very low subsistence incomes, so we keep the 1948 level constant at the 1931 level. For 1960 we opt for the consumption basket approach as that seems to indicate a rise in subsistence incomes more in line with overall increases in incomes and prices than any of the other approaches to estimate subsistence incomes.

Appendix III: Social Tables

Table A8: Social table 1960

1960					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	788	0,0	1908	112	0,4
Government (admin, executive, etc.)	44 550	0,7	317	19	4
Government (other)	63 460	0,9	301	18	5
Total skilled labourers	366 290	5,4	185	11	18
Commercial workers	47 600	0,7	238	14	3
Domestic services	39 100	0,6	72	4	1
Mines	48 430	0,7	139	8	2
Total unskilled labourers	117 360	1,7	87	5	3
Agricultural wages	625 224	9,3	47	3	8
Elite cocoa farmers	23 915	0,4	528	31	3
Large Scale Cocoa Farmers	49 704	0,7	211	12	3
Medium-scale cocoa farmers	185 837	2,8	97	6	5
Small-scale cocoa farmers	143 914	2,1	46	3	2
Fishermen	56 610	0,8	42	2	1
Food farmers	1 088 560	16,2	63	4	19
Petty traders	323 900	4,8	80	5	7
Subsistence group	3 501 759	52,1	17	1	16

We obtained information on the size of each social class for 1960 mostly from the 1960 Population Census and from the 1960 Labour Statistics. While the classification of various occupational groups was based on the census, they were re-categorized to form broad social classes. Our social class of government administrators and executives for instance comprised, central government officials including defence and justice and local government administrators as defined in the 1960 population census. Other government officials included officials providing community services as described in the census. Wholesale and retail traders, and workers in banks and other financial institutions made up our social class of commercial workers. Estimates on people engaged in cultivating field crops and foodstuff production and engaged in other kinds of extra subsistence activities were combined to obtain the size of the class of food crop farmers. The census numbers on workers in the manufacturing, transport and communication, construction and other occupations of similar kind as described in the census were added to give the size of the class of skilled workers. The number of agricultural labourers was

underestimated in the censuses. Austin (2005:319-20) based on the Report on Cocoa Farming-Families for Ashanti for 1956/57 notes that there was a ratio of nearly 1.9:1 between hired labourers on cocoa farms and cocoa-farm owners. The survey for Oda-Swedru Asamankese indicates that the ratio of hired labourers to farmers was 1.39:1. We adopt an average of 1.55:1 for 1960 and 1948.

Table A9: Social table 1948

1948					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	493	0,0	849	77	0,3
Government (admin, executive, etc.)	11 741	0,3	276	25	2
Government (other)	20 873	0,5	174	16	3
Total skilled labourers	56 629	1,2	104	9	4
Commercial workers	30 633	0,7	121	11	3
Domestic services	10 410	0,2	53	5	0
Mines	30 632	0,7	73	7	2
Total unskilled labourers	94 060	2,0	44	4	3
Agricultural wages	210 898	4,6	26	2	4
Elite cocoa farmers	10 698	0,2	474	43	4
Large Scale Cocoa Farmers	21 397	0,5	181	16	3
Medium-scale cocoa farmers	100 565	2,2	100	9	7
Small-scale cocoa farmers	81 308	1,8	52	5	3
Fishermen	43 500	0,9	41	4	1
Food farmers	1 550 832	33,6	38	3	41
Petty traders	68 181	1,5	56	5	3
Subsistence group	2 267 150	49,2	11	1	18

The 1948 Census identified only four main occupational groups: Cultivation of Cocoa, Artisans, Craftsmen and Skilled Workmen, Shopkeepers, Traders and Sellers, and Unskilled Workmen, and a fifth group for occupations not included in these four. We therefore had to rely on Kay and Hymer (1972:316) and some fragmented information given in the Census Report for a breakdown of these occupations. The total number of African government officials is taken from Kay and Hymer's (1972) classification of persons employed in government administrative and security services. Other government officials is based on their classification of professional and technical workers which included doctors,

teachers and surveyors. Kay and Hymer (1972) indicate that of the total government employees, 64 percent are estimated to be in government (others). These workers are taken out of the original skilled labourers group in the census to give us our social class of 'Other Government Officials'. Regional division of government employees is based on the share in main occupation groups of the 1948 census.[21] The number of skilled labourers are taken from Kay and Hymer (1972:316). Again, we use their share of the population classified as blue collar and others in the transportation and communication sectors to estimate the number of skilled workers in the original 'Craftsmen and Skilled Workmen' group in the census. Regional division of total skilled is based on the regional division of artisans, craftsmen and skilled workmen reported in the 1948 census.[22]

For petty traders, the census indicates that nearly 67 percent of the female population were petty traders.[23] As the original distribution of the four main occupations was based on the male population, the number of female petty traders was added to the official sum. The share of the population engaged in commerce, that is not petty trading, based on the summaries for administrative areas and districts given in the census,[24] was then taken out of the derived total to obtain the number of commercial workers. The remainder was the taken as the number of petty traders. The regional distribution of petty traders and commercial workers was based on the regional division on shopkeepers, traders and sellers as given in the census.

For the number of employees working as domestic servants, we combine information from Kay and Hymer (1972:316) and the official census for 1948. The total number of labourers in mines are taken from Kay and Hymer (1972:415), who record the number of Africans employed in the mines. As we have no information on regional distribution of the mine workers for 1948, we base our distribution on the regional division for 1960. We obtain the number of agricultural labourers from the 1948 population census estimate of wage-earning employees in the cocoa farms. The number of fishermen was also based on information from the 1948 population census.[25]

According to the 1948 population census,[26] majority of the group categorized as 'remainder' were farmers (other than cocoa). We add the total number of female

21 1948 Population Census, p.370.

22 1948 Population Census, p.370.

23 1948 Population Census, p.23.

24 1948 Population Census, pp. 371-388.

25 Ibid

26 1948 Population Census, p.20.

farmers to the official figure based on the population census to arrive at the number of food crop farmers for 1948.

Table A10: Social table 1931

1931					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	949	0,0	788	72	1
Government (admin, executive, etc.)	6 120	0,2	131	12	1
Government (other)	8 775	0,3	92	8	1
Total skilled labourers	38 295	1,2	51	5	3
Commercial workers	13 296	0,4	66	6	1
Domestic services	16 430	0,5	64	6	2
Mines	14 107	0,4	26	2	1
Total unskilled labourers	67 449	2,1	30	3	3
Agricultural wages	136 224	4,2	16	1	3
Elite cocoa farmers	10 941	0,3	157	14	3
Large Scale Cocoa Farmers	21 882	0,7	90	8	3
Medium-scale cocoa farmers	102 847	3,2	38	3	6
Small-scale cocoa farmers	83 153	2,6	27	2	3
Fishermen	8 429	0,3	39	4	1
Food farmers	1 109 372	34,4	23	2	39
Petty traders	57 120	1,8	38	3	3
Subsistence group	1 531 611	47,5	11	1	26

For 1931, most of our estimates on the size of many social classes was derived from the 1931 population census. These included the number of commercial workers, petty traders, domestic servants, fishermen and miners. Where the number of some occupational groups was not directly given, we relied on secondary sources. For instance, for the number of cocoa farmers, our estimate is based on Van Hear (1982:122) who indicates that the cocoa sector absorbed one sixth of the country's labour in the early 1930s.

The number of food crop farmers was taken from Kay and Hymer's (1972:316) estimate of the share of food farmers of the classified population. The size of skilled workers, African government administrators and executives, other government employees was also derived from Kay and Hymer (1972). For agricultural labourers, our estimate is based on the number of people moving south from the north to work on cocoa and food farms for wages as stated in the Northern Territories report for

1933-1934.[27] Admittedly, assuming that all workers moving south were engaged as agricultural labourers is rather precarious. However, as Sutton (1983:479) argues while a few of the northerners were engaged as traders, much of the northern labour went to work on cocoa and food farms.

Table A11: Social table 1921

1921					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	995	0,0	562	37	1
Government (admin, executive, etc.)	1 526	0,1	110	7	0
Government (other)	16 240	0,6	57	4	1
Total skilled labourers	10 851	0,4	68	5	1
Commercial workers	9 661	0,4	68	5	1
Domestic services	3 569	0,1	62	4	0
Mines	11 300	0,4	33	2	0
Total unskilled labourers	48 518	1,9	39	3	2
Agricultural wages	206 177	8,2	25	2	6
Elite cocoa farmers	10 309	0,4	210	14	2
Large Scale Cocoa Farmers	20 618	0,8	158	10	4
Medium-scale cocoa farmers	96 903	3,8	72	5	8
Small-scale cocoa farmers	78 347	3,1	63	4	6
Fishermen	9 502	0,4	38	3	0
Food farmers	622 380	24,6	61	4	43
Petty traders	41 505	1,6	31	2	1
Subsistence group	1 339 599	53,0	15	1	23

We combine information from the 1921 Census Report and Kay and Hymer (1972:316; 415) to estimate the size of each class for the 1921 social tables. The number of miners, fishermen, government administrators and executives, other government employees is based on Kay and Hymer. The estimate of the number of cocoa farmers is based on Berg (1960:192 cited by Van Hear 1982:35) assessment that in the period 1900-1910 between 10 and 15 percent of the total population was engaged in the cocoa sector. We use the same share for 1921. For food crop farmers we rely on Kay and Hymer's (1972) share of farmers of the classified population.

[27] Report on the Northern Territories for the Year 1933-34, p.60.

The number of agricultural labourers is based on the Northern Territories Report for the Year 1924-1925.[28] As the number of petty traders and commercial workers in the census report were for a few towns and hence most likely are grossly underestimated, we used the share of the trading population for 1931 to estimate their sizes. The number of agricultural workers is based on Hill (1997: 17), who indicates that there were as many farm labourers as farmers as early as 1910 or earlier. We apply this ratio for the years 1901-1921.

Table A12: Social table 1911

1911					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	619	0,0	371	33	0,5
Government (admin, executive, etc.)	1085	0,1	85	8	0
Government (other)	11550	0,6	39	3	1
Total skilled labourers	3832	0,2	43	4	0
Commercial workers	11700	0,6	25	2	1
Domestic services	2539	0,1	32	3	0
Mines	18300	0,9	26	2	1
Total unskilled labourers	34603	1,7	26	2	2
Agricultural wages	134264	6,7	15	1	4
Elite cocoa farmers	6713	0,3	185	17	3
Large Scale Cocoa Farmers	13426	0,7	150	13	4
Medium-scale cocoa farmers	63104	3,2	52	5	7
Small-scale cocoa farmers	51020	2,6	47	4	5
Fishermen	6221	0,3	38	3	1
Food farmers	400057	20,0	45	4	39
Petty traders	29375	1,5	24	2	2
Subsistence group	1211591	60,6	11	1	29

The 1911 Population Census gives occupational statistics for a few towns in the Western, Central and Eastern Provinces. Occupational statistics were not asked for in the cases of Ashanti and the Northern territories as a majority of their male population was assumed to be mostly farmers, and the women were employed

[28] Report on the Northern Territories for the Year 1924-25, p.21.

mainly in domestic duties.[29] Hence, we had to use estimates from some secondary sources and the occupational shares in later years to determine the sizes of many social classes, especially for Ashanti and the Northern Territories.

The number of miners and skilled workers is taken from Kay and Hymer (1972:415). The estimate of the number of cocoa farmers is based on Berg's (1960:192) estimation of 10 and 15 percent of the total population engaged in the cocoa sector between 1900 and 1910. The number of commercial workers and petty traders is based on the number given in the census report and the share of the trading population for Ashanti and the Northern Territories in 1921. We had no reason to suspect that this might have significantly changed over the period. For food crop farmers, unskilled labourers and all other social classes we use the share of the population for 1921.

Table A13: Social table 1901

1901					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	361	0,0	250	23	0,3
Government (admin, executive, etc.)	927	0,1	85	8	0
Government (other)	1 400	0,1	39	4	0
Total skilled labourers	3 710	0,3	32	3	0
Commercial workers	10 794	0,9	32	3	1
Domestic services	7 665	0,6	32	3	1
Mines	17 000	1,4	27	2	2
Total unskilled labourers	29 306	2,4	22	2	2
Agricultural wages	20 148	1,7	15	1	1
Elite cocoa farmers	4 478	0,4	123	11	2
Large Scale Cocoa Farmers	8 955	0,7	116	11	4
Medium-scale cocoa farmers	42 090	3,5	46	4	7
Small-scale cocoa farmers	34 031	2,8	46	4	6
Fishermen	5 930	0,5	37	3	1
Food farmers	196 775	16,3	46	4	34
Petty traders	27 101	2,3	29	3	3
Subsistence group	793 606	65,9	11	1	33

[29] Census of the Population, 1911, p.34.

The occupational distribution of the Colony as given by the 1901 census was based only on 10 principal towns which were mostly found in the Western, Central and Eastern Provinces which made up the 'Colony'. Therefore, we use information from the census and from Kay and Hymer to estimate the respective sizes of social classes. The number of African government administrators and executives, other government officials and miners is based on Kay and Hymer's estimates (1972:316; 415).

The size of skilled workers, fishermen and agricultural labourers was taken from the census. [30] The number of food crop farmers, commercial workers and petty traders is based on the share of the trading population in 1911. The estimate of the number of cocoa farmers is based on Berg's (1960:192) estimation of between 10 and 15 percent of the total population involved in the cocoa sector during this period.

Table A14: Social table 1891

1891					
	No. in class	*Population share (%)*	*Annual income £*	*Welfare ratio*	*Income share (%)*
European Government Officials	308	0,0	200	12	0,3
Government (admin, executive, etc.)	792	0,1	80	5	0
Government (other)	1 500	0,1	32	2	0
Total skilled labourers	3 091	0,3	32	2	1
Commercial workers	4 795	0,4	32	2	1
Domestic services	2 795	0,3	30	2	0
Mines	2 499	0,2	24	1	0
Total unskilled labourers	25 023	2,3	20	1	3
Agricultural wages	17 203	1,6	13	1	1
Elite cocoa farmers	3 267	0,3	398	23	7
Large Scale Cocoa Farmers	6 533	0,6	74	4	2
Medium-scale cocoa farmers	30 706	2,8	36	2	6
Small-scale cocoa farmers	24 827	2,2	36	2	5
Fishermen	16 593	1,5	36	2	3
Food farmers	167 528	15,2	36	2	31
Petty traders	35 313	3,2	24	1	4
Subsistence group	761 148	68,9	9	1	35

[30] Report on the Census for the Year 1901, p.8.

Occupational data for 1891 are given for only 16 towns and for 35,529 persons in the 1891 census.[31] The number of most of our social classes for 1891 is therefore based on Szereszewski's (1965:18-20) estimates and on the 1891 census. In 1891, there were virtually no cocoa exports from Ghana. Instead, the size of cocoa farmers is calculated using the growth in farmers from 1901-1911 period. Except the elite farmers who derived incomes from trade in palm oil and rubber, all other farmers were the most affluent among the food farmers. Especially in the earlier years, it was customary to plant food crops for several years while cocoa seedlings were still growing (Beckett, 1944; Austin, 2014). Estimates of agricultural labourers are based on the share of the population of agricultural labourers in 1901.

Appendix IV: Robustness of cocoa incomes

Distribution of production capacity

Within the rapidly expanding group of cocoa farmers, the distribution of production capacity was unequal from the start, albeit exact farm sizes remained unknown (Hill, 1956: 84-91; Konings, 1986: 76; Austin, 2013: 5-6). However, even though the number of available surveys on the distribution of farming assets and income increases from the 1930s onward, there is little consistent evidence on the exact farm sizes, and there are little comparative statistics available over time (Austin, 2013: 6). Three factors are especially relevant for the present study.[32] First, regional variation was considerable, which makes finding the average cocoa farming area from which to generalize very hard. Second, many farmers had more than one cocoa farm and not always were all farms owned included in the survey. Third, the available estimates are presented using different size bands which makes combining the estimates to construct time series hazardous (Austin, 2013: 9). We therefore opted to use the first comprehensive national study to distinguish between different groups of farmers (see main text). However, to see how this assumption affects our results, we collected regional surveys on the distribution of production capacity for various years covering the period 1925/26 to 1963/64 and use those to distribute total exports over total number of cocoa farmers to how robust our original estimates are.

A 1925/26 survey of cocoa farmers in the Asante-Akyem region reports that farm sizes varied from less than an acre to over 20 acres. 45 percent of the farmers had farms of less than an acre, 54 percent worked between one and ten acres, and one

[31] 1891 Census Report, pp. 133-36.

[32] Austin (2013) also discusses the fact that with a tree crop it is crucial to distinguish between current ouput and or income and the capital value or wealth that the farm represents. While the latter is an important factor determining latent wealth inequality between farmers, this factor seems less relevant when discussing income inequality only.

percent of the farmers managed an area of more than ten acres to grow trees on (Austin, 2005:307). Metcalfe (1964:653) reports of a survey done by the Department of Agriculture on farms of 1,250 farmers in Ashanti in the 1930s, which indicated that the size of farms varied from a fraction of an acre to 27 acres, and that 60 percent of the farmers owned up to 1 acre. Various regional surveys of cocoa farms during the 1950s indicate that a small group of elite cocoa farmers harvested 270 to 325 loads of 60 lb per year (Austin, 2013:9). The majority of surveyed farms however produced much less. About half of the farmers produced less than 30 loads, and another 40 percent produced less than 100 loads annually.[33] In 1963, five percent of the farmers could be classified as large-scale farmers, and they produced around 200 loads of 60 lb each. More than half of the farmers produced between 40 and 100 loads of 60 lb, and the remaining small cocoa farmers produced between 10 and 40 loads (Beckman, 1970). We use the available regional distribution of production capacity and apply broad but homogeneous bands of production to distribute output over the farmers. In a next step we apply that on a national level to see how sensitive the results are to the different distributions of production capacity.

[33] Survey of Population and Budgets of Cocoa Producing Families in the Oda-Swedru-Asamankese Area, 1955-1956; Survey of Cocoa Producing Families in Ashanti, 1956-57.

Table A15: farm sizes and levels of output in the cocoa sector

	1925		1931		1954/55, various regions		Oda Swedru Asamankese 1955/56		Ashanti 1956/57		1963/64 national survey	
	% farmers	% output	% farmers	% output	% farmers	% output	% farmers	% output	% farmers	% output	% farmers	% output
<20 loads	68	29	80	8	29	9	48	6	25	4	38	7
< 100 loads	32	33	19	40	53	49	47	29	53	41	47	39
> 100 load	1	37	1	52	17	43	5	32	15	24	10	23
> 200 loads							1	33	7	30	5	31

Source: 1925/26: Austin (2005: 307), table 16.1; 1931: Cardinall (1931), 1954/55 various regions: Hill (1956: 89-90), table 16 and 17; Oda-Swedru-Asamankese, 1955: Survey of Population and Budgets of Cocoa Producing Families in the Oda-Swedru-Asamankese Area, 1955-1956, table 22, page 68-69; Survey of Cocoa Producing Families in Ashanti, 1956-57, table 21, page 54-55; 1963/64 Beckman (1970) reproduced in Konings (1986:76). We apply the 1925 estimate to our 1921 social table, the 1931 estimate to our 1931 social table, the 1950s estimate to our 1960 social table.

Table A16: cocoa income estimates using regional surveys from table A15

	1921		1931		1960			
	Original estimate paper	regional survey estimate (1925)	Original estimate paper	regional survey estimate Cardinall	Original estimate paper	regional survey estimate Hill (1956)	regional survey estimate Oda-Swedru-Asamankese (1955/56)	regional survey estimate Ashanti (1956/57)
Large/ Elite	210	363	157	108	764	476	1019	713
Large	158		90		301		378	268
Medium	71.6	71	38	52	129	181	136	129
Small	62.6	65	27	24	54	61	30	28

Source: authors' calculation using total exports, prevailing retail prices and method described in the paper.

From table A16 it is clear that the distribution of production capacity of cocoa affects the exact level of incomes, but that variation is rather limited. For the years 1931 and 1925 the surveys allow the distinction between three classes of cocoa farmers: elite and large, medium and small. When using the survey of 1925 for calculating the cocoa incomes for 1921, especially the elite/large farmer income is much higher compared to the original incomes used in the paper. This is due to the fact that this group of farmers according to the survey only make up 1 percent of the population but produces 37 percent of the output. For 1931, the combined income for the elite and large-scale farmers is actually close to the average of elite incomes and large-scale farmer incomes used in the paper. The same is true when we use the survey estimates on the distribution of production capacity from the mid-1950s from Hill (1956). Incomes for medium and small-scale farmers are very similar to the ones used in the paper. The surveys of Oda-Swedru-Asamankese and Ashanti from the mid-1950s allow for the distribution of output over the four categories of farmers as used in the paper. Incomes using these distributions show again for small and medium-scale farmers very similar income levels compared to the ones used in the paper. Income for large-scale farmers is higher than the estimate used in the paper in Oda-Swedru-Asamankese and a bit lower in Ashanti and the same is true for the income of elite farmers. But the different levels of income seem within reasonable bounds, and the average of the two is similar to the estimates based on the regional average used in the paper.

Measurement of cocoa incomes

In the paper we apply an indirect method to calculate incomes. First, we distinguish between different groups of farmers with respect to production capacity based on the first comprehensive national study of inequality among cocoa-farmers, which was done for the crop year 1963/64 (Beckman, 1970). Second, we distribute total exports over the different groups of farmers resulting from step one. Finally, we multiply the resulting production level by the prevailing retail price. To check whether this indirect approach of calculating cocoa incomes results in reasonable estimates, we can compare our estimates to detailed production and income estimates from two cocoa surveys, one for Ashanti and one for Oda Swedru Asamankese done in the 1950s.[34] These surveys provide information on loads sold, number of labourers and others employed, incomes earned from other sources than cocoa, and farming costs for 12-14 income groups. When we compare cocoa incomes earned using our method based on export figures in combination with the distribution of output over groups of farmers, we get close to the level and distribution of net incomes (gross incomes minus farming costs) given in the surveys, see table A17 below. Yet, our method using retail prices and production is

[34] Survey of Population and Budgets of Cocoa Producing Families in the Oda-Swedru-Asamankese Area, 1955-1956; Survey of Cocoa Producing Families in Ashanti, 1956-57.

actually calculating gross incomes, and therefore our method seems to underestimate cocoa incomes. This might be due to two things: first, the export figures that we use as the base for our calculations might be too low. However, given the importance of cocoa exports for the colonial government, underreporting of export figures seem unlikely. Second, the number of cocoa farmers as given by the census is too high. Distributing total reported output over an overestimated number of farmers lead to lower incomes for all. As we have no clear indication from our sources or from secondary sources and literature on which of the two (too little exports or too many farmers) might be driving our cocoa income estimates down, we continue with our method for calculating incomes as described above.

Table A17: Comparison incomes cocoa farmers survey and indirect estimates

Social group	Category	Oda-Swedru-Asamankese net farming incomes	Ashanti net farming incomes	Indirect cocoa incomes using national exports
Small cocoa farmers	less than 20 loads	59	68	54
Medium cocoa farmers	20 - 100 loads	185	187	129
Large cocoa farmers	100-200 loads	375	393	408
Elite cocoa farmers	more than 200 loads	753	870	764

Continuing with the method as described above has important implications. First, our method underestimates total gross income earned in the economy. Second, we might be underestimating actual inequality had we included the actual gross incomes for cocoa farmers. On the other hand, the surveys indicate that except for the very small-scale cocoa growers, about 88 percent of all costs (the difference between gross and net incomes in the survey) is due to payments made to labour. These are the incomes that accrue to agricultural labourers and not cocoa farmers. Agricultural labourers and their incomes are accounted for in the social tables. The sum of both kinds of income should be equal to the total income earned in the cocoa sector by the different participants. Further, costs, and especially labour costs seem specific for the cocoa sector. In no other sector as we define them in our social tables, are incomes earned using substantial wage labour (Van Hear, 1982). Therefore, the cocoa incomes net of labour costs is actually much more comparable to the way we calculate average incomes for the other social groups. Given that the level and internal distribution of cocoa incomes is close to the survey in the 1950s, we apply this method for calculating cocoa incomes for all other census years.

Paper II

Inequality of Education in Colonial Ghana: European Influences and African Agency

Prince Young Aboagye

Abstract

How and why did African households under colonial rule make the decision to educate their children or not? To what extent did this micro-level decision making affect the diffusion of education in colonial Ghana? This paper addresses these questions using colonial educational reports, social and economic surveys and other secondary sources. The paper shows that households in colonial Ghana, especially in the north were reluctant to enroll their children in school because the opportunity costs of education were prohibitive. Meanwhile, the benefits of colonial education were limited in the earlier years of the colonial period. Unemployment of school leavers was a major social problem throughout the colonial era and returns to education did not justify investments in education. The demand for education was relatively high in areas where the demand for skilled labour was high, and from the late 1930s when there were growing payoffs to colonial education. Overall, the paper points to the need for empirical analyses on the determinants of educational demand in order to understand variations in human capital accumulation in sub-Saharan Africa.

Introduction

It is generally agreed that equal access to education enhances social mobility and promotes economic development in the long run (Coleman 1965:523; Glaeser et al. 2004; Goldin and Katz 2008). However, despite efforts to expand access to educational facilities in sub-Saharan Africa, the region has the highest rates of educational exclusion in the world today (UNESCO 2019). More than one out of five children between the ages of 6 and 11, one-third of 12 to 14-year olds and nearly 60 percent of young people age 15 to 17 are not in school (UNESCO 2019). Further, gender parity in education is still far from achieved (UNESCO 2017). Several scholars claim that this inequality of education has its roots in the colonial era, when formal schooling in Africa spread unevenly along geographical, gender and ethnic lines (Bolt & Bezemer 2009; Feldman 2016; De Haas & Frankema 2018).

Commonly invoked explanations for the uneven diffusion of Western education in colonial Africa focus on supply factors as they highlight the nature of missionary expansion and differences in metropolitan educational policies and practices (Subramanian 1979:129; Benavot & Riddle 1988; Grier 1999; Brown 2000). While missionary activities and colonial government policies were important and deserve to be extensively studied (see for example, Huillery 2009; Gallego & Woodberry 2010; Cogneau & Moradi 2014; Jedwab et al. 2018), an equally important determinant of educational expansion in colonial Africa was the responses of the indigenous population. Although recent scholarship has acknowledged the role of African demand in the development of schooling (Frankema 2012; De Haas & Frankema 2018), much remains unknown about specific contextual variables that influenced the micro-level decision to enroll children in school, or not.

This paper contributes to the strand of literature emphasizing colonial legacies in current inequality of education in Africa. The focus in on Ghana and the study covers the period from the 1890s to the country's independence in 1957. Despite a long history of European influence and being considered to be a relatively rich colony, the spread of Western education was sluggish and uneven. Gross enrollment ratio in primary education was low and although it began to increase from the late 1930s, only 4 percent of Ghana's population of over four million had ever attended school by 1948.[35] Further, throughout the colonial era, northern Ghana[36] trailed

[35] Census of Population, 1948, Report and Tables, p.18.

[36] Northern Ghana (the Northern Territories under colonial rule) comprises present-day Northern, Upper East, Upper West, North East and Savannah regions. The south comprised the Gold Coast Colony (Western, Eastern and Central Provinces), Ashanti and British Togoland during the colonial era.

behind the south in terms of number of schools, total enrollment, and educational attainment of its population (Foster 1965:116-120; Thomas 1974; George 1976:28-29). There were also significant gender gaps in enrollment rates throughout the colonial era and in 1950, 35 percent of boys but only 12 percent of girls were enrolled in primary school (Akyeampong & Fofack 2014:64-65; Lee & Lee 2016). Both regional differences and gender gaps in access to education have persisted until today.

The paper makes three contributions to the existing literature on the spread of education in colonial Africa. First, it shows that to reach a comprehensive understanding of the reasons for uneven development of education, empirical analyses should focus more on the *interactions* between colonial policies and African responses than has been done so far. Second, although recent literature has pointed to the importance of African demand, this paper outlines the specific *social and economic determinants of indigenous agency* and its effects on educational development. Finally, the paper concludes that as long as other social and economic factors are unequally distributed between social groups, supplying school facilities, while leaving other factors unattended to, is not enough to ensure equal educational opportunity. As long as occupational opportunities within the 'modern' sectors of the colonial economy were modest, especially for girls and residents of the north, many parents were disinclined to enroll their children.

The paper proceeds as follows: Section 2 provides a brief summary of previous literature on the reasons for educational expansion in general and the origins and spread of formal education in sub-Saharan Africa and Ghana specifically. Section 3 presents an overview of educational development in colonial Ghana. Both supply and demand are highlighted and regional and gender disparities in education are discussed. Section 4 analyses the rationale of African agency by examining how opportunity and monetary costs of education influenced demand. Section 5 outlines the potential benefits of colonial education with an emphasis on occupational opportunities and financial rewards. Section 6 concludes.

Supply and Demand in Educational Expansion

In an overly simplified characterization, one can divide the literature on educational expansion into emphasizing either supply side or demand factors. Many scholars representing the 'supply-side' highlight the role of the state, policy makers, political or religious leaders and other corporate actors to account for the uneven spread of education (Archer 1979; Boli et al. 1985; Lindert 2004; Go & Lindert 2010; Gallego 2010). From this perspective, conflict and competition between different class and

status groups affect the characteristics of educational expansion, for example, if it is inclusive or targeted. Further, the distribution of political power and the role of political elites and their perceptions of the likely benefits of an educated populace affect the size and direction of investments in education (Engerman & Sokoloff 2002; Lindert 2004; Andersson & Berger 2018:3). This literature focuses primarily on the supply of education and not the demand for education. It does not account for the motivations of the recipients and assumes that acquiring more education is always beneficial for households and individuals.

Meanwhile, scholars representing the 'demand-side' argue that supply is highly elastic in the long-run and determined by demand of primary actors such as individuals or the family unit (Craig 1981:157). Education is then a consumption good demanded for the satisfaction it provides. It expands when preferences and costs remain constant and demand for schooling rises with real income. Given that the benefits of education continue into the future or come later, education is also an investment. Families and individuals invest in education when the private benefit from doing so exceeds the private cost (Becker 1964; Clemens 2004). When the cost is prohibitive or when the benefit is insufficient, they will stop investing.

However, demand-side explanations anchored on the cost–benefit analysis of families and individuals tend to be deterministic and assume that families make their decisions based on perfect information and foresight on the potential costs and benefits (Cunningham 2000:414; Lord 2011:89). Instead, decisions to invest in education are made under uncertain conditions (Levhari & Weiss 1974). It is not possible for potential investors to predict the future demand for skills and the potential returns from investment in schooling nor how long they can expect to receive returns on educational investments. Differences in the demand for education and disparities in levels of enrollment are therefore partly due to differential access to and valuation of information about the effects of schooling (Psacharopoulos 1981; Craig 1981). Due to imperfect information and uncertainty over the future, households or individuals' decisions are therefore not necessarily as is expected under the theory of economic rationality (Lord 2011:89-90).

Much of the extant literature on the uneven spread of education in colonial sub-Saharan Africa have focused on explaining supply-side factors (Frankema 2012). It is argued that, especially in British-ruled colonies, the provision of education was virtually a monopoly of Christian missionaries. The spread of Western education therefore depended on the character of missionary expansion. Areas where missionaries decided to concentrate their efforts, typically in coastal areas and administrative towns which were more accessible, developed, healthier and safer, took the lead in educational development (Craig 1981:194; Jedwab et al. 2018). The uneven distribution of schools is explained by deliberate government policy. For example, in some Islamic or peripheral inland areas missionary activities were

restricted in order to avoid conflicts (Coleman 1960:281; Bolt & Bezemer 2009:32; Cogneau & Moradi 2014:698).

Nevertheless, Frankema (2012:352) has shown that once supply-side constraints were eliminated, African demand became the key determinant of educational expansion in the last two decades of colonial rule. Demand was not uniform and depended on a range of cost-benefit calculations made by African families. The demand for formal education was high only in areas where the economic benefits of education were most conspicuous and where education offered opportunities for socio-economic mobility (Craig 1981: 193; Frankema 2012:349). De Haas and Frankema (2018), for example, argue that in Uganda while new labour market opportunities were created under the colonial era, they were unevenly distributed and this was reflected in the demand for education. This they find to be particularly relevant for explaining low female enrollment as an outcome of women having access to limited occupational opportunities.

For colonial Ghana, Lord (2011) argues that from the 1940s until independence in 1957 educational demand was low because colonial education was a costly and uncertain investment. Further, Foster (1965:125-128) has pointed out that in colonial Ghana the development of trade and the growth of cash crops led to the expansion of education. However, given that these economic developments impinged differentially upon various regions, the associated demand and subsequent provision of educational services was unequal. Others contest demand-side explanations and claim that regional inequality was due to the colonial government's educational strategies that were biased against the north (Ladouceur 1979; Plange 1979; Bening 1990; Abdulai & Hickey 2016). This paper rejects the one-sided explanation of both 'camps' and instead we show how supply and demand factors interacted to shape educational development in colonial Ghana.

In fact, while the above views on educational expansion might appear to be poles apart it is possible to unite them (Craig 1981). 'State' or 'corporate' action and primary (family or individual) action are both essential to educational development, but their relative importance vary depending on the case. The paper adheres to this approach of emphasizing the interaction between supply and demand, and how the characteristics of this interaction varies over time and space. The paper finds that such focus has so far been missing in the literature on educational spread in colonial Africa and we suggest that the reason for this omission is the limited understanding of the factors influencing African responses to colonial state and missionary efforts. It is the primary objective of this paper to provide such insights.

Educational Development in Colonial Ghana

European supply and African responses

European merchant companies constituted the first wave of colonial expansion into the territory that is current day Ghana in the late 16th century, and they were the first to introduce Western education (McWilliam & Kwamena-Poh 1975:17). Educational developments were sporadic, short-lived and confined to coastal towns as they remained the subsidiary function of the trading companies (Kimble 1963:61; Foster 1965:44). British colonial authorities established publicly funded schools after 1821 and a new phase of educational expansion began in the third decade of the nineteenth century with the arrival of Basel missionaries in 1828 and the Wesleyans in 1835 (Foster 1965:50). Vigorous missionary activities resulted in the establishment of a number of mission schools that eventually absorbed the 'government' schools (Foster 1965:49).

The early merchants and missionaries were met with indifference or even active opposition from the indigenous population. Even in the coastal towns, the bastions of merchant activities and colonial administration, the demand for education was very limited (Graham 1968:191-192). Differently from trade, the local African societies did not deem the benefits of reading and writing, especially in a foreign language, as relevant (Kimble 1963:61-62). After the first half of the 19th century, a modest increase in indigenous demand could be noticed. Africans who were influenced by the colonial administration and the European economy began to associate education with the prospects of employment as a teacher, clerk or other higher administrative post, regular salary, increased authority and prestige and a means of avoiding manual labour (Kimble 1963:62). Educational expansion was not, however, without its challenges.

In 1852, the colonial government's attempt to direct the educational system through the provision of schools turned out to be unsuccessful. An important contributing factor was the coastal population's refusal to pay the poll tax that the government had wanted to use for the running of the schools (McWilliam & Kwamena-Poh 1975:17). Even less progress was made in the interior and in 1876, a king of Asante reportedly indicated that:

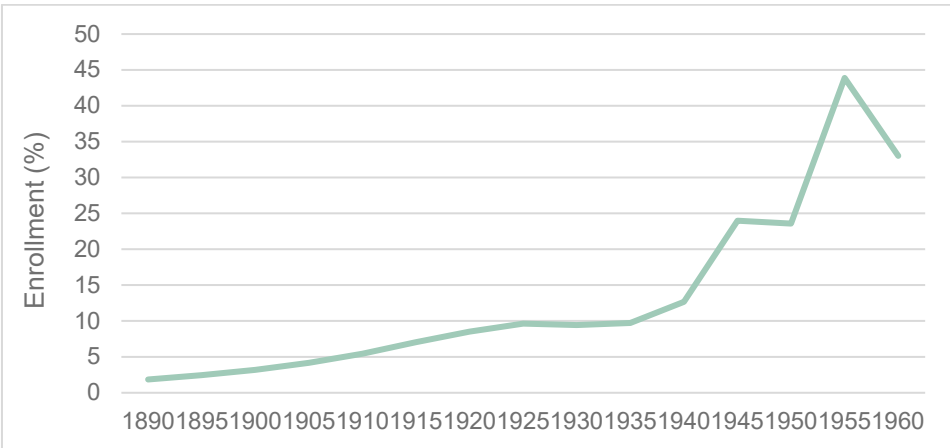
> We will not select children for education; for the Ashantee children have better work to do than to sit down all day idly to learn hoy! hoy! hoy! They have to fan their parents, and to do other work, which is much better.[37]

[37] Letter of 3 May 1876, from Rev. T. Picot, published in the African Times, 1 Aug. and 1 Sept. 1876 cited by Kimble (1963:75).

Nonetheless, in 1881, there were 139 schools in the Gold Coast Colony with approximately 5,000 pupils enrolled and partly due to the government's financial difficulties mentioned above, the overwhelming majority were run by various missionary societies. The Methodist had 84, the Basel Mission 47, the Bremen Mission four and the Roman Catholic had one school. Only three were under the management of the colonial government.[38] To make up for its own poor performance, the state began to make grants-in-aid to mission institutions considered to be of sufficient quality in 1882 and Christian missionaries remained the major providers of education.

As we can see in Figure 1, educational development in terms of gross primary school enrollment ratios progressed slowly but steadily from the 1890s until the mid-1920s when it stagnated for roughly a decade. By the turn of the 20th century, there were approximately 12,000 pupils enrolled in 129 assisted and 120 unassisted Christian mission schools, seven government schools and two Mohammedan schools.[39]

Figure 1: Gross Primary School Enrollment ratio in Ghana, 1890-1960



Source: Lee and Lee (2016)

Untill the end of the nineteenth century, education was almost exclusively confined to the coastal area, but there were efforts to also supply other parts of the colony. In Ashanti, Christian missionaries were kept at bay until British occupation in 1896 (Tordoff 1965:195-201; Allman & Tashjian 2000:26), but already by 1900 the Basel Mission, followed by the Wesleyans, had secured a substantial footing. Although they made progress, there were few inroads with Asantes (Allman & Tashjian

[38] Annual Report of the Education Department for the Year, 1952, p.2

[39] Report of the Education Department for the Year 1900, p.1; 4. There were two classes of primary schools: (a) Government-established schools funded from public funds; and (b) schools established by missions and private persons but assisted from public funds.

2000:26) and it was non-Asantes, primarily people from the coastal towns, who frequented their schools and churches. In 1908, it was estimated that the total Christian population in Ashanti was only '2,682 out of a population of half a million souls'.[40] Until the beginning of World War I, school attendance was low as many parents refused to send their children (Tordoff 1965:201). As late as 1921, the total number of pupils enrolled was only 3,291[41] out of a child population (6 to 15 years) of 103,755.[42] A decade later, there were 6,949 pupils in all 114 schools, representing about 3% of children in Ashanti.[43] Meanwhile, in the Northern Territories, the colonial government was relatively active from the early 20th century and pursued a special policy of free schooling, special courses and other incentives to encourage parents to send their children to school.[44] Still, the demand for education remained low.

However, significant overall educational expansion was to follow. As Figure 1 shows, gross primary school enrollment surged from above 9 percent in 1935, to 24 percent a decade later and peaked at 44 percent in 1955. This increase, as we shall see later in Figure 3 in section 5 on benefits of education, moves in parallel with substantial rises in wages from the 1930s onwards. We return to the discussion of the relationship between wage increases and school enrollment. For now, we are content to suggest that as investments in education take several years to pay off, it appears unlikely that more schooling could explain growth trends in the 1930s, but rather that improvements in income opportunities were behind growth in enrollment numbers.

With a rapidly growing demand for education, hundreds of unassisted primary schools opened throughout the colony.[45] Local communities started many of these schools without reference to recognized educational units or to the Education Department.[46] Such schools were unregistered, ill-housed, lacked teaching and learning equipment, and with few exceptions, all were staffed with untrained teachers.[47] Chiefs and native authorities also established and administered 'national' or 'state' schools receiving government assistance, while rich Africans began to

[40] Ashanti Report for 1908, p.20.

[41] Report on the Education Department for the year 1921.

[42] Census Report, 1921, p.117.

[43] Report on the Education Department, 1931; Cardinal (1931:165).

[44] Gold Coast, The Governor's Address, Legislative Council Debates, 1928-29, p.15 cited by Foster (1965:124).

[45] Annual Report of the Education Department for the Year, 1952, p.5

[46] Annual Report of the Education Department for the Year, 1952, p.5

[47] Ibid.

establish private schools in urban areas (George 1976:31).[48] The colonial government also opened primary schools in areas where missions had made little progress and established teacher training colleges, technical and vocational schools and other institutions of higher learning.[49] In 1951, when Ghana became self-governing, there were 3,198 schools, of which 1,378 were unassisted schools, 957 grant-aided schools by native authorities, 653 grant-aided schools and 52 were government-funded schools.[50]

Regional and gender inequalities

The substantial increase in enrollment rates from the mid-1930s presented in Figure 1 and the successive growth in the number of schools discussed above, were primarily driven by the increase in educational development in the southern part of colonial Ghana. The regional bias is clearly reflected in tables 1 and 2, both showing how education spread unevenly along geographical lines. In absolute numbers, schools were concentrated in the southern coastal zone and forest areas, while the north lagged behind. In relative terms, measured as number of schools per 10,000 individuals, Togoland had more than 35 times as many schools as the Northern Territories, with the Gold Coast Colony and Ashanti in between.

[48] Report on the Education Department for the Year 1951, p.4.

[49] Report on the Education Department for the Year 1951, p.3.

[50] Report on the Education Department for the Year, 1951, Table 1, p.31.

Table 1: Regional Distribution of Schools in Colonial Ghana, 1910-1940

Region	1910	1915	1920	1925	1930	1935	1940
Gold Coast Colony							
Western Province	17	16	22	23	46	48	74
Central Province	42	43	45	46	94	101	132
Eastern Province	89	95	123	88	205	220	264
Ashanti	7	12	23	33	112	131	231
Northern Territories	1	2	4	5	9	10	14
British Togoland[51]				39	123	168	208
Total	156	168	217	234	589	678	923

Source: Annual Reports on the Education Department, 1910-1940.

Table 2: Number of Schools per 10,000 population, 1910-1940

Region	1910	1915	1920	1925	1930	1935	1940
Gold Coast Colony							
Western Province	1.03	0.88	1.07	0.98	1.65	1.57	2.21
Central Province	1.70	1.57	1.45	1.33	2.28	2.18	2.61
Eastern Province	2.01	1.94	2.22	1.16	2.27	2.40	2.63
Ashanti	0.24	0.35	0.56	0.69	1.90	2.06	3.22
Northern Territories	0.03	0.05	0.07	0.08	0.12	0.13	0.17
Togoland				1.67	4.00	5.33	6.04

Source: Author's estimates based on Annual Reports on the Education Department, 1910-1940; Population Censuses, 1911; 1921 and 1931.

Note: Average annual percentage increase between each census are from The Gold Coast Census of Population 1948, Report and Tables, p.10. Figures for 1910 are based on population figures for 1911.

[51] British Togoland became part of the Gold Coast in 1922.

Also, in terms of share of pupils reached and literacy, there were clear differences between the north and the south. For example, only 0.22 percent of the child population in the north were receiving education in 1931, while in the Central and Eastern Province about 5 percent of the child population were in school.[52] In 1948, 5.8 percent of the Gold Coast Colony's population had six years of primary education and 1.6 percent had at least 10 years of education. Meanwhile, the numbers for the Northern Territories were 0.21 percent and 0.3 percent respectively.[53] As Table 3 shows, in 1960, three years after Ghana's independence, the regional inequalities in education were still noticeable. Close to 95 percent of the population aged 6 and above in the Northern Territories had never been to school and only 3.6 percent were attending school.

Table 3: School Attendance (of persons aged 6 and over) by region, 1960

Region	Never (%)	Past (%)	Present (%)
Western	71.9	13.2	14.9
Eastern	61.0	19.9	19.1
Volta	66.3	15.5	18.3
Ashanti	71.9	12.7	15.4
Northern	94.5	1.8	3.6
All Regions	73.0	12.8	14.2

Source: Population Census of Ghana, 1960

As discussed earlier, several studies have shown that government policies affected educational diffusion in colonial Africa (Coleman 1960; Bolt & Bezemer 2009; Cogneau & Moradi 2014). To explain differences in supply between the Gold Coast Colony, Ashanti and the Northern Territories, we similarly scrutinize both the policies of the colonial state and the nature of missionary expansion. Above, we have described the role that trading companies, missionaries and the government played for the spread of Western education in the coastal areas from the late 16th century onwards. Subsequently, the colonial state invited Basel and other mission societies to establish schools and begin evangelical work in Ashanti when it was occupied in 1896, and missionaries arrived in the north after it was formally declared a Protectorate in 1901.

However, unlike the rest of the territory, the colonial government subsequently restricted missionary activities in the north for many decades (Ladouceur 1979:50-

[52] Author's calculations based on Cardinal (1931:199).

[53] Gold Coast, Census of Population 1948, p.18.

52; 58-60).[54] This was because it was not willing to 'make themselves responsible for the protection of the lives and property of missionaries, especially those of a foreign power'.[55] Instead, in 1909 the colonial state itself established a school in the north, while it continued to be unsympathetic to the establishment of missions. It was not until the 1930s that some missions began to operate in the north on a limited scale (Ladouceur 1979:50). The restrictions of missionary activities had lasting consequences for the supply of education in the north and, for example, Abdulai and Hickey (2016) claim that late educational development in turn delayed the emergence of a northern educated elite that could influence the further distribution of public investments. The colonial state's isolationist 'policy' was supposedly meant to protect the north from disruptive outside influences on its local values and institutions (Ladouceur 1979:57). Further, it was argued that unlike the south, where educational expansion was uncontrolled and quality was allegedly compromised, the colonial authorities could ensure that education in the north was of a higher quality (Ladouceur 1979:57; Bening 1990:51). Plange (1979) speculates that the real reason for the isolationist policies were to make the north a labour reserve for the cocoa growing south.

Supply-side factors-government policy and missionary activities, were not the only important determinants of the slow spread of education in the north. An equally important determining factor was the limited demand for education by the indigenous population (Foster 1965:124; Hurd 1967:219; George 1976:34-35). Missionaries lamented the lack of desire for education among the people of the Northern Territories[56] and in 1928, the governor of the Gold Coast Colony remarked that some schools in the north were closed and others were not filled. While there was a growing demand for education in the south from the mid-1930s, there was no similar trend in the north.[57] As late as 1952, the Education Department noted parents' reluctance to send their children to school in its annual report.[58]

Turning to gender inequalities in education, Figure 2 shows that girls' enrollment in schools lagged far behind that of boys throughout the colonial period. In 1890, gross primary school enrollment rate for boys was a little above 3 percent rising to 18 percent in 1940 and 60 percent in 1955. Girls' enrollment rates in the same years were 0.46 percent, above 7 percent and 27 percent respectively.

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[54] This is contrary to Foster's (1965:121) assessment that unlike in Northern Nigeria, 'few efforts were made to limit the activities of the missions' in Ghana.

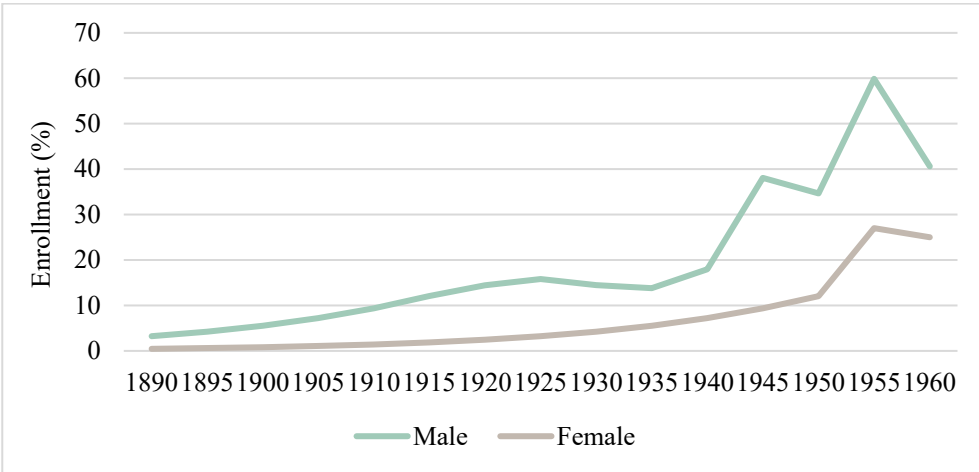
[55] Colonial Secretary to Acting Chief Commissioner of the Northern Territories, 4 July 1905, NAG-A/ADM 56/1/33, cited by Bening (1990:21).

[56] Missionary Council of the Church Assembly, 1926, p.120, cited by Foster (1965:124).

[57] Annual Report of the Education Department for the Year, 1952, p.5

[58] Ibid.

Figure 2: Gross enrolment rates at primary level by sex, 1890-1960



Source: Lee and Lee (2016)

Colonial authorities often bemoaned the fact that few girls were found in schools and that girls' education lagged behind that of boys (Graham 1971:71). In 1894, colonial officials contemplated instituting compulsory measures, albeit with potential social difficulties, to attract girls of the colony to school. 'The sooner steps [were] taken to educate the girls of the colony', they argued, 'the better will the next generation of West Africans become'.[59] In spite of this rhetoric, the Gold Coast government throughout the colonial era did not appear anxious to give special attention to girls' education and missionary societies where the ones who advanced girls' education (Graham 1971:133). Few separate girls' schools were established and there were more school places available to boys (Reindorf 1966:222).

It appears that African demand interacting with supply-side factors also contributed to gender differences in education. Many parents were disinclined to enroll girls in school because as Collett, a Catholic missionary remarked in 1928, 'most of the parents seem to think it [western education] quite superfluous, if not harmful' (Robertson 1984:139). For missionaries, the ultimate goal for educating girls was for girls to acquire domestic skills to make them better wives and mothers (Graham 1971:71). Therefore, there were differences in the kind of education boys and girls received. In some mission schools which concentrated on vocational/technical education, girls were taught sewing and how to cook (Graham 1971; Robertson 1984:139). Such domestic skills could however be acquired at home and for many

[59] Report of the Education Department for the Year, 1894, p.6

parents, Western education was thought of primarily as the gateway to employment opportunities available only to boys (Graham 1971:71).

Differences in enrollment between boys and girls were pervasive in all provinces of colonial Ghana. In 1930, the Gold Coast Colony had 24,217 boys enrolled as compared to 7,780 girls, in the Northern Territories it was 574 boys and 61 girls and in British Togoland 2,911 boys and 780 girls (see Table 4).

Table 4: Number of pupils and share of child population enrolled by province, 1930

Province	No of Pupils		% of Child Population in School	
Gold Coast Colony	Boys	Girls	Boys	Girls
Western Province	3 495	682	7.00	1.30
Central Province	7 548	2 335	8.30	2.70
Eastern Province	13 174	4 763	7.90	2.80
Ashanti	4 153	972	3.30	0.80
Northern Territories				
Northern Province	315	46	0.00	0.00
Southern Province	259	15	0.01	0.00
Togoland				
Northern Section	35	5		0.00
Southern Section	2 876	775	10.90	3.00
Total	33 855	9 593	5.30	1.50

Source: Report on the Education Department, 1930

In a survey of about 238 women in Accra in 1971-72, Robertson (1984:141) found out that among the women who were in their 80s and 90s, only 5percent had attended primary school, compared to 47 percent of those in their forties and thirties. Based on the generational differences, Robertson argues that it was not until after World War II, that there was a drastic attitudinal change towards female education resulting in many girls attending school. Even so, as Figure 2 shows, the gap between male and female enrollment ratios persisted throughout the colonial era.

So far, we have mapped the spread of education and discussed the interaction between supply and demand. Now we turn to a more in-depth probing and analysis of the demand-side through the lens of African agency as we discuss the direct and indirect costs, expressed as opportunity and monetary costs, as well as benefits of education.

Costs of Colonial Education

In colonial Ghana both indirect and direct costs of education were high (Lord 2011; 2015). First, the indirect costs of education were the often substantial opportunity costs in terms of the labour and income families lost by enrolling their children in school. Second, direct costs related to school fees, books, uniforms and in later years various additional fees charged by mission schools for such items as sports, equipment, building, needlework, domestic science or handwork (Busia 1950:24). In the following sections we analyse the effect of the costs of education on demand for schooling. To what extent can we relate changes in costs of colonial education to the trend in the spread of education (sharp increase in enrollment and number of schools after mid-1930s) discussed in the earlier section on the development of education in colonial Ghana? Further, we consistently address the regional and gender differences depicted in Figure 2 and tables 1-4.

Opportunity Costs

In colonial Ghana, the wealth and work that children embodied was assembled, circulated and exchanged for the benefit of adults. As a result, the opportunity costs of education were high as it reduced the supply of labour available to parents and deprived them of other sources of capital and income (Lord 2011, 2015). The following discussion on opportunity costs is organized according to the different activities and economic sectors children were involved in during the colonial era: subsistence activities, pawning, mining and cocoa production.

Until the early decades of the 20th century, the basic work unit for subsistence and extra-subsistence economic activities for many indigenous Africans, was the conjugal family (Austin 1994; 2005:110; 171; 173-174; Allman & Tashjian 2000:60-70). From an early age, boys accompanied their fathers to the farm helping them to carry tools and supplies, weed, plant, harvest and transport crops, and assisted in craftwork (Kaye 1962:194-199). Girls maintained homes, cooked, cleaned, took care of younger siblings, marketed farm produce and gradually took on women's food production roles in the fields (Robertson 1984:70; 72; 73; 165; 171; 172). In coastal and riverine towns, children supported their parents in fishing and where mixed farming was practiced, they tethered poultry and small livestock (Kaye 1962:198). In pastoral communities in the Northern Territories, boys between the ages of 9 and 12 also herded cattle (Fortes 1938).

Whereas child labour enabled the economic flexibility and viability of households throughout the territory, nowhere was it more desperately required than in the Northern Territories. Forced labour recruitment by the colonial state and out-

migration of labour from the northern savannah regions reduced the availability of labour for on-farm production. Colonial authorities often lamented that the drain of labour affected agriculture adversely.[60] Children therefore took the place of absent men in crop cultivation and other subsistence-oriented activities. In 1922, a colonial official found a notable absence of young men at village meetings and received complaints from chiefs that they had to work the farms with old persons and children.[61] Under these circumstances, parents in the north could hardly respond to calls to put their children in school.

Pawning of one's children as a form of collateral was pervasive in many of the areas of pre-colonial and colonial Ghana and presented a lucrative alternative to sending the children to school. Though some evidence on the gender composition of the pawns and slaves points to insignificant differences between the number and market value of male and female pawns in pre-colonial 19th century, it appears female pawns and slaves were more preferred, both for economic reasons and reproductive purposes (Austin 2005:174-180; 234). In some communities, if a girl's master seduced her into marriage, her family could waive off her bride wealth. This was a convenient way for some families to pay off their debts (Robertson 1984:134). During the early colonial period, families betrothed girls sometimes even before they were born, to become pawn-brides of their creditors (Austin 2005:146). Robertson (1984:139) states that for these reasons, 'parents were not anxious to make their daughters, who had functional economic value, into luxury goods' by enrolling them in schools.

In the early years of the 20th century, the extensive practice of pawning was cited as the 'proper reason' for the difficulties in getting 'scholars from the people'.[62] In the late 1950s, Hill (1958, cited by Coe 2012:297) met elderly cocoa farmers who recalled from their childhood in the early 20th century that they chose to be pawned to help their parents buy land for cocoa farming. Typically, when fathers pawned their own children, the children could also claim direct inheritance to their fathers' farms (Coe 2012:297). Cases of child pawning appeared in the courts in the south at least up to 1942 (Austin 2005:234). As late as 1948, some parents in famine prone areas in the north pawned their children in exchange for food in times of famine or sold their sons' labour to pay local taxes (Van Hear 1982:505).[63]

So far, we have discussed activities in the informal economy, but children were also employed in the wage sector. In mining towns, boys under the age of 14 worked as

[60] Report on the Northern Territories, 1914, p.8

[61] CCNT to Secretary for Mines, 6 June 1922, NAG-A ADM 56/1/315, cited by Thomas 1973, p.99.

[62] Freidrich Ramseyer to Governor, 31/10/1904, Domestic slavery in Ashanti, August 1904-05, ARG 1/2/30/1/2, NAG Kumasi, cited by Lord 2015:61.

[63] Ghana National Archives, Tamale Adm. 1/301: 'Slave Dealing' cited by Van Hear (1982:505).

grass cutters, water boys, messengers and apprentices (Lord 2015:246), while girls were employed as carriers, diamond sorters and cooks. Occasionally, the Public Works Department engaged children for tidying up roads and paths (Akurang-Parry 2002). Children were also employed by expatriate trading firms as porters and domestic servants by foreign contractors, missionaries, civil servants and businessmen (Lord 2015:249).

In the south, the expansion of cocoa production, the most spectacular development in the first four decades of colonial rule, had additional far-reaching implications on the demand for labour. It created new roles for children in planting, harvesting, processing and transportation that were important regardless of expanded cocoa output and the increased use of hired labour (Austin 2005:310). Kaye (1962:23) tells of an illiterate farmer with five wives and 27 children who would want more children because 'there would be no need to engage labourers to weed [his] cocoa farm and to help in the plucking and in carrying the dried beans to the nearest weighing station if [he] had more children'.

At the same time, the expanding cocoa industry required additional labour for the cultivation and transportation of the crop. Many of the children working as carriers engaged in head loading cocoa were from the Northern Territories (Van Hear 1982).[64] By 1914, it was observed that,

> a large number of the children in this colony are engaged daily in heavy weight carrying. It is in fact their daily occupation…A great deal of this cocoa carriage is in the hands of the Wangaras [a tribe from the North] and it is not unusual to see immature children amongst them.[65]

Did children who travelled from the Northern Territories to the cocoa-producing south attend school? Unfortunately, we do not have sufficient and consistent information on the geographical origins of pupils attending school in the south. However, our limited data suggests that there were few, if any, children of northern descent in schools in the south. Between 1925 and 1926, 50 percent of the children attending schools in the large commercial centres in Ashanti were Asantes. In interior towns, colonial officials remarked that the percentage was far higher and at the small mission schools, the children were with a few exceptions, natives of Ashanti.[66] Further, Fortes (1947:161) observed that in the Kumasi municipality, less than 0.5 percent of children attending school were of northern origin although Northerners numbered about 5 or 6 percent of the population in the municipality. Many of these were temporary labour migrants.

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[64] Annual Report of the Medical Department, 1920.

[65] PRO CO 96/546/2608: 'Child Cocoa Carriers' (1.7.1914), cited by Van Hear (1982:500).

[66] Report on Ashanti for 1925-26, p.27.

In Figure 1 and Table 1, we noted a sharp increase in school enrollment and number of schools from the mid-1930s onwards. Further, we stated that the changing trend was primarily driven by an increasing interest in schooling in the south, as Africans came to attribute the material advantages of the European to the 'mystique of his education' (Kimble 1963:62). Our investigation into opportunity costs supports this tentative conclusion. In 1937, farmers' sons were beginning to enter government service and schooling could now offer the prospects of earnings beyond those available in farming (Austin 2005:311). Cocoa farmers therefore began investing in their children's education to qualify them for more lucrative jobs (Fortes 1947:165; Austin 2005:311). Austin (2005:311-312) argues that for a number of cocoa farming households that included school children, the labour inputs of children were in decline, per capita and cohort by cohort. Nevertheless, children's labour contributions to cocoa production remained extremely important throughout the colonial period and beyond.

Growing labour demand and more children from the south attending school meant that the cocoa sector became increasingly reliant on migrant child labor. Cocoa head loading did not stop with the development of transport as colonial officials had anticipated and suggestions that legislations should be passed to halt the employment of children were deemed unfeasible (Van Hear 1982). With a revival of the cocoa industry after the slump in 1935, more children were reportedly accompanying adult labourers to work on cocoa farms. Initially, they helped the adults to cultivate their food farms, thus freeing the adults to do the more difficult cocoa work. Children also head loaded harvested cocoa to marketing stations (Van Hear 1982:501). In addition, children from the north were directly recruited to the south under annual and other forms of labour contract (Van Hear 1982:501). The Chief Commissioner of the Northern Territories described the practice to the Colonial Secretary:

> These labourers are frequently youths of 14 or 15 with no previous experience of work or conditions in the South who leave their homes without the knowledge or consent of their parents. In some cases, written agreements are made but, in most cases, it is only verbal.[67]

Also, after the increasing interest in education in the south and the growing labour child migration from the north in the 1930-1940s, there were few children from the Northern Territories attending school in Asante and in the south.

Subsequently, in the late colonial era, cocoa production, the decline of slavery and the rise of wage labour, mechanized transport and the growth of the colonial state reconfigured, did not reduce, child labour in the south. Lord (2015:280-282) argues that as these transformations rippled through colonial Ghana in the last years of the

[67] Ghana National Archives, Tamale Adm. 1/301: 'Slave Dealing', cited by Van Hear (1982:502).

colonial era, new gaps in the economy emerged while old ones remained. Child labour became even more public and widespread as the number of 'small jobs' required to keep the economy running increased. Children took up interstitial jobs in transportation as bus conductors, short distance porterage and street hawking.

There are various indications that the regional gap persisted in the 1950s and that it was primarily families in the south who perceived that the opportunity costs had started to change in favour of schooling. In primary and middle schools in Accra in 1954, over 90 percent of the children enrolled were from the southern coastal towns (Foster 1965:119-121). Bray (1959:42) in a survey of Ahafo in 1956-c.58 found that out of the 839 offspring of cocoa-faming families, 30 had finished school and 239 were at school.

Estimating the role of opportunity costs is, however, difficult. As a final note we refer to Foster (1965) who argues that while one cannot disregard poverty and opportunity costs as causes of low school enrollment, the low assessment of educational investment as against alternative traditional forms of expenditure such as funerals was more significant. In addition, he concludes from some rural and urban surveys that in 1960, non-school going children while performing duties at home did not do so much more than school-going children as would justify their non-attendance in school' (Foster 1965:123). Admittedly, for some Ghanaian children education did not necessarily replace work, but ran parallel to it. However, this coexistence was usually uneasy and colonial officials often bemoaned low attendance and high drop-out rates (Busia 1950:52; Acquah 1958:75-77; Lord 2015).[68]

Monetary costs

Aside from opportunity costs, there were monetary costs that deterred investment in education. Parents who wanted to enroll their children in school had to pay for fees, supplies and uniforms and many could not afford them. Even in the relatively more prosperous Asante, school fees featured prominently in conjugal negotiations and was a constant source of conflict between parents (Kaye 1962:180-181; Allman & Tashjian 2000:33; 91). Husbands and wives battled over who should pay and what rights were conferred on the parent who did.

In the north, school fees might not have been as much a deterring factor for investment in education as it was in the south. No fees were collected in the north until the 1930s when boarding institutions were established and annual fees ranging between 30 and 50 shillings per child were charged (Bening 1990:16). Still, many

[68] In many of the reports of the Education Department, colonial officials often complained about low attendance and high drop-out rates.

of the schools in the Northern Territories did not have suitable accommodation, and pupils who had to travel long distances to school encountered boarding, lodging and feeding problems. Although parents initially received a penny a day for their children attending school, problems with accommodation and feeding constrained school attendance and enrolment (Bening 1990:13-14). Pupils who did not have relatives in the towns where they schooled often became houseboys for their hosts and rendered domestic services in exchange for lodging.[69]

Increasing shares of children enrolled in school (see Figure 1) can therefore be partly explained by more parents in the south being able to pay the monetary costs, and that this ability was directly dependent on the development of cocoa prices. In an annual report from 1936, the colonial administration attributed the rise in demand for education to parents' more prosperous conditions due to the better prices obtaining during the last cocoa season.[70] Schools filled up when cocoa trade was good and parents had money to spend on schooling and in bad times, school attendance dropped. Colonial officials observed:

> Education is generally still looked upon as a luxury to be indulged in when there is money to spare over and above normal requirements, and this luxury is the first to be given up when less prosperous times necessitate economy.[71]

In a survey in 1948 in Sekondi-Takoradi, a rich municipality in the Gold Coast Colony, Busia (1950:24) met many parents who were unable to pay for primary school education, let alone secondary school education. The financial pressure sometimes necessitated the withdrawal of children from school and many of them left before the end of the primary school course (Busia 1950:39). Taking the school year as of 40 weeks' duration, Busia (1950) estimates that the total average expenditure on a senior school pupil to be approximately £14 for a boy and £19 for a girl, based on 1947 prices (see Table 5). Busia (1950:57) suggests that many parents and guardians who earned low incomes could not provide food, rent and clothing for the household, in addition to keeping their children in school. He narrates individual accounts such as that of a parent on an income of £90 a year who found it impossible to keep his three children at school, and eventually withdrew one. Another father on £120 a year indicated that keeping three children at school was a strain on his finances.

[69] Report on the Northern Territories, 1910; 1911; 1920; 1926-27.

[70] Annual Administrative Report on Ashanti for 1936-37, p.14.

[71] Annual Administrative Report on Ashanti for 1936-37, p.14.

Table 5: Average Expenditure on a Senior School Pupil in Sekondi-Takoradi, c. 1947-8

Expenditure Items	Boy	Girl
	£ s. d.	£ s. d.
Bus fares (10d.a week)	1 13 4	1 13 4
Breakfast/Lunch (10d. a week)	1 13 4	1 13 4
School fees	2 8 0	2 8 0
Books	2 15 0	2 15 0
School uniforms	2 0 0	2 10 0
Additional fees (sports, equipment, domestic science)	0 3 0	1 1 0
Clothing other than school uniforms	3 8 3	7 9 7
Total	14 0 11	19 10 3

Source: Busia (1950:56)

In some cocoa growing villages in Ashanti, the Gold Coast Colony and Trans-Volta Togoland, Hill (1956:97) based on data collected in 1954-5, estimated the average annual educational expenditure to vary between £4 and £11 per child (see Table 6). A further decomposition of the sample indicates that a large share of the respondents was in the low-income bracket. In Tetrem, for example, about 41 percent of the 78 respondents earned up to £99 in the 1954-55 cocoa season. In Nkwantakesse, 61 percent of the 56 respondents earned up to £99. In Kokoben and Asiakwa, where close to 80 percent of all the farmers had net incomes under £100, net cocoa income for this group of farmers was insufficient to even meet food expenditure (Hill 1956:97).

Table 6: Cocoa Famers Education Expenditure in 8 villages, 1954-55

	Average net cocoa income (£)	Average number of school children per farmer	Average annual education expenditure (£)		Education expenditure per farmer as % of net cocoa income	Average annual food expenditure per farmer % of net income
			Per school child	Per farmer		
Asafo	65	2.9	6	17	27	n.a
Asiakwa	82	3.1	10	31	38	93
Kokoben	84	1.7	6	10	12	73
Nkwantakesse	114	2.6	11	29	25	54
Seniaja	156	3.6	4	14	9	38
Tetrem	212	4.4	11	48	23	39
Duayaw-Nkwanta	248	2.9	8	23	9	29
Hwidiem	575	3.2	11	35	6	24

Source: Hill (1956:96; 98)

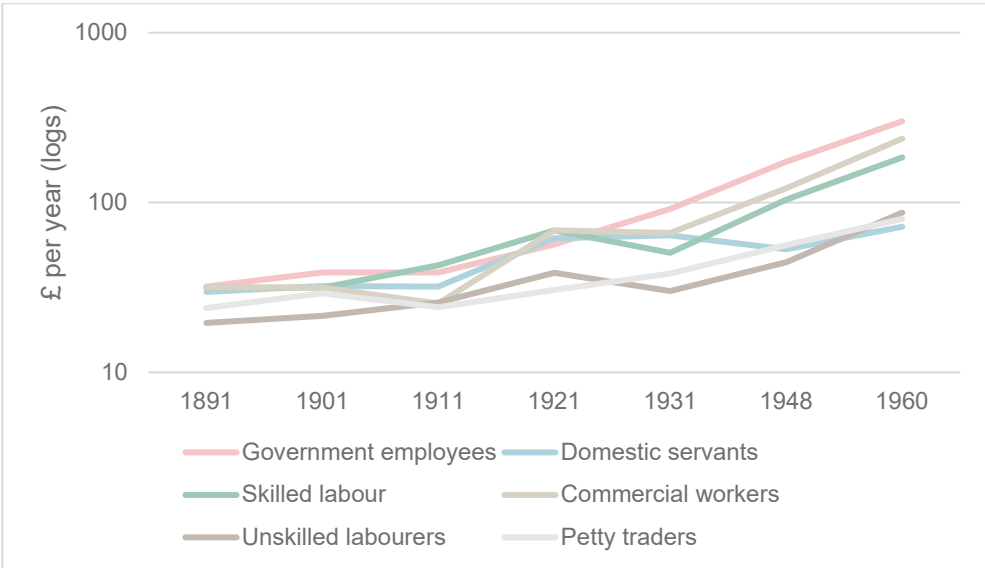
Benefits of Colonial Education

Children represented a form of security and insurance for the future and parents who made the effort to educate their children considered it as a financial investment from which they expected returns when their children were in salaried jobs (Busia 1950:57; Kaye 1962:24, 181; Allman & Tashijan 2000:47). Private benefits of education that influence parents' decision to enroll their children in school or not in turn largely depend on the perceived or real demand for skilled labour (Clemens 2004:2). This section shows that in the early decades of the colonial era in Ghana, the returns to colonial education were insufficient to encourage investments in education. Increasing cocoa prices from the 1930s onwards and general economic development, however, provided a capital injection to the economy resulting in expanding private and public sectors and subsequent growing demand for skilled labour. Having said that, growth and structural change were limited and occupational opportunities overall remained exclusive.

Figure 3, based on Aboagye & Bolt's (2020) estimates, shows nominal wages and incomes for six occupational groups from 1891 to 1960. We observe no marked differences in wages of government employees and other occupations until the

1920s and 1930s.[72] Tellingly, we can see how commercial workers engaged in the cocoa sector, with the exception of a slump around the Great Depression, experience consistently increasing nominal wages from the 1910s. Even if the global economic crisis affects the 1931 measure negatively, the trend of significant increase for all wage categories until 1960 is clear. The trend is the strongest for wages in the public sector, the sector which many Ghanaian school leavers were drawn to. Overall, the wage data mirrors the timing when we observe an increase in enrolments and supply of education (see Figure 1 and Table 1). We now scrutinize labour market opportunities and wage levels further, starting from the 1890s.

Figure 3: Nominal Wage and Income developments for African Workers



Source: Aboagye & Bolt (2020)

At the start of our period of investigation, there were low financial payoffs for the privileged few employed by the colonial administration. Access to senior positions within the colonial administration by highly educated Africans was limited and monopolized by Europeans. Up to 1896, the salary for government clerks ranged from £18 to £200 per annum. However, only four officers were at the top of the scale and more than 75 percent of the 233 clerks employed were receiving less than £80 per annum (Kimble 1963:101). While a committee of inquiry in 1896 pegged the minimum annual salary at £36, the lowest possible cost of living was estimated to be about £45 per annum. This implied that unless their families supported them,

[72] See also Bowden *et al*. (2008) and Frankema & Waijenburg (2012).

some educated Africans could not live without running into debt (Kimble 1963:101).

Senior civil service expanded rapidly in the early years of the twentieth century but as it became easier to recruit Europeans for Gold Coast appointments, only a few Africans occupied senior civil service positions (Kimble 1963:99). In 1908, while there were 274 officers listed, only 5 of these were Africans, and except for one, they were of relatively junior rank. Africans were mainly low-ranking clerks and their salaries remained static and for over twenty years, the lowest grade continued to receive an amount that could not meet the cost of living. Demands for better emoluments and conditions of service continued throughout the early years of the 20th century, but it was not until 1921, that the starting rate for African clerks was raised up to £60.[73]

Despite these poor financial prospects, there was some interest in securing desk jobs in the public sector. In early twentieth century Asante, catechists bewailed the fact that the growth in education and the attendant process of conversion to Christianity was inspired by the economic motives of aspirant men and women (Allman & Tashjian 2000:30). Christian leaders observed that Christian scholars after returning from Kumasi, 'have quite other minds'. Rather than continue their course of study, they preferred to 'become clerks, etc. as their mates in order to make money as quick as possible'.[74] Evidently, Ghanaian aspirations were oriented to clerical occupations in government or commerce, and more importantly, to the financial rewards accruing to them. Colonial rule and the expansion of the economy did create new labour market opportunities that had not existed before, but they were few and exclusive. Unemployment of school leavers was a major social problem throughout the colonial era and beyond (Busia 1950: 61-63; Foster 1965:64; 67; 93; 180-181).

Meanwhile, cocoa production became the biggest absorber of labour services (Szereszewski 1965:57) and Berg (1960:132, cited by Van Hear 1982:35-36) estimates that in 1901-1910, about 10 to 15 percent of the adult population were engaged 'more than casually' in cocoa farming. In 1911, cocoa cropping and investment alone absorbed approximately 185,000 people, with the total population of the Gold Coast Colony and Ashanti being 1.5 million (Szereszewski 1965:57). In Amansie in Asante, Austin (2005:417) notes that by 1914-15, as the 'take-off' phase of local cocoa planting approached its close, cocoa farms would have required at least a third, or even over a half, of the equivalent of the entire male labour force. While the cocoa market slumped towards the end of World War I, and created a

[73] Dispatch of 1 Nov. 1921, from Churchill to Guggisberg; 'African Civil Service', Sessional Paper No. 1 of 1922-23.

[74] BMAD-1/186: "Report of Samuel Boateng" Bompata, no date, probably 1905 cited in Allman & Tashjian (2000:30).

surplus of unskilled labour, market prices picked up again after the war and led to acute shortage of unskilled labour again. Many unskilled labourers also preferred the immediate, better earnings and greater autonomy the cocoa industry offered (Van Hear 1982:53).

Therefore, although the demand for skilled labour in the colonial economy increased over time, it remained relatively limited (Szereszewski 1965:21; 35; 39-41, see also Table 7) and instead, the sharpest scarcity point continued to be in the field of unskilled wage labour for the cocoa, mining and construction industries (Berg 1965; Austin 2005:88). In the field of skilled labour, there were occasional surpluses and even an exodus of skilled workmen to other African countries, albeit for shorter periods.

Table 7: Occupations of enumerated men in Ghana, 1911-1931

Occupations	1911		1921		1931	
	No.	(%)	No.	(%)	No.	(%)
Professionals	12 854	18,8	12 557	18.2	17 379	13.0
Skilled workers	7 017	10,3	7 307	10.6	22 154	16.6
Unskilled workers	17 668	25.9	21 039	30.4	46 687	35.0
Farmers	30 774	45.0	28 210	40.8	47 243	35.4
Total enumerated	68 313	100	69 113	100	133 463	100

Source: Gold Coast Census Reports, 1911, 1921, 1931.

Opportunities for women were even more limited. In 1931, only 0.4% of the 97,237 women enumerated were among administrative and professional personnel.[75] The limited employment opportunities available to girls was noted by women missionary educators in the late 1930s. In a 'Memorandum on Women's Work in the Gold Coast' cited by Allman & Tashjian (2000:200-201), Beer wrote:

> The number of girls attending school has increased tremendously. These girls acquire a taste for European dress and amusements. They will not go home to the heavy manual work of the farm. There is little economic outlet for them. Some get accepted to train as nurses or teachers. A few get work at the Post Office or Telephone Exchange. But great numbers fail to find any wage-earning occupation. Of these it is grievous to know that many are coming to our large towns, or to the mining centres, or roam from village to village, town to town as prostitutes. It is our problem in a sense because it is in one way a result of the education, we have given them.[76]

[75] Authors' estimate based on Cardinal's Report 1931.

[76] MMS, WW, Correspondence, Africa, Missionaries: Persis Beer, "Memorandum on Women's Work in the Gold Coast" (no date, perhaps 1938) cited by Allman & Tashjian (2000:200-201).

While Beer potentially exaggerated the extent of prostitution (Allman & Tashjian 2000:201), her report indicates the limited occupational opportunities available to female school leavers and the desperation that emanated from it. Beer admits that unemployment among girl school leavers was a result of the kind of education girls received, which did not fit them for better jobs. Although as Robertson (1984:139) notes, there were fewer 'better jobs' available to them.

A further look at skill premiums in Table 8 indicate that educational skills were clearly at a premium as wages for skilled labour were higher than those in other sectors. The skill premiums are mainly based on the wages of skilled craftsmen, carpenters, tailors, weavers, goldsmiths, electricians, blacksmiths and motor mechanics and they range from 170 to 250 percent of an unskilled wage. A high skill premium suggests that there is a high demand for skilled labour relative to unskilled labour, and this we would expect to positively influence investments in education. However, although the wages of skilled labour were higher than wages in other sectors, there were limited changes in the skill premium over time. Therefore, though the number of skilled workers began to rise from the 1920s, supply kept pace with demand.

Table 8: Skill premium, Annual wages (£)

	Skilled wages	Unskilled wages	Ratio
1891	31.6	14.1	2.2
1901	31.6	13.5	2.3
1911	34.1	19.5	1.7
1921	68.4	31.2	2.2
1931	58.4	25.5	2.3
1948	112.6	44.6	2.5
1960	211.1	93.6	2.3

Source: Aboagye & Bolt (2020)

Further, in pre-colonial and colonial Ghana Western education was not necessarily required for many skilled occupations. Apprenticeship to parents or a self-employed craftsman, carpenter, mason, or plumber was the most important 'avenue for children to accumulate specialized and marketable human capital' (Lord 2015:323, Peil 1970:138). Even in the late colonial era, children continued to enter apprenticeships at an early age, implying that masters within the trade or children who abandoned schooling did not consider Western education as a prerequisite for success (Lord 2011:97). Admittedly, as Frankema (2012:349) argues there were large material and social benefits associated with literacy and the learning of the

metropolitan language particularly in the last decade of the colonial era with the rising demand for white-collar workers by expatriate commercial enterprises and the colonial administration. Such opportunities, however, were confined to urban centres and major cities (Lord 2011:96-98; Frankema, 2012:349).

Over the 1930s-1950s, occupational structures continued to change. In 1960, 60 percent of the 2.56 million employed in the Ghanaian labour force were engaged in farming, fishing, forestry, and hunting. 13 percent were engaged in small-scale trading activities, as contrasted with only 4.5 percent occupied in professional, administrative, technical and clerical roles. These changes mostly included men in the south and structural inequalities in the labour market remained. In 1960, of the employed labour force, women accounted for 1.2 percent of professional personnel compared to 3.1 percent of men. With the exception of trading, where women accounted for 28.2 percent of the employed labour force, men monopolized all other occupations.[77]

Occupational opportunities were also subject to regional differentiation (see Table 9). Initially, Southerners monopolized all white-collar and semi-skilled jobs within the Northern Territories, but as more Northerners became trained, they increasingly took over (Ladouceur 1979:59). Further, as a deliberate policy, only natives of the Protectorate were engaged on the Native Administration clerical staff.[78] Therefore, in the north government employees, at least at the lower and middle levels, were increasingly of northern origin. This policy provided employment opportunities for the few educated Northerners (Ladouceur 1979:59). There was, however, little or no expansion in the 'modern' sector of the economy in the north (Szereszewski 1966:89-105). Throughout the colonial era, agriculture remained even more important in the Northern Territories compared to the south and there were few people employed in non-traditional sectors of the economy (Aboagye & Bolt 2020).

[77] Census Report, 1960.

[78] Annual Report on the Northern Territories for the Year 1936-37, p.17.

Table 9: Main Occupations of all employed persons aged 15 years and over by region, 1960

Occupation	All regions (%)	Western (%)	Eastern (%)	Volta (%)	Ashanti (%)	Brong Ahafo (%)	Northern (%)
Professional and technical	2	2	2	2	3	2	1
Administrative/Executive/ Managerial	1	1	1	0	1	0	0
Clerical workers	2	2	3	1	2	1	0
Sales workers	14	15	20	17	12	5	5
Farmers, fishermen, hunters,	61	57	44	61	61	80	85
Miners and Quarrymen	1	3	2	0	1	0	0
Workers in transport and communication	2	2	3	1	2	1	1
Craftsmen, production process workers	16	16	21	16	16	10	7
Service, Sports and Recreation	2	2	3	2	3	1	1

Source: 1960 Population and Housing Census, Advance Report, pp.71-73.

Conclusion

Conventional views on the expansion of educational opportunities in colonial Africa have ascribed a dominant role to European policymakers and missionary societies and have had little place for the agency of the colonized people themselves. In relation to persistence in educational inequality, it has been argued that unequal provision of educational opportunities was a result of deliberate isolationist policies of the colonial state and the accidental character of missionary expansion. While this paper does not question that colonial policies and missionary activities had an impact, it has shown that the concrete outcome of said policies on educational development in colonial Africa cannot be fully understood without an analysis of the interaction with African responses. Further, it shows how indigenous agency depended on an evaluation of the costs and benefits of Western education.

In colonial Ghana, the critical roles children played in the household and in the accumulation strategies of parents and kinsmen, meant that the opportunity costs of educating children, particularly girls, were high. Meanwhile, in the Northern Territories where incomes were low and children assumed the role of absent adults in household production and other subsistence-oriented tasks, families had little or no incentive to educate their children. Further, monetary costs associated with schooling were often more than what many parents could afford. With increasing cocoa prices from the 1930s onwards and subsequent rising wages and incomes, however, a growing number of parents, particularly in the south, could afford to

enroll the children in school. Existing regional and gender inequalities were further reinforced by changes in labour market structures and income levels that created differences in both opportunity costs and monetary costs.

In addition, the benefits of education were uncertain during the earlier decades of the colonial era, as the demand for skilled labour was limited and salary gains modest. Many school leavers could not find employment in the much sought after public sector and unsurprisingly, enrollment rates stayed low. With the economic expansion from the 1930s onwards and a subsequent increase in demand for skilled labour and higher returns to colonial education, we found a significant increase in enrollment rates. We therefore conclude that instead of a sequencing where education contributes to growth (Welch 1970; Romer 1990), we instead see that growth and associated expansion of economic opportunities eventually contributed to educational expansion. However, the underlying expectations that undergirded many parents' decision to enroll their children in school were mostly not met and unemployment rates for school leavers remained substantial. Finally, expanding occupational opportunities in the colonial economy were primarily for the south, the public sector, in large towns, and for men. The educational sector mirrored these socio-economic inequalities, it did not alter them.

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Paper III

Government Tax and Expenditure Policies and Inequality in Ghana, 1891-2000

Prince Young Aboagye

Abstract

Although growing inequality in sub-Saharan Africa has revived the debate on the distributional effects of government tax and expenditure policies, there are limited long-term empirical studies on this issue. This paper therefore examines how government tax and expenditure policies have changed over time and how they have affected inequality trends in colonial and postcolonial Ghana. The paper finds that overall, fiscal policies have had limited redistributive impact because of the limited coverage of taxes and skewed government expenditures towards the export sector. While the call for sub-Saharan African governments to learn to tax or to learn to spend well in order to reduce inequality is not misplaced, an understanding of why they are unable to implement comprehensive redistributive measures and why fiscal policies in the past have had limited impact on income inequality, is more urgently required.

Introduction

The role of taxation and government expenditures in alleviating economic inequality has long been recognized. Tax-funded government spending on welfare, education, health insurance, pensions and infrastructural development have been instrumental in redistributing income in developed countries historically and today (Lindert and Williamson, 1985; Lindert, 2004; Acemoglu and Robinson, 2002; Goldin and Katz, 2008; Piketty, 2006; 2014). As a result, tax experts and policy makers have become more concerned with the role taxation and government spending might play in reducing the high levels of inequality in many developing countries (Bird and Zolt, 2005; Kumar, 2014; Odusola et al., 2017b).

Historically, redistribution via taxation and social transfers have been least present in many underdeveloped countries where there are high levels of poverty and inequality (Lindert, 2004). Taxation, especially, personal income taxes, has done little, if anything, to reduce inequality in poor countries because their income taxes are neither comprehensive nor progressive (Bird and Zolt, 2005). Further, the levels, coverage and quality of government expenditure on social transfers in developing countries are limited. Although, investments in public health, public schools and infrastructural development have increased since 1996 in sub-Saharan Africa, the impact on income distribution has been minimal and some countries even recorded declines in their fiscal policy distributional effectiveness between 1990 and 2014 (Sahn and Younger, 2000; Odusola, 2017a).

Some scholars argue that African states' weak tax systems and limited expenditure on public goods to enhance citizens' welfare trace their roots to the colonial era (Acemoglu et al., 2001; Cooper, 2002; Mkandawire, 2010). In some colonies, Acemoglu et al. (2001:1375) argue that absolutist governments set up extractive institutions to facilitate the exploitation of indigenous labour and natural resources and did not promote broader economic and social welfare. In others, colonial governments described as "gatekeeper states" did not develop a state apparatus for direct tax collection and broadening the tax base. Instead, they focused primarily on developing their colonies' primary sectors, controlling the borders and taxing the export sector (Cooper, 2002). With undeveloped fiscal systems, there were inadequate resources for social spending in some colonies, and in others alternative expenditure options were deliberately neglected (Frankema, 2011:137). Investments in social transfers were limited and colonial incomes were mainly geared towards developing the export sector (Hillbom, 2012). As a result, areas that produced export crops were better off than their labour-supplying hinterlands (Austin, 2009:27). Other scholars have been more sympathetic towards colonial governments and show that colonial taxation and spending led to broad-based social and economic development (Sender and Smith, 1986:61-66; Moradi, 2009).

Ultimately, what matters are the effects of government policies on economic development in the long run, regardless of the type of state- minimalist, extractive or developmental.

In light of the above discussion, the paper explores two related questions: How have government tax and expenditure policies changed over the long term? How have they affected inequality trends over time? The paper focuses on colonial and post-colonial Ghana where successive governments from the colonial era have been concerned with redistribution (Rimmer, 1992; Hutchful, 2002; Whitfield, 2018). Whitfield (2018) argues that governments have consistently prioritized distributive expenditures across a broad spectrum as well as targeted distribution to specific groups linked to ruling elites. While this is hardly exceptional, Ghana has also experienced several political and economic changes in the long twentieth century. It therefore provides a suitable case for studying the impact of changing government policies on inequality trends over the long term. By cutting across the conventional dividing point between colonial and post-colonial periods, this paper identifies continuities and changes, and differences and similarities in governments' fiscal policies and priorities, and their implications for inequality. Although the literature on the relationship between governments' policies and welfare developments in Ghana is vast, it is fragmented. This paper therefore presents a comprehensive narrative of the effects of governments' fiscal policies with inequality as the sole focus, from the late nineteenth century to the end of the twentieth century.

The paper does not focus on all aspects and purpose of government's policies and does not suggest that tax and expenditure policies alone have been responsible for inequality trends. In a trade-based economy such as Ghana's, commodity price boom and slumps on the world market influence income distribution trends (Aboagye and Bolt, 2020). Nonetheless, state interventions and policies in Ghana, especially after the colonial era seem to have shaped general economic development more than external influences (Frimpong-Ansah, 1991; Rimmer, 1992; Austin, 1996; Whitfield, 2018). One should therefore not overlook the potential role that the state and its fiscal policies have had on the long-term evolution of inequality.

The paper finds that government tax and expenditure policies in Ghana have historically had limited redistributive effects. Limited taxation and public investments in the early colonial era ensured that government officials, private sector employees and producers of exports earned a larger share of the country's income than many of their compatriots. Inequality stayed at fairly high levels during this period. Between 1941 and 1960, the colonial government and the immediate post-colonial government introduced more 'progressive' tax policies and became more expansionary in their developmental efforts. Nonetheless, the narrow coverage of taxes and public investments had little redistributive impact. Fiscal policies implemented between 1961 and 1982, in part, led to a general compression of

Ghanaian incomes and led to a fall in inequality. Inequality has been on the rise since the implementation of structural adjustment reforms in 1983 and the extent of fiscal redistribution has been small.

The next section discusses previous literature on the relationship between government taxation and spending and inequality. Subsequently, we trace changes in government taxation and expenditure policies from the colonial era to the end of the twentieth century. On the whole, the paper shows that although it has been argued that Ghanaian governments have prioritized redistributive expenditures over ensuring economic growth, fiscal policies in Ghana have done little to redistribute income.

State, Fiscal Policies and Inequality

Attempts at theory-building on income distribution have increasingly placed the role of government policies at the centre. Inequality dynamics, Piketty (2006:71) argues, depend largely on the policies and institutions adopted by government and societies. In most developed countries, progressive income and estate taxation and investments in knowledge and skill diffusion largely account for the compression of income distribution that occurred between 1910 and 1950 (Piketty, 2014). Progressive taxation and redistributive spending reduced inequality in the last decades of the nineteenth century and in the early decades of the twentieth century (Lindert and Williamson, 1985; Acemoglu and Robinson, 2002; Lindert, 2004). History has repeatedly shown that changes in fiscal regimes to address inequality are seldom made without social protests from various disadvantaged classes. Acemoglu and Robinson (2002), for example argue that the decline in inequality in Western Europe that followed industrialization was not a natural development, but a consequence of social mobilization among marginalized groups.

Based on the experiences of developed countries, international development and financial organizations and tax experts have urged developing countries to use the fiscal tool to address their high levels of inequality. The conventional wisdom since the 1960s has been that developing countries could solve their inequality and other economic problems by "learning to tax" (Kaldor, 1963) or by learning to spend well. The use of the fiscal means to reduce inequality seemed obvious but the ability of taxes and spending to do so was largely unquestioned. The experience of developing countries, however, show that the redistributive impact of fiscal policies on inequality has been limited (Bird and Zolt, 2005; Gemmell and Morrissey, 2005). Not much fiscal redistribution has been achieved on the spending side of the budget either. In 2015, income taxes and transfers reduced the Gini coefficient in a sample of developed economies from 0.48 to 0.31. Meanwhile, in Latin American

countries, the Gini coefficient only decreased from 0.51 to 0.48 (IMF, 2017:9) and in sub-Saharan Africa, some country studies show that despite recent increase in government expenditure on social protection mechanisms, tax-funded national health services, and investments in education, the impact on inequality reduction has been unimpressive (Sahn and Younger, 2000; Odusola, 2017b). Many sub-Saharan countries rely on indirect taxes which are general regressive and have minimal impact on income inequality. Only a few people in the formal sector pay personal income taxes and government expenditures are poorly targeted.

Some scholars have attributed sub-Saharan Africa's weak tax systems and government spending levels and patterns to the legacy left by former colonial governments (Bertocchi and Canova, 2002; Mkandawire, 2010; Feger and Asafu-Adjaye, 2014). They argue that many colonial governments were a form of "administration on the cheap", "night watchman" states who undertook minimum tasks at minimum costs (Herbst, 2000:73; Frankema, 2012). Such states were preoccupied primarily with maintaining order and did not seek to expand state authority beyond major commercial and administrative centers (Frankema, 2012:138). Due to budget constraints broad-based economic development was not prioritized. Night watchman colonial states created dualistic economies where the export sector and the traditional sector were geographically close but economically separate (Amin, 1972). Surpluses from the export sector were used to develop the enclaves, but not much of these surpluses were spent on improving living standards or enhancing the long-term development potential of indigenous populations (Booth, 2007:243).

Others hold a more sympathetic view towards colonial governments' fiscal policies. The reduction in mortality rates and increasing life-expectancy in some colonies, for example, underscore the beneficence of colonial governments (Sender and Smith, 1986). In colonial Ghana, improvements in heights of army recruits suggest that there were general improvements in human welfare as a result of colonial investments (Moradi, 2008; Austin 2008:1012; Jedwab and Moradi, 2016; Moradi et al. 2013). Nonetheless, earlier contributions argue that colonial fiscal policies did little for welfare development in colonial Ghana (Kay and Hymer, 1972; Howard, 1978). Government spending was mostly directed towards the development of the export sector and non-cocoa growing areas received much less support (Songsore, 1979; Plange, 1979; Inez, 1989; Brukum, 1998; Abdulai, 2016). Further, recent studies have shown that the extent of fiscal redistribution through progressive taxes and expenditures in Ghana is small (Sahn and Younger, 2000; Younger et al., 2017). This is somewhat surprising given that postcolonial governments, unlike their colonial predecessor, have been more expansionary in their fiscal policies (Rimmer, 1992; Whitfield, 2018). Given these divergent views the impact of colonial fiscal policies on inequality dynamics in Ghana is worth exploring.

In a wider sub-Saharan African context, although the impact of fiscal policy in addressing inequality through redistributive taxation and public expenditure has been recognized in the literature, there is limited empirical work on this matter (Okojie and Shimeles, 2006; Odusola, 2017a, b). Studies on the impact of taxation and expenditure policies on inequality have mostly focused on developed countries. This paper therefore adds to a still incipient but expanding literature on the impact of fiscal policies on income distribution in sub-Saharan Africa.

Fiscal Policies and Inequality in Ghana

The analysis of the relationship between fiscal policies and inequality covers four periods. The periodization is constructed based on changes in fiscal policy regimes rather than on breaks in political events. We begin from 1891, where we have the earliest inequality estimates, until 1940. During this period, the colonial government adopted minimalistic fiscal policies. It was more concerned with extracting revenues from the booming cocoa export sector rather than setting up a more broad-based tax infrastructure. Government investments were mostly directed towards developing the export sector, and regional inequality was exacerbated and income inequality stayed at moderately high levels. Subsequently, we continue with the period between 1941 and 1960, the development era, where colonial governments began to formulate policies and invest in their colonies for socio-economic development. Government tax policies and expenditure patterns did little to address the lopsided development of earlier decades of colonialism and inequality increased substantially. We proceed to the period between 1961 and 1982. Although Ghana became self-governing in 1951 and achieved full independence in 1957, it was in 1961 that the immediate postcolonial government broke with the policies inherited from the British (Killick, 2010:38). Successive governments extracted surpluses from domestic sources to finance increasing government expenditures. Inequality declined, but as we shall see, equity was achieved only by impoverishing the rich. Finally, we examine the era between 1983 and 2000 when structural adjustment reforms led to an increase in income, rural-urban and regional inequality.

Conservative Fiscal Policies and Inequality, 1891-1940

Some scholars who have examined government revenues and expenditures in colonial Ghana in the decades from 1900 to 1940 have argued that they had a favourable impact on welfare development (Moradi, 2008; Austin 2008:1012; Jedwab and Moradi, 2016; Moradi et al. 2013). Others have been critical of at least two aspects of the fiscal policies of this era: first, the regressive nature of colonial

tax systems, and second, the failure to spend on programmes that improved the welfare of the indigenous population (Howard, 1978; Plange, 1979; Frimpong-Ansah, 1992:66-69). This section examines these contrasting views. We argue that, on one hand, the benign view of colonial taxation and spending is somewhat exaggerated. Although, government spending on infrastructural developments led to an increase in cocoa production, welfare effects from the booming cocoa trade were confined to the south. On the other hand, criticisms against imperial beneficence need some revision. As Jean-François Bayart (2000:221), has argued, colonization is a generic term that subsumes a variety of historical situations. A major aspect of this variety was time (Austin, 2008:1007). Between 1919 and 1927, the colonial government actively pursued policies that would be considered developmental today. Government expenditures increased rapidly and there were attempts to ensure widespread development. Admittedly, though given the resources the colonial government had then, more could have been achieved. Following this, we first describe inequality trends in colonial Ghana between 1891 and 1940. Next, we analyse government tax policies and its distributional consequences. We end with a discussion of expenditure policies and priorities and their implications for income and regional inequality.

There is scarce quantitative information available about the income distribution effects of government tax and expenditure policies during the colonial era. In a recent attempt to map income inequality trends in colonial Ghana, Aboagye and Bolt (2020) find that inequality was high in the last decade of the nineteenth century and remained at relatively high but constant levels between 1901 and 1921 and declined in the early 1930s, primarily as a result of the global depression in prices in the 1930s. As Figure 1 shows, income inequality as measured by the Gini coefficient stood at 0.37 in 1901, increased to 0.40 in 1911 and marginally declined between 1921 and 1931. Changing prices for the colony's major export crop, cocoa, and changing incomes for government employees, skilled and commercial workers account for the levels of inequality observed. Aboagye and Bolt (2020) confirm earlier claims that there were some welfare effects from economic changes. Nonetheless, some people especially in the southern cocoa growing areas benefitted more than residents of northern colonial Ghana.

Figure 1: Income Gini Coefficients (1891-1960)

Source: Aboagye and Bolt (2020)

Although Aboagye and Bolt (2020) do not explicitly relate their findings to changes in fiscal policies, and they measure pre-tax and pre-transfers inequality, government tax and expenditure policies directly and indirectly affected prices and income developments during this era. To begin with, the colonial government committed itself to a low level of taxation and hence taxes did not check the growth of incomes and did not have redistributive effects. Unlike many sub-Saharan African colonies at the time, direct taxes were not collected in the Gold Coast until the 1940s. Highly paid government officials and private officials and high-earning private sector employees paid no taxes. As a typical night watchman state the colonial administration did not cast its fiscal net very wide and raised most of its revenues from trade taxes-import and export duties (Kay and Hymer, 1972:26). There are limited estimates on the burden of taxation during this period, but given that exports were less heavily taxed than imports, the burden of taxation fell mostly on European manufacturers exporting to Africa and African consumers of imported European goods (Cox-George, 1973:25; Frankema and Waijenburg, 2014:385). Even so, since the colonial government was careful not to reduce incentives for cocoa production and for private enterprise, trade taxes were kept low such that the tax burden was not punitive.

In fact, in times of economic prosperity, the government reduced trade taxes ostensibly guided "by the great consideration that the reductions or proposed reductions will benefit the largest number of individuals, especially the poorer members of the country".[79] However, the welfare effects created by the reduction in

[79] Governor's Address to the Legislative Council, 6th March, 1945, p.5.

trade taxes were not diffusive. Tariff reductions only benefitted producers of primary exports and consumers of European commodities who could bear greater tax burdens (Cox-George, 1973:25). Given that high earning public officials, private sector employees and producers of exports were not subjected to high levels of taxation, their income levels remained high relative to other low earning Ghanaians and many others who lived on subsistence. Therefore, there was little, if any, fiscal redistribution from taxation between 1891 and 1940.

Not much redistribution was achieved on the expenditure side either. Government expenditure was biased towards the cocoa export sector from which it raised much of its revenues. Aside from two periods of intense government activities, 1897-1907, and 1919-27 characterized by export expansion and improvements in transport and other social services, attempts at broader economic development were limited. Between 1900 and 1930, non-recurrent government expenditure on administrative, social and economic infrastructure made up 55 percent of total government expenditure. Government spending on economic infrastructure which almost entirely covered expenditure on railways and harbours accounted for 20 percent of total government expenditure throughout 1900 and 1930 (Kay and Hymer, 1972:26-27). Certainly, investment in transport infrastructure can result in a decline in transport costs and they can lead to improvements in rural incomes by integrating labor and goods markets and therefore provide new economic opportunities to rural inhabitants (Jacoby and Minten, 2008). The provision of transport infrastructure may have an unbalanced effect on the income and welfare of the poor and lead to a decline in income inequality. Transport infrastructure increases the value of the assets (such as land or human capital) of the poor and lowers the transaction costs poor people incur in accessing markets (Calderón and Servén, 2010).

Yet, in colonial Ghana, although government investment in transport infrastructure was fairly high, the expansion of rail and road transport was greatest in and around mining areas and the cocoa belt (Hinden, 1941:148; Kay and Hymer, 1972:20-25; 137). Better transport infrastructure diminished transport costs in cocoa growing areas and led to increased incomes for cocoa growers and migrant labourers (Jedwab and Moradi, 2016). This might have further worsened income differences between Africans in cocoa growing areas and those in non-cocoa growing areas (Aboagye and Bolt, 2020).

With greater emphasis on infrastructural development, the provision of other social services was limited. Admittedly, previous studies on the effects of social transfers on inequality elsewhere have shown that investment in social services like education and health care may affect the distribution of income only after a relatively long-time lag but they can also have immediate benefits (Chu et al, 2000; Anderson et al, 2017). Government spending that reduces or takes away the costs (monetary and

non-monetary) of educating children and providing health care from families reduces the income gap between rich and poor households as the cash benefit for low-income earning families is proportionately greater (Oxfam, 2019). In colonial Ghana, government expenditure on basic education and health care was limited and accounted for between 2 and 8 percent and 6 and 10 percent respectively of total government expenditure, between 1905 and 1935 (Aboagye and Hillbom, 2020). Schools were mainly mission-run and were mostly located in the south and in large towns (Aboagye, 2020). Health care delivery was southern and urban biased and other public services were only rudimentary in the towns, and unavailable in the villages (Hinden, 1941:148; Kimble 1963:59; Patterson, 1981:17; Kay and Hymer, 1963:137). Planned provision of public services and infrastructural developments in the north were sometimes abandoned and government resources were used to fund similar projects in the south (Ladouceur, 1979). To be sure, between 1919 and 1927 colonial government expenditure aimed at broader welfare development than before. During this time, budgetary expenditures were more than quadrupled and improvements in economic and social infrastructure had positive effects on incomes (Jedwab and Moradi, 2016).

However, the colonial government responded to economic challenges in the 1930s by cutting expenditure instead of raising taxes.[80] Expenditure for infrastructure averaged about 27 percent of total expenditure in the 1930s as compared to an average of 57 percent for the 1920s (Kay and Hymer, 1972:43). Government expenditure remained stagnant until 1941. Such expenditure cuts were unwarranted because in spite of the difficult economic conditions, the 1930s was, at least from 1932 a period of budget surpluses. 1931 was the only deficit year and by 1934 when the colony got out of the depression its reserves and surpluses had increased (Cox-George, 1973:110). Government's surpluses could have been used to enhance the welfare of the indigenous population. However, accumulated reserves were invested mostly in the United Kingdom, in British Treasury Bills (Frimpong-Ansah, 1991:67). Large sums of potential public outlay therefore leaked out of the colonial economy. As a result, the levels of public expenditure and economic activity was kept lower than they should have otherwise been. In sum, government's tax and expenditure policies had limited redistributive effects and inequality stayed at high, albeit constant levels until the 1940s.

[80] Governor's Address, Opening of the 1930-31 Session of the Legislative Council, 17th February, 1930, pp.4-11; Governor's Address, Opening of the 1931-32 Session of the Legislative Council, 23rd February, 1931, pp.11-16.

Decolonization, Self-Government and Rising Inequality, 1941-1960

During the decolonization era through to the early years of Ghana's independence the colonial government took a more active role in directing development, although its investments were still geared towards prodding up the export sector. The dual societal structure from earlier decades rather than being eliminated was reinforced and inequality rose sharply. We begin by describing inequality trends during this period and subsequently, we first analyse government tax policies, and then expenditure priorities and their implications for distribution.

Like the previous era, not much information is available on the effects of government tax and expenditure policies on living standards and income distribution between 1941 and 1960. Nominal and real wages which reflect living standards appear to have increased substantially for many urban wage-earning Ghanaians during this period (Frankema and Waijenburg, 2012). Nonetheless, there were large wage differences between skilled and unskilled workers and the relative position of workers at the low end of the remuneration did not improve (Birmingham, 1960; Rimmer, 1992:68; Aboagye and Bolt, 2020). Further, a majority of Ghanaians who earned a living from the non-cocoa sector fell behind. Inequality increased substantially after the 1930s world slump in prices with the Gini coefficient rising from 0.34 in 1931 to 0.49 in 1960 (see Figure 1). Incomes for commercial and skilled workers and government employees increased rapidly in the 1940s leading to increasing income inequality. Increasing cocoa prices in the 1950s also meant that Gold Coast cocoa farmers earned higher incomes. In 1960, nominal incomes for large-scale cocoa farmers stood at £211, £63 for food farmers, and £80 for petty traders and £87 for unskilled labourers (Aboagye and Bolt, 2020). At the end of the colonial era, large-scale cocoa farmers were better off and, in the north, where cocoa was not cultivated, many were poor (Rimmer, 1992:30).

Although Aboagye and Bolt's (2020) estimates are for pre-tax inequality, it does not appear that much redistribution was achieved through taxation, notwithstanding the successful introduction of direct taxation in 1943. It was expected that the income tax would reach many of the richer Africans and become a much-needed remedy to the existing inequitable system of taxation. But only a small minority of Africans paid the income tax. It fell almost entirely on non-African sources of income and the tax rate was among the lowest in the British Empire (Hailey, 1956:666). In 1948, 5, 000 non-Africans and only 693 Africans paid the income tax. The number of Ghanaian income taxpayers increased over time and as table 2 shows by 1958/59 they accounted for 42 percent of income taxpayers, but their contribution to total income tax returns (32 percent) was still less than that of British and other Commonwealth nationals (41 percent). As table 2 indicates only 10,000 people (Africans and non-Africans) in a population of nearly six million paid income taxes by 1958 (Aboagye and Hillbom, 2020). With inadequate staff and

logistics, and limited coverage, the Income Tax Department was unable to reach many self-employed persons and other potential taxpayers, and as the 1954/55 report of the Income Tax Department indicate “the field for expansion [remained] very large”.

Table 1. Personal Income Taxpayers by Nationality, 1954/55 to 1958/1959.

	1954-55		1955-56		1957-58		1958-59	
	Number	Income	Number	Income	Number	Income	Number	Income
Nationality	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Gold Coast	24	20	23	21	29	24	42	32
Other African Territories	1	1	1	1	1	1	1	1
India	2	2	2	2	2	2	2	2
UK & Commonwealth	51	50	53	50	46	44	37	41
Other European & American	10	11	12	12	13	13	10	12
Middle East	11	16	10	14	10	16	8	12
Total	8,641	10,963,702	8,678	11,862,076	10,061	14,562,681	12,879	16,827,128

Source: Income Tax Department Reports, 1954-55 to 1958-59

Cocoa was government's major tax handle. We must therefore briefly examine the nature of government's taxation of the cocoa sector to ascertain if much redistribution was achieved. State-controlled marketing was introduced during World War II which allowed the colonial government and immediate self-governing state to extract cocoa farmers' surpluses (Beckman, 1976; 41-42; Alence, 2001). This war-time measure for supposedly stabilizing prices paid to cocoa farmers became a permanent feature of Ghanaian cocoa trade from 1947 when the Cocoa Marketing Board (CMB) was established. The CMB fixed producer prices below the average market prices, and became the main instrument for state accumulation in the 1950s and thereafter. Between 1949/50 and 1957/58, cocoa farmers received 51 percent of the total proceeds, 32 percent of the proceeds was paid in export duty, 7 percent was absorbed by other CMB costs, and 10 percent accrued to the CMB as surpluses (Rimmer, 1992:55).[81]

In spite of government's increased taxation of the cocoa sector, not much redistribution was achieved. Cocoa farmers were still better off in both relative and absolute terms especially between 1950 and 1958. They harvested on an annual average the same tonnage as in the immediate post-war year. Prices continued to increase during this period and farmers received a real price nearly almost three times greater than what they received in the immediate pre-war year (Rimmer, 1992:67; Killick, 1966:367-371).

Tax policy is only one half of the fiscal equation, and the colonial government could have redistributed income through expenditures aimed at improving the incomes of the African population. However, not much redistribution was achieved on the expenditure side of the budget either. Indeed, the 1940s was the era of "development-minded colonialism" where colonial governments began to consciously make investments for the general improvement of the welfare of their colonized people (Austen, 1987; Cooper, 2002:39). Between 1941 and 1948, the Gold Coast received a total of £858,778 under the Colonial Development and Welfare Act of 1940 (Frimpong-Ansah, 1991:24). Grants from the Welfare Act were invested in agricultural research, the building of schools and, urban water supply and electrification. Governments' budgetary expenditure rose significantly with an annual average rate of 16 percent to over £7 million from 1942 to 1950, and a large share of this expenditure was directed towards development and the expansion of social services (Frimpong-Ansah, 1991:65). Development spending which had previously been neglected picked up rapidly from the mid-1940s as table 2 shows (Frimpong- Ansah, 1991:78).

[81] Cocoa Marketing Boards, Annual Reports.

Table 2: Government Development Expenditure with Functional Breakdown, 1940-1960

Year	General Services	Community Services	Social Services	Economic Services
1940	0	0	0	0
1945	10,1	29,4	50,0	10,5
1950	1,4	41,4	30,9	26,3
1951	11,9	39,3	33,4	15,4
1952	10	32	34	24
1953	4,7	28,3	27,5	39,5
1954	6,6	51,9	23,5	17,9
1955	10,9	44,7	16,5	27,9
1956	13,5	51,2	14,6	20,7
1957	14,1	39,4	15,5	31,0
1958	13,7	31,8	11,3	43,1
1959	29,0	30,8	16,0	24,1
1960	23,5	23,9	20,0	32,6

Note: General services refer to expenditure on financial administration, tax administration, general economic regulations, defence and foreign affairs, justice and police, and other like expenditures. Community services include construction, fuel and power, roads, scientific services. Social services cover education and health services. Economic services include agriculture, mining, manufacturing and commerce, railways, harbours, transport and communications.

Source: Kay and Hymer (1972:375), Table 29; Frimpong-Ansah (1991:79), Table 5.1.

Still, developmental colonialism had some defects. The south continued to benefit disproportionately from government expenditures relative to the north (Kay and Hymer, 1972). Investments were made to develop the export economy of the south as a large share of government outlays went into economic and community services (see table 2). There were more schools, hospitals, roads and other social services in the south than in the north (Foster, 1965; Patterson, 1981). The nature of investments made by the colonial government were more likely to exacerbate inequality. As mentioned earlier, government spending on public transportation directed towards the poor is more likely to reduce inequality, while public expenditure on developing infrastructure that favours the richer owners of capital tends to worsen the distribution of income (Artadi and Sala-i-Martin, 2003; Turnovsky, 2015). Similar to the previous era (1891-1940), infrastructural development between 1941 and 1960 were concentrated around cocoa growing and mining areas. Meanwhile, majority of the poor did not have access to roads and railways and other social services (Frimpong-Ansah, 1991). Inequality was typified, on one hand, by the growing urban trading and administrative centers and in the forest cocoa belts, the rich local farmers. On the other hand, outmoded agricultural systems still existed and many Africans barely scratched a living from the soil (Frimpong-Ansah, 1991:67-69).

Ghana became self-governing in 1951 and attained full independence in 1957. Compared to the British, the indigenous government from 1951 more actively used surpluses from the cocoa sector to fund development initiatives. As Table 2 shows investments in community services increased rapidly. The ruling Convention People's Party (CPP) led by Kwame Nkrumah in its 1951 election manifesto laid down such welfare aims as free technical and primary education up to the age of 16 years and free national health service. This was to be rolled out under a five-year economic plan that would include infrastructural developments, electrification of the whole country, progressive mechanization of agriculture, and a robust industrialization program. These would "afford the people an increasingly higher standard of living which has long been denied to them under the Crown Colony system of government".[82] From approximately £17 million per year between 1953 and 1958, development (or capital) expenditure rose to £26.1 million in 1958/59 (Rimmer, 1992:55). Some significant results were achieved as major improvements occurred in communications and public services. For example, road mileage maintained by the Public Works Department grew from 3,525 in 1950 to 4,277 in 1958 (Frimpong-Ansah, 1991:82; Rimmer 1992:66-67; Rimmer, 1992:66).[83] The impact of these improvements on redistribution would be more discernible in the 1960s.

Overall, between 1941 and 1960 the tax net was still narrow, only a few people paid income taxes and although government expenditure increased, investments were still determined by the need to increase export earnings and few resources were spent on improving the incomes of the majority of the African population. Inequality as measured by the Gini coefficient was 0.50 in 1960 (see figure 1). After 1960, the independent state would extract more from cocoa farmers in a bid to the change the structure of the export-based colonial economy. This would result in a more equitable distribution of income, but equity would be served only to the extent of making the former rich, less rich.

[82] CPP, General Election Manifesto, 1951 'Toward a goal' in Metcalfe, *Great Britain and Ghana*, p.705.

[83] See also, Kay and Hymer (1972:396). According to Rimmer (1992:66), there were many other roads also and in 1958, the total road mileage was put at 18,866.

Big Push, Big Fall and Income Redistribution, 1961-1982

From 1961, Nkrumah adopted fiscal policies that differed from those inherited from the British. Extraction of resources from the rich and reallocation of government expenditures in favour of the poor resulted in a decline in inequality. Nkrumah's government was ousted from office in a military coup in 1966 and between 1966 and 1982 Ghana had eight different regimes. Nevertheless, generally there was much continuity rather than change in fiscal policies during this period (Killick, 2010). Overall, inequality remained low due in part to increased redistributive expenditures, but also due to the general fall in incomes as result of economic stagnation and decline. We begin with an analysis of Nkrumah's tax efforts and expenditure priorities and their effects on the distribution of income. We follow up with fiscal policies after Nkrumah and their distributional effects.

1961-1966 marked a 'turning point' in the country's strategies. The government adopted 'big-push' development strategies in order to build an industrialized and economic independent welfare state. As a result, expenditures increased and a larger tax effort was needed. The independent state maintained control of marketing board surpluses and continued to extract a large share of cocoa farmers' income (Aboagye and Hillbom, 2020). The state also cast its fiscal net wide illustrated by the increase in the share of taxes not directly related to external trade from 15.3 percent in 1960/61 to 43.4 percent in 1965-as a result of increased rates of personal and corporate income tax, increase in excise duties, and the introduction of a purchase tax on imported consumer durables (Rimmer, 1992:80). Relative to other African countries the taxes levied on Ghanaians at this time was high (Killick, 2010:159) and perhaps for the first time, redistribution occurred through taxation. Other factors also pushed down inequality. For example, the decline in world cocoa prices, especially in the first half of the 1960s depressed cocoa farmers' incomes. In real terms, cocoa farmers might have received even lower producer prices given that Ghana's currency was notoriously overvalued (Bequele, 1980; Huq, 1989:21). Retail prices also increased and real wages declined both in absolute and relative terms to most other incomes (Hart, 1973:64; Rimmer, 1992:102-103). The real incomes of urban wage earners, for example, declined by 46 percent between 1960 and 1966 (Hart, 1973:64). In sum, government-controlled incomes-wages and cocoa farmers' earnings declined.

Redistributive consequences also followed from government expenditure policies. Major improvements occurred in public services (Killick, 2010:80-84), the most dramatic of which was in education, though this was a continuous trend from the previous decade. Gross primary school enrollment rate increased from 33 percent in 1960 to 60 percent in 1965, a development related in part to the introduction of the 1961 Education Act that made basic education free and compulsory (Huq, 1989:71; Lee and Lee, 2016). There were steady improvements in the provision of health

services, water supplies, electricity, and housing standards in both rural and urban communities (Omaboe 1966:442; Huq, 1989:71-72; Arku, 2006; Killick, 2010:80-83). As mentioned earlier, such investments can affect income distribution with a long-term lag but when they 'free' families of the costs of procuring such services, there can be immediate effects on the distribution of income. Under Nkrumah, free or highly subsidized social services became widely diffused and enjoyed by many (Beckman, 1976:224-225; Ray, 1986).

Government expenditures affected the distribution of income through other channels. The reallocation of cocoa income had important effects on the development of agriculture and agricultural incomes outside the cocoa sector (Beckman, 1976:222-228). During the colonial era, investments in public transport had favoured the exporting areas and regions with the potential for food production were left behind. Under Nkrumah such investments integrated local food production into the market economy and led to an increase in rural incomes. Food farmers' terms of trade rose from an index of 102 in 1962 to 132 in 1966 and on realistic assumptions about supply and demand elasticities, this might imply that their real incomes also increased (Killick, 2010:80; 100-101). Knight (1972:231) argues that between 1960 and 1967, urban real incomes fell while rural incomes rose by 20 percent and the growing urban-rural income differential of the 1950s contracted in the 1960s. There were regional dimensions to redistribution under the CPP as well, as the north now benefitted from investment in public services unlike previously (Beckman, 1976:225).

Therefore, on both sides of the budget, redistribution occurred and although we do not have Gini estimates, it is not far-fetched to suggest that income disparities fell between 1961 and 1966. However, redistribution was achieved by 'killing the goose that laid the golden egg'. As the cocoa sector continued to be squeezed for finance, there were limited incentives for increasing production, the cocoa sector declined and led to adverse consequences on the Ghanaian economy. Nkrumah's government was overthrown in 1966 and a long period of economic decline followed.

The National Liberation Council (NLC) government that took over from Nkrumah held the view that taxes had become too high and there was "the need to reduce the tax burden on the majority of our people".[84] Several taxes were either reduced or abolished between 1966 and 1968 (Rimmer, 1992:114; Killick, 2010:334).[85] At the same time, the government reduced public expenditure but recurrent expenditures for education and social and general government expenditure increased (Chazan, 1983:158-159; Whitfield, 2018:92). By 1969, when the NLC government transferred control to the Progress Party (PP) government, public services had

[84] The National Liberation Council, Budget Statement for 1966-67, p.12.

[85] Ibid; pp.12-14; National Liberation Council, Budget Statement for 1969-70, p.26.

deteriorated (Chazan, 1983:159). The effects of government's reduced taxation and expenditure on income distribution between 1966 and 1969 are unclear given its short tenure in office. Gini estimates for this period are unavailable, except for Muller's (1995:972) point estimate of 0.39 in 1970. Income inequality therefore appears to have remained at a relatively low level. Nonetheless, rural-urban income disparities worsened as a result of the strong urban bias of government expenditure (Killick, 2010:90).

The Progress Party that governed between September 1969 and January 1972 was preoccupied with reducing the large disparities alleged to exist between rural and urban living standards. However, the government did not forcefully use the tax side of fiscal policies for redistribution. It only made slight adjustments to the tax structure to make it more equitable and to liberalize imports.[86] Other mechanisms have to be called into play. The government restrained wages, imposed a national development levy on wages and salaries, and reduced the fringe benefits of public servants. Higher rents for government housing and reduced allowances cut the effective incomes of senior civil servants (Konings, 1986:33; Killick, 2010:64; 72). These policies might have held inequality down. On the expenditure side, redistribution entailed greater public investment in agriculture and rural development programs. Many rural areas certainly benefited from government investments in water supplies, electricity, health services and feeder roads (Armah, 1974:167).

As public expenditure soared and a large import boom led to an economic crisis, the government devalued the currency by 90 percent in December 1971 and although it increased the wages of low-earning government employees and cocoa producer price by 25 percent, devaluation was unpopular especially in the urban areas (Killick, 2010:64). Devaluation led to an increase in prices of imported commodities and negatively affected the real incomes of urban workers. In January, 1972, the government was ousted from office in a military coup. On the whole, income inequality and urban-rural inequality might have stayed at relatively low levels due to the reallocation of resources to rural areas and the reduction of the real incomes of both private and public urban workers.

The succeeding military government, the National Redemption Council (NRC) took much more forceful steps to reduce rural-urban and regional inequalities through redistributive expenditures to ensure that the fruits of development "accrue, in an equitable fashion, to all sections of the population and to all regions of the nation".[87] Budgetary allocations to the agricultural sector increased and the government subsidized the costs of fertilizer and cutlasses, waved custom duties on agricultural

[86] Budget Statement for 1970-71, pp.44, 49.

[87] Guidelines for the Five-Year Development Plan 1975-80, p.45 in Rothchild (1980:474).

machinery. It also placed tax exemptions on income from cocoa, abolished taxes on farming enterprises' incomes in their early years of operation and increased public loans to agriculturally related projects (Rothchild, 1980:471; Chazan, 1983:164; Konings, 1986). These measures presumably led to an increase in rural incomes (Tabatabai, 1988; Rimmer, 1992). Resources were reallocated from higher education to primary, middle, and technical training and health services were expanded in poorer regions. Although recurrent expenditures were still more favorable towards richer regions, capital expenditures were more sensitive to corrective equity. Overall, Acheampong's record on distributive and redistributive equity was much better than the first two post-independence governments (Rothchild, 1980:475).

Ghana's economy declined after 1975 as government revenues shrunk much faster than expenditures and living standards fell. External factors like the 1979-80 increase in oil prices and decline in cocoa prices on the world market had an impact on living standards in Ghana but ultimately these factors only "put the boot to an already prostrate economy" (Price, 1984:174). Per capita GDP declined by 16 percent between 1974 and 1978 (Killick, 2010:402). Hardship increased and people adopted a beat-the-system approach to survival (Chazan, 1983:194-197). People engaged in various malpractices- importation of manufactured goods into Ghana and smuggling of Ghanaian products across the borders, hoarding or black marketeering, exploiting differences between regulated and black market prices, in order to avoid existing controls or to defraud to maximize gains (Chazan, 1983:194-197). Successive governments between 1978 and 1983 were unable to halt economic decline and the economy spiraled into the abyss (Rimmer, 1991:133).

The indirect evidence we have alluded to in this section should point to a reasonable generalization that inequality declined between 1960 and 1982. However, scholars differ on the extent of inequality during this period. Bequele (1983), for instance, on the basis of the unequal distribution of income among wage and salary earners and cocoa farmers, and the unequal distribution of land with a Gini coefficient of 0.64, and the rise in food prices relative to agricultural wages, concludes that economic inequality in Ghana's rural areas increased significantly after 1970. Ewusi (1983) estimated Gini coefficients of 0.38 and 0.40 in the more rural Upper Region of Ghana and the more urbanized Greater Accra region respectively, indicating that income was more unequally distributed within the urban sector than in the rural sector. Further, given that real agricultural wages fell relative to real manufacturing wages, and of cocoa producer prices relative to the minimum wage, the economic standing of rural residents was weakened as compared to urban dwellers (Ewusi, 1983). On the contrary, Jackson (1983) argues that urban-rural income gaps fell as a result of rapid inflation from 1974/75 and with food prices rising faster than other prices.

Tabatabai (1988:726) shows that between the 1970s and at least until 1983, there was substantial redistribution within both rural and urban areas between two main groups; in the rural areas, from cocoa producers (and agricultural labourers) to food producers, and in urban areas, from wage earners to traders. Real wages and salaries fell by 16 percent between 1970 and 1983. In that same period, real cocoa producer price fell by an annual average of 11 percent. For food farmers, Tabatabai (1988:725) suggests that although the trend in their returns may have been on a decline, "this decline was much lower than those suffered by the wage earners and the cocoa producers". Finally, "traders did even better" as their real returns increased an annual rate of 2.5 percent between 1970 and 1983.

All in all, inequality declined in Ghana between 1961 and 1982 as a result of government fiscal policies, although the extent of inequality within both rural and urban areas remains debatable. As poverty and deprivation deepened and living standards generally fell, food farmers and traders and individuals who engaged in rent-seeking fared best, or least badly.

Distributional Effects of Structural Adjustment, 1983-2000

In April 1983, the Provisional National Defence Council (PNDC), a quasi-military regime that seized power in December 1981, launched an IMF-World Bank supported structural adjustment program (SAP) to reverse decades of economic decline. Scholars differ on the effects of structural adjustment on inequality in Ghana, although there is some consensus that it resulted in uneven distribution of wage and income in its initial phase (Hutchful, 2002:89). Roe and Schneider (1992:118) have suggested that there were more gainers than losers from the SAP, and the rich were more affected both negatively and positively than the poor. It is therefore not unreasonable, they argue, to suggest that overall equity may have somewhat increased by adjustment. Similarly, Bawumia (1998) concludes that between 1983 and 1992, rural households are more likely to have benefited most from the SAP because of the high prices they received from their products and improved infrastructure. Konadu-Agyemang (2000) holds a different view and argues that the adjustment era was the "worst of times" as rural-urban and regional inequalities in income and access to social services widened. We argue that tax reforms during structural adjustment affected income distribution through price changes but also more directly through tax cuts for the rich. Expenditure reforms also favoured the rich more than the poor. Ultimately, Ghana's structural adjustment experience resulted in uneven distribution of wage and income and efforts to "mitigate the social costs of adjustment" had limited impact.

Structural reforms sought to restructure the tax system and expenditures to strengthen economic incentives for increased production and investment. After

1985, tax reforms were broadened to enhance the efficiency of tax administration and the equity of the tax system. On direct taxes, the government reduced corporate tax rates and by 1994 all rates had been reduced from 50-55 percent to 35 percent (Kusi, 1998:18). Government also reformed exemptions and tax brackets to reduce the progressivity of personal income taxes (Roe and Schneider, 1992:75). In the case of indirect taxes, the government integrated ad hoc excise duties on many mass consumption manufactures with a broadened sales tax (Roe and Schneider, 1992:75). The general sales tax rate was increased from 10 percent in 1987 to 20 percent and then to 25 percent. The rate was reduced 22.5 percent in 1989 and further lowered to 17.5 percent in 1991 (Kusi, 1998:20). The government also reduced the 'tax' on cocoa farmers and other commodity producers, and real producer prices for cocoa farmers almost quadrupled between the agricultural years of 1982/83 and 1987/88 (Roe and Schneider, 1992:75).

The extent to which the tax side of governments affected the distribution of income can be assessed by examining the expenditure patterns of various socio-economic groups and the relative retail prices of food and non-food consumption goods. Food and other luxury items that were affected by tax and other pricing policies made up a larger share of the expenditure budgets of rich households than poor households and hence government's fiscal policies may have been progressive in their effects (Roe and Schneider, 1992:111, 123; Hutchful, 2002:120). However, non-food expenditures which occupied a high expenditure share for poor households were subject to the same tax increases on expenditure items for the rich. Between 1983 and 1987, non-food prices increased by nearly 300 percent whereas consumer prices for food increased by 64 percent.[88] These changes in relative prices benefitted the rich and urban food consumers more than the poor (Roe and Schneider, 1992:114; Bawumia, 1998:61). An increase in cocoa prices benefitted the poor in rural areas. Still, only 19 percent of the rural poor were engaged in cocoa production (Konadu-Agyemang, 2000:480). Another government intervention that affected agricultural incomes was the removal of subsidies on farm inputs in 1990. Poorer households spent nearly 6 percent of their agricultural income on farm inputs while richer ones spent less than 2 percent on farm inputs. Therefore, the removal of subsidies had a regressive effect on income distribution (Roe and Schneider, 1992:112).

On the expenditure side, some positive welfare effects were achieved but were unevenly distributed between rural and urban areas and between regions. Unlike other African countries, Ghana's adjustment programme did not require major cuts in overall expenditures (Hutchful, 1992). Government spending on education, health and social welfare as a share of GDP increased from 2.3 percent in 1983 to 5.8 percent in 1989, and from 29.1 percent of total government expenditure in 1983

[88] Real prices for food fell between 1983 and 1986 due to increases in food supply as a result of higher rainfall and increased supply of agricultural inputs.

to 41.7 percent in 1989 (Bawumia, 1998:61). However, much spending on education and health does not necessarily benefit the poor unless much of the outlays are directed towards basic education and preventive health care. Admittedly, government expenditures in basic education and health care increased and primary school enrolment rate for example, increased from 65 percent in 1987 to 72 percent in 1991 and expenditures on health, housing, electricity and water, and other social services provided large benefits to the poor (Bawumia, 1998:61). Many roads, railways and highways were rehabilitated so that exportable products from the hinterlands could be transported to the ports. Certainly, these improvements in transport facilities positively affected rural incomes.

Nevertheless, other aspects of expenditure reforms had adverse effects on the poor. User fees and other charges were introduced in health, education and water. In the health sector, steeper increases in the costs of health services followed an initial round of increases in 1985 and a cash and carry system with increased charges for drugs and curative services was implemented in all regions by 1992. Increases in funding for hospitals improved health care delivery but this did not always mean the poor had increased access to health services (Hutchful, 2002:129). The introduction of user fees led to a decline in hospital and clinic visits in both urban and rural areas.[89] In Ghana's capital, Accra, there was an instant drop of 25-50 percent in hospital and clinic visits and in some rural areas, it was 45-80 percent in the first eight months of the implementation of the "pay as you use" system (Konadu-Agyemang, 2000:478). Declines in the use of out-patient services in government hospitals continued throughout the 1990s Hutchful, 2002:130). On education, although the government restructured educational spending in favour of basic education, and education was free in theory, school enrolment and attendance rates were not impressive.

Further, capital expenditures on health, education and other social services were biased against rural areas and the 'northern regions' of the country. Rural-urban and regional inequalities in the provision of health services were reinforced under SAP. For example, urban areas with one third of the population received 42 percent of health spending in 1989, this increased to 48.7 percent in 1992 (Hutchful, 2002:119; 130). Access to education continued to be unequal between urban and rural areas and between regions (Konadu-Agyemang, 2000:478-480).

Another major government spending policy that affected income distribution was the increase in real wages of public-sector employees. The salaries of senior civil servants were more than tripled between 1983 and 1988 while those of unskilled labour increased only by 50 percent. The ratio of the highest to the lowest salary in

[89] Bawumia (1998:66) argues that rural households relied more on traditional sources of medicine so they might not have been affected by the increases in hospital user fees, but provides no evidence to back this claim.

the civil service increased from 2.5:1 in 1984 to 9.5:1 in 1990 (Roe and Schneider, 1992:113). While the real minimum wage increased from an index of 54 in 1983 to 117 by 1992, real public sector earnings increased from an index of 48 in 1983 to 270 by 1992 (Bawumia, 1998:65). The rise in incomes for civil servants might have improved the well-being of many households but the increase in wages and salaries came at the back of retrenchments in the public sector. More than 300,000 public sector employees lost their jobs during the implementation of SAPs (Konadu-Agyemang, 2000:474).

There are no income Ginis for this period and consumption-inequality trends from earlier surveys and recent inequality estimates suggest that inequality might have indeed started increasing from the SAP era, although overall welfare might have improved and poverty levels declined. Consumption-inequality Ginis have been on the rise, increasing from 35.3 in 1987 to 40.1 in 1998 and 42.8 in 2005 (World Bank, 2019). Since consumption Ginis generally show lower inequality than income Ginis, the extent of inequality could be higher. Already in the late 1980s rural residents were on average found to be worse off than urban residents (Glewwe and Twum-Baah, 1991). The government recognizing in 1988 that the economic recovery programme will worsen the economic challenges of certain vulnerable groups drew up a Programme of Actions to Mitigate the Social Costs of Adjustment (PAMSCAD). As a result of poor administration and poor targeting the progamme was unable to alleviate the plight of retrenched workers and low-income urban and rural households (Brydon and Legge, 1996). Between 1992 and 1998 regional disparities in public spending in health and education were still noticeable and overall initial high public expenditures in social sectors were not sustained (Canagarajah and Ye, 2001; Hutchful, 2002:139).

Conclusion

Taxes and government transfers reduce income inequality and ensure that gains from economic growth are broadly shared. While it is widely acknowledged that income inequality is as much the consequence of public choices as it is of economic forces, not many studies have investigated the distributional effects of government fiscal policies in sub-Saharan Africa. This paper therefore contributes to a growing literature that analyses the relationship between taxes and government expenditure and inequality. The paper traces changes in Ghanaian governments' fiscal policies from the late nineteenth century until the end of the twentieth century and their distributional effects.

The paper shows that in the first half of the colonial era, government's fiscal policies and investments did not have much redistributive impact. Inequality remained at

relatively high but constant levels between 1891 and 1940 and government officials and private sector workers and producers of exports did much better than other Africans. While government expenditure increased between 1941 and 1960, they were still biased towards developing the export sector and its gains did not diffuse to other sectors of the economy. Between 1961 and 1982, increased extraction of cocoa farmers' surpluses and the contraction of public sector wages amidst general economic decline resulted in fall in inequality. Inequality increased again from 1983 as a result of government tax and expenditure policies that favoured the rich more than poor.

On the whole, throughout Ghana's history, governments' fiscal policies have had limited impact on redistributing income because as Rimmer (1991:218) points out the means for redistributing income are insufficient. Redistributive policies have been obstructed by the lack of progressive taxes and the lack of social benefits for those who earn extremely low incomes. When redistribution has occurred, it has come at the back of squeezing the surpluses of primary producers and wages and salaries subject to government control. Further, the structure of the country's economy impedes redistributive policy. As Whitfield (2018) argues Ghana's economic structure based on exports has remained "shallow" in terms of what is produced locally, "narrow" in terms of the basket of exports and their complexity, and "thin" in terms of linkages with the rest of the economy. Uneven distribution of incomes is therefore inevitable and redistributive taxation and spending have only been short-term palliatives.

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Paper IV

Tax Bargaining, Fiscal Contracts and Fiscal Capacity in Ghana: A Long-term Perspective.

Prince Young Aboagye

Ellen Hillbom

Abstract

Many sub-Saharan African countries are unable to generate sufficient tax revenues for public purposes. While it is widely accepted that governments' ability to tax is shaped by politics, the precise mechanisms through which this relationship takes place in practice remain elusive. Based on a historical analysis of four major tax reforms in Ghana from the 1850s to the late 1990s, this article captures the various ways in which taxpayers negotiate with the state in an attempt to limit the extent of taxation, especially in cases where state reciprocity falls short of what people expect. Our evidence suggests that, far from being a recent development, effective taxation in Ghana has long depended on the ability of the state to convince taxpayers that tax revenues will be used for the public benefit. A history of misappropriation of tax revenues, overt corruption and profligacy diminished taxpayers' support for governments' tax efforts. More generally, the article points to the importance of understanding how tax bargaining works in practice and people's perceptions of their governments over the long term, in order to overcome resistance to tax reforms.

Introduction

Fiscal capacity is essential for state building and economic development as it provides the financial means for states to invest in infrastructure, support systems of production, human capital and strengthen institutions. Many sub-Saharan African countries, however, tend to lack the capability to mobilize sufficient revenues to finance the provision of these public goods. In 2016, sub-Saharan Africa's average tax revenue as a percentage of Gross Domestic Product (GDP) was 15.47 percent. For OECD countries, the figure stood at 26.15 percent.[90] Traditionally, scholars identified administrative and technical challenges and sub-Saharan Africa's weak economic structure as the main causes of the region's poor tax performance.[91] Others argued that the root causes could be traced to the legacies of colonialism. The different forms of incorporation of indigenous populations into the colonial order left an institutional and infrastructural residue that continues to determine governments' tax policies and tax capacity.[92]

In recent literature on taxation and tax reforms in developing countries, however, it is widely accepted that the state's ability to tax citizens is equally shaped by politics.[93] Political bargaining between actors over the development, implementation and enforcement of fiscal contracts, government responsiveness and accountability are decisive for the success of tax reforms and the state's fiscal

[90] ICTD/UNU-WIDER (2019), Government revenue dataset, <https://www.wider.unu.edu/project/government-revenue-dataset> (20 November 2019).

[91] Richard M. Bird and Milka Casanegra de Janstcher, 'Improving tax administration in developing countries' (International Monetary Fund, Washington, DC, 1992); Robin Burgess and Nicholas Stern, 'Taxation and development', *Journal of Economic Literature*, XXXI (1993), pp.762-830; Vito Tanzi and Howell H. Zee, 'Tax policy for emerging markets: Developing countries', (WP/00/35, International Monetary Fund, Washington, DC, 2000); Timothy Besley and Torsten Persson, 'Why do developing countries tax so little?', *Journal of Economic Perspectives* 28, 4 (2014), pp. 99-120.

[92] Thandika Mkandawire, 'On tax efforts and colonial heritage in Africa', *Journal of Development Studies* 46, 10 (2010), pp. 1647-1669; Thuto Feger and John Asafu-Adjaye, 'Tax effort performance in sub-Sahara Africa and the role of colonialism', *Economic Modelling* 38 (2014), pp. 163-174.

[93] See for example, John L. Campbell, 'The state and fiscal sociology', *Annual Review of Sociology* 19 (1993), pp.163-185; Christine Fauvelle-Aymar, 'The political and tax capacity of government in developing countries' KYKLOS 52 (1999), pp. 391-413; Deborah Bräutigam, Odd-Helge Fjeldstad and Mick Moore (eds), *Taxation and state-building in developing countries: Capacity and consent* (Cambridge University Press, Cambridge, 2008); Isaac William Martin, Ajay K. Mehrotra and Monica Prasad (eds), *The new fiscal sociology: Taxation in comparative and historical perspective* (Cambridge University Press, Cambridge, 2009).

capacity.[94] Although the impact of politics is uncontested, the precise mechanisms through which it affects fiscal capacity remain elusive. To explore how politics has played out in practice, we conduct a longitudinal study of tax reforms in Ghana extending from the 1850s until the 1990s and investigate the political determinants of the state's fiscal capacity and the specific processes through which politics has influenced taxation. Since the British establishment of a state apparatus in the 1850s, Ghana has seen several recurrent instances when the state made explicit concessions to taxpayers in response to the reality or threat of opposition from interest groups.[95] We examine how the interactions between the state and various actors historically shaped the state's ability to tax and taxpayers' willingness to comply.

Our analysis focuses on four major state-led tax reforms. We start with the colonial government's attempt to introduce direct taxation in the form of a poll tax in 1852 to compensate for inadequate indirect tax revenues. Second, we consider the income tax reform initiated in 1931 and completed in 1943, motivated by declining export revenues due to a fall in cocoa prices. Third, we analyse the processes of cocoa taxation and the levying of several taxes between 1951 and 1966 by the independent state to finance the industrialization efforts of Nkrumah's developmental state. Finally, we consider the introduction of a Value Added Tax (VAT) between 1995 and 1998. The study is principally qualitative drawing on primary data from both contemporary and archival sources, such as colonial correspondences, Colonial Blue Books, Income Tax Department Reports, colonial and present parliamentary records, as well as additional secondary literature.

We find that the Ghanaian state's fiscal capacity has been consistently limited by its inability to secure political support for its revenue mobilization efforts. A history of misappropriation of tax revenues, overt corruption and profligacy diminished citizens' support for governments' tax efforts. Hence, tax reforms were often met with violent protests, strikes and demonstrations by various interest groups and social classes, weakening governments' tax capacity. Our contribution to the existing literature is three-fold. First, we place the importance of politics and fiscal contracts to tax reforms and the state's fiscal capacity in a long-term historical perspective and show that the design, implementation and successful enforcement of tax policies have long depended on the ability of the state to demonstrate that tax revenues would be used for the public benefit. Whereas some recent studies show that bargaining between citizens and governments over taxation was particularly common in Ghana relative to other sub-Sahara African countries, we show that tax

[94] Wilson Prichard, *Taxation, responsiveness and accountability in sub-Saharan Africa: The dynamics of tax bargaining* (Cambridge University Press, Cambridge, 2015); Mick Moore, Wilson Prichard and Odd-Helge Fjeldstad, *Taxing Africa: Coercion, reform and development* (Zed Books Limited, London, 2018), pp. 179-210.

[95] Prichard, *Taxation*, p. 83.

bargaining is entrenched in a much longer history. [96] In this respect, Ghana is somewhat unique in comparison with its neighbouring countries. Second, while it is generally accepted that politics matters for tax reforms and that the extent of state reciprocity affect taxpayers' willingness to comply with tax obligations, this article highlights the varied and complex ways in which that has played out in practice. We show how taxpayers negotiated with the state in an attempt to limit or shape the extent of taxation in instances where the state's reciprocity fell short of what taxpayers anticipated. Third, we show that throughout history local processes shaped tax performance: the interactions between the state's fiscal ambitions and the responses of interest groups. Hence, weak fiscal capacity is not solely the making of the 'dead hand of the past' or exclusively path-dependent, but rather shaped by actors who make history all the time.

In the next section, we provide a brief summary of previous literature on the determinants of the state's tax capacity and present our conceptual model. Subsequently, we introduce the Ghana case and describe tax performance over the long term. We then use the four historical cases of tax reforms to shed light on the nature of political contestation over taxation in Ghana. Overall, our article demonstrates that reciprocity and fiscal contracts between governments and society are the foundation of effective taxation.

The determinants of fiscal capacity

In the political economy literature on taxation, explanations of taxpayer compliance are usually based on a number of related political economy models.[97] The classic economic deterrence model views taxpayers' decision to pay or evade taxes as dependent on their calculations of the potential benefits of evasion as against the likely costs of non-compliance.[98] Given the prospect that tax evaders are rarely

[96] See for example, Prichard, *Taxation*.

[97] For a summary and review of these models, see Odd-Helge Fjeldstad, 'What's trust got to do with it? Non-payment of service charges in local authorities in South Africa', *Journal of Modern African Studies* 42, 4 (2004), pp. 539-562; Merima Ali, Odd-Helge Fjeldstad and Ingrid Hoem Sjursen, 'To pay or not to pay? Citizens' attitudes toward taxation in Kenya, Tanzania, Uganda and South Africa', *World Development* 64 (2014), pp. 828-842.

[98] Michael G. Allingham and Agnar Sandmo, 'Income tax evasion: A theoretical analysis', *Journal of Public Economics* 1 (1972), pp. 323-338; Joel Slemrod, 'Tax Compliance and enforcement: New research and its policy implications'. Ross School of Business Working Paper 1302 (University of Michigan, 2017); Margaret A. McKerchar and Chris Evans, 'Sustaining growth in developing economies through improved taxpayer compliance: Challenges for policy makers and revenue authorities', *eJournal of Tax Research* 7 (2009), pp. 171-201. Ali, Fjeldstad and Sjursen, 'To pay or not to pay?'.

caught and penalized, this model, however, is unable to precisely explain why people pay taxes and may predict a higher rate of non-compliance than is actually observed.[99] Further, social influence theory suggests that a taxpayer's behavior is determined by the conduct and social norms of their reference group.[100] However, our understanding of why social relationships influence taxpayer behavior is limited.[101] Additionally, the comparative treatment or equity theory posits that individuals who perceive that they, and their group (defined by age, education, wealth, religion, and ethnicity) are fairly treated by the government are more likely to pay taxes.[102]

In our study, we focus on the fiscal exchange theory that views taxation as a bargained exchange between governments and taxpayers, that is, the payment of taxes in return for both tangible public goods such as education, health care, and infrastructure and intangible public goods such as political representation, and law and order.[103] Tax compliance is likely to increase when taxpayers perceive that they receive corresponding benefits from the state. The conceptual model we apply in our analysis of the success and failure of fiscal contracts (summarized in figure 1) is based on Margaret Levi's seminal work on the development of states' fiscal capacity, legitimacy and tax compliance. [104] The model shapes our analysis of the development, implementation and enforcement of tax reforms and the extended success and failure of fiscal contracts over time.

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[99] Ahmed Riahi-Belkaoui, 'Relationship between tax compliance internationally and selected determinants of tax morale', *Journal of International Accounting, Auditing and Taxation* 13 (2004), pp. 135-143.

[100] Ali, Fjeldstad, and Sjursen, 'To pay or not to pay?', pp.829-830; Keith Snavely, 'Governmental policies to reduce tax evasion: Coerced behavior versus services and values development', *Policy Sciences*, 23 (1990), pp. 57-72; James Andreoni, Brian Erard and Jonathan Feinstein, 'Tax compliance', *Journal of Economic Literature* 36, 2 (1998), pp. 818-860.

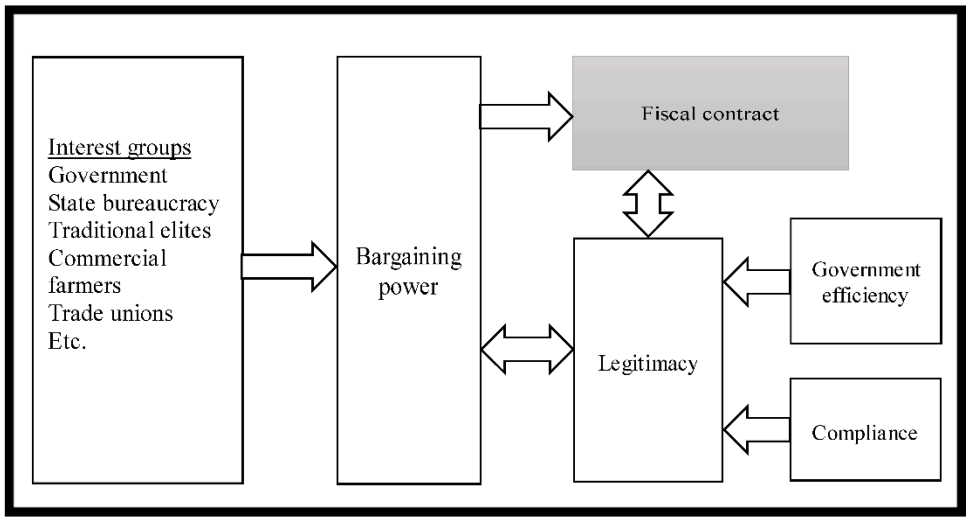
[101] Snavely, 'Governmental policies', p.63.

[102] Ali, Fjeldstad, and Sjursen, 'To pay or not to pay?', p.830; Joel Slemrod, *Why people pay taxes: Tax compliance and enforcement* (University of Michigan Press, Michigan, 1992).

[103] Fauvelle-Aymar, 'The political and tax capacity', p.399.

[104] Margaret Levi, *Consent, dissent, and patriotism* (Cambridge University Press, Cambridge, 1997); Margaret Levi, *Of rule and revenue* (University of California Press, Berkeley and Los Angeles, CA, 1988).

Figure 1: Conceptual Model- Development of Fiscal contact



Source: Authors' own

Levi hypothesized that governments seek to maximize revenues and their ability to do so is constrained by their relative bargaining power, transaction costs and discount rates.[105] Of the three, we focus on bargaining power that in Levi's model refers to the extent to which interest groups, the government as well as other actors, control economic, political and coercive resources on which others depend. Each interest group's bargaining power changes over time depending on the extent to which they independently control key resources. For example, governments are most often economically dependent on the skills, knowledge and labour of individuals and so their fiscal choices are often influenced by the probability of strikes, protests and other work disruptions. The government's bargaining power may also decrease when there are contenders to the allegiance of members of the society, and in democracies, governments tend to become more vulnerable and dependent on society in times of elections.[106] Successful tax negotiations require that each interest group be consulted in a manner that corresponds to its bargaining power.

[105] We do not discuss and apply the concepts of transaction costs and discount rates thoroughly due to difficulties in operationalizing these concepts, see Campbell, 'The state and fiscal sociology', p.172.

[106] Douglass C. North, *Structure and change in economic history* (New York, Norton, 1981), pp. 28-29; José Antonio Cheibub, 'Political regimes and the extractive capacity of governments: Taxation in democracies and dictatorships', *World Politics* 50, 3 (1998), pp. 349-376.

Tax negotiating and bargaining processes result in a fiscal contract or a 'productive contract' between taxpayers and the government.[107] In this 'contract of reciprocity' taxpayers are expected to pay taxes to finance the activities of government.[108] However, the free-rider problem arises when a fiscal contract is established.[109] Parties to the contract may want to receive benefits without paying their taxes and enforcement of the contract therefore becomes problematic. The government can ensure compliance in three ways: by the use of coercion, by the creation of quasi-voluntary compliance and by establishing and maintaining norms of compliance (ideological compliance).[110] When it is illegal to evade taxes and where people who do so face severe sanctions, compliance is likely to increase. However, it is costly to use coercion to ensure compliance.[111] Technologies for monitoring, auditing, and identifying the non-compliant are not always cost-effective and efficient. Governments can reduce the costs of enforcement by creating conditions that encourage taxpayers to engage in *quasi-voluntary compliance*. According to Levi it is *voluntary* because 'taxpayers choose to pay' and it is *quasi*-voluntary because 'the non-compliant are subject to coercion- if they are caught'.[112]

Quasi-voluntary compliance depends on the *legitimacy* of the state and of the bargaining processes, and *government efficiency*. Taxpayers are more likely to pay taxes when they perceive the government to be legitimate. Legitimacy as used here connotes citizens' beliefs in the 'normative appropriateness of government structures, officials and processes'.[113] Where legitimating beliefs exist, citizens would accept that the state has the right to impose taxes and tax compliance is likely to become more habitual.[114] Conversely, the less citizens consider the government to be legitimate, the less they will accept their obligation to give it the taxes it needs

[107] Paul Nugent, 'States and social contracts in Africa', *New Left Review* 63 (2010), p. 43.

[108] Fauvelle-Aymar, 'The political and tax capacity', p. 399.

[109] Levi, *Of rule and revenue*, p. 49.

[110] Levi, *Of rule and revenue*, p. 49-55. We do not discuss and apply the concept of 'ideological compliance' in this paper. The concept is inadequately described and it is hard to separate it from other factors that influence compliance, see Levi, *Of rule and revenue*, p. 51.

[111] Ibid, p. 50.

[112] Ibid, p. 52.

[113] Margaret Levi, Audrey Sacks and Tom Tyler, 'Conceptualizing legitimacy, measuring legitimating beliefs', *American Behavioral Scientist*, Vol. 53, 3 (2009), pp. 354-375; p.354; see also Seymour M. Lipset, 'Some social requisites of democracy, economic development and political legitimacy', *American Political Science Review* 53, 1 (1959), pp. 69-105; p. 86.

[114] Russell Hardin, 'Compliance, consent and legitimacy', In Carles Boix and Susan C. Stokes (eds), *The Oxford Handbook of Comparative Politics* (Oxford University Press, Oxford, 2007), pp. 236-265; Blaine Robbins and Edgar Kiser, 'Legitimate authorities and rational taxpayers: An investigation of voluntary compliance and method effects in a survey experiment of income tax evasion', *Rationality and Society* 30, 2 (2018), pp. 247-301.

to govern.[115] To create and produce legitimacy, government must be efficient in the subjective opinion of their citizens, that is, fulfill its part of the fiscal contract and provide valued benefits in return for tax payment.[116] Where state officials use public funds for private gain or the costs of public goods are unduly inflated, it undermines citizens' perceptions of government's legitimacy and their willingness to comply.[117] As our analysis shows, this has been a recurrent issue in Ghana. In addition, quasi-voluntary compliance is likely to occur when the state demonstrates that the tax system is fair. Norms of fairness are undermined when the state favours special interest groups, when the return for taxpayers' taxes declines, and when some parties to the fiscal contract fail to keep their bargains.[118] The state may use coercion to enforce compliance when taxpayers become dissatisfied with the fiscal contract as a result of the state's inefficiency and unfairness of the tax system. But as more people consider non-compliance, it becomes more costly to use coercion.[119]

Finally, the combination of who produces what in the domestic economy, and how production is organized conditions what kinds of taxes governments can collect and affect the state's fiscal capacity. Price fluctuations in international trade and global political economy factors also affect the revenue options of the state. However, these factors are exogenous to the model and thereby described when relevant, but they are not analysed per se. In our study of Ghana's four tax reforms, the regime changes over time from a colonial state, to Nkrumah's one-party system and the multiparty democratic system established in 1992. These regimes differ significantly in their ideological and institutional set-up, and while the type of state has an impact on fiscal capacity,[120] our analysis does not focus on the type of regime by definition. Instead, we focus on the common denominators of the various regimes: their desire to optimize tax revenues and how they interact with various interest groups to establish and enforce fiscal contracts.

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[115] Fauvelle-Aymar, 'The political and tax capacity'.

[116] Ibid; Jeffrey F. Timmons, 'The fiscal contract: States, taxes, and public services', *World Politics* 57, 4 (2005), pp. 530-567.

[117] Levi, Sacks and Tyler, 'Conceptualizing legitimacy', p.359; Mitchell A. Seligson, 'The impact of corruption on regime legitimacy: A comparative study of four Latin American countries', *The Journal of Politics* 64, 2 (2002), pp. 408-433.

[118] Levi, *Of rule and revenue*, p.53.

[119] Ibid, p.53-54.

[120] Cheibub, 'Political regimes'; Carles Boix, 'Democracy, development, and the public sector', *American Journal of Political Science* 45, 1 (2001), pp.1-17; David A. Luke and Matthew A. Baum, 'The invisible hand of democracy: Political control and the provision of public services', *Comparative Political Studies* 34, 6 (2001), pp.587-621.

Fiscal capacity over time in Ghana

In theory, economic growth drives an increase in tax revenues as it widens the tax net and expands the tax base. A growing economy thereby translates into a rise in the absolute amounts flowing in to the government coffers, but it does not automatically ensure improvements in tax capacity, as measured by tax revenues to GDP.[121] The significantly higher tax revenues found in the developed Global North compared to the developing Global South is explained by both higher levels of economic growth and higher tax-to-GDP ratios. Austria, Denmark, Finland, France and Sweden are not only some of the wealthiest countries in the world, they also have high total tax revenue-to-GDP ratios of about 28 to 45 percent.[122] Consequently, developing countries can increase their tax revenues either by initiating economic growth or improving their fiscal capacity, or optimally by doing both.

Between 1983 and 2000, Ghana recorded annual growth rates averaging 4.7 percent. Growth rates improved to an average of 7.2 percent between 2000 and 2013, with an all-time high of 14.4 percent in 2011 when commercial oil production commenced.[123] While the GDP growth rate began to decelerate in 2014, it picked up again and was 8.5 percent in 2017. The last two decades of economic progress have been important for increasing tax revenues, but the country's total tax revenue as a share of GDP has remained modest in both global and regional perspectives. It increased from 4.52 percent in 1990 to 12.38 percent in 2016, below sub-Saharan Africa's average of 15.47 percent in 2016.[124] Further, as Table 1 shows, the country continues to rely on indirect taxes for much of its tax revenues.

[121] Burgess and Stern, 'Taxation and development'; Besley and Persson, 'Why do developing countries tax so little?', pp. 4-5.

[122] ICTD/UNU-WIDER (2018), Government revenue dataset, <https://www.wider.unu.edu/project/government-revenue-dataset> (13 June 2019).

[123] Ernest Aryeetey and Ama Pokuaa Fenny, 'Economic growth in Ghana: Trends and structure, 1960-2014', in Ernest Aryeetey and Ravi Kanbur (eds), *The economy of Ghana: Sixty years after independence* (Oxford University Press, Oxford, 2017), pp. 45-65.

[124] ICTD/UNU-WIDER (2018), Government revenue dataset, <https://www.wider.unu.edu/project/government-revenue-dataset> (20 November 2019).

***Table 1*: Ghana: Total tax revenue by component, Share of GDP, 1990-2015**

	1990	1995	2000	2005	2010	2015
Total Taxes	4.5	6.5	7.1	10.3	9.8	11.7
Direct Taxes	1.1	1.6	2.3	2.9	3.9	4.2
Income Taxes	1.1	1.4	2.3	2.9	3.9	4.2
Personal Income Tax	0.4	0.5	0.9	1.2	1.8	2.0
Corporate Income Tax	0.7	0.9	1.1	1.4	1.8	2.1
Indirect Taxes	3.4	5.0	4.8	7.4	5.9	7.5
Value-Added Tax			2.0	3.3	3.1	4.0
Excise Taxes		1.7	1.2	2.1	0.6	1.3
Trade Taxes	1.9	2.1	1.6	2.0	1.9	1.9

Source: ICTD/UNU-WIDER (2019).

Since the 1960s, Ghana has consistently experienced fiscal imbalances, causing the country to become highly aid dependent.[125] Between 1960 and 2014, the average government total revenue as a ratio to GDP was 16.3 percent, while government expenditure was approximately 19 percent of GDP on average.[126] Since independence in 1957, there have only been 11 years of marginal budget surpluses (averaging 1 percent surplus to GDP).[127] Tax revenues have consistently fallen short of budget estimates. In 2016, total tax revenue in Ghana was GH¢25,729 million, equivalent to 15.2 percent of GDP, falling short by 11.7 percent of the budget target of GH¢29,129 million, or 17.5 percent of GDP.[128] With insufficient increases of tax revenues to balance the budget, there have been calls for a reduction in public expenditures. Budget cuts are, however, problematic, as the government needs to continue investing in health, education and infrastructure to fight poverty and growing economic inequality as well as to keep its end of the fiscal contract.

In its tax mobilization efforts, the Ghanaian state has so far addressed administrative and technical bottlenecks. In the 1980s and 1990s, it focused on enhancing the autonomy of revenue collection institutions, reorganizing tax institutions along

[125] Lindsay Whitfield, 'The state elite, PRSPs and policy implementation in aid-dependent Ghana', *Third World Quarterly* 31, 5 (2010), pp. 721-737.

[126] Robert Darko Osei and Henry Telli, 'Sixty years of fiscal policy in Ghana: Outcomes and lessons' in Ernest Aryeetey and Ravi Kanbur (eds.), *The economy of Ghana,* pp. 66-87.

[127] Years of budget surpluses have been 1986-91, 1994, 1995, 1997, see Osei and Telli, 'Sixty years of fiscal policy', p. 68.

[128] Ministry of Finance, 'The budget statement and economic policy of the government of Ghana for the 2017 financial year' (Ministry of Finance, Ghana, 2017), p. 20; 41.

functional lines and ensuring monitoring and supervision of tax collection institutions.[129] The state has sought to boost tax revenues by strengthening tax administration, reducing tax exemptions, seal tax loopholes and combat tax evasion.[130] A redesigned National Identification System was rolled out in September, 2017 to bring on board economically active but undocumented citizens and to rope in the informal sector of the economy, thereby broadening the tax base.

Ghana's current weak fiscal capacity has a lengthy history. Although Ghana was one of the fastest growing economies during the colonial era, taxation, particularly of incomes, was least developed.[131] It was not until 1943 that direct taxation was introduced and in 1958 personal income tax was paid by only 10,000 individuals in a total population of 6 million.[132] A comparative assessment of different tax rates for various income brackets showed that Ghana's income tax in 1960 was among the lowest in the world in spite of its high per capita income of £70.[133] The colonial state responded to failed tax reforms by relying heavily on trade taxes and subsequent governments continued with this strategy.

Eboe Hutchful argues that independent Ghana inherited a 'social compact' constructed in the last decades of the colonial era when the administration increasingly assumed a developmentalist role.[134] The process of decolonization pitted a lower class of teachers, civil servants, traders and small businessmen against the intelligentsia, rural cocoa elites, chiefs and urban businessmen. A 'populist nationalist stratum' emerged that favoured a strong central government that plays an active role in guiding economic development and provides social welfare benefits such as free or subsidized education, health and housing.[135] In the historical analysis that follows, we show that this social compact has a much longer history and the

[129] Seth E. Terkper *Ghana: Tax administration reforms (1985-93)* (Report No. 504, Harvard Institute for International Development, Harvard University, 1995).

[130] Budget statement, 2017, p. 3.

[131] Stephen Broadberry and Leigh Gardner, 'Economic growth in Sub-Saharan Africa, 1885-2008', (Oxford Economic and Social History Working Papers, Number 169, March 2019).

[132] Noah Arthur Cox-George, *Studies in finance and development: The Gold Coast (Ghana) experience, 1914-1950*. (Dobson, 1973), pp. 51-52; Report on the Income Tax Department for the Year 1957-58, LSE Library Government Publications Journals 667 (R32).

[133] John H. Perry, *Taxation and economic development in Ghana* (Report No. TAO/GHA/4/Rev, United Nations Commissioner for Technical Assistance, Department of Economic and Social Affairs, New York, 1959); Fuat Andic and Süphan Andic, *A survey of Ghana's tax system and finances* (London School of Economics and Political Science, 1963), LSE Library Archives special HJ/D594, pp. 25-26. Kenya's per capita income was £31; Uganda, £23 and Tanzania, £21, see U.N. Statistical Yearbook, 1961.

[134] Eboe Hutchful, *Ghana's adjustment experience: The paradox of reform* (James Curry, Oxford, 2002), pp. 8-20.

[135] Ibid, p.8.

state's consistent inability to meet its part of that compact accounts for its weak fiscal capacity.

Poll tax, 1852-1861

The poll tax was the first attempt in the Gold Coast by the colonial administration to complement revenues from indirect taxes with direct taxation. This was to help support the government machinery and provide public goods to the coastal communities that had submitted to British rule for protection from then powerful Ashanti kingdom.[136] Given its weak administrative structure and lack of direct control over inland areas, the colonial administration saw the need to build relationships with existing influential interest groups. The British concluded that the successful implementation of their fiscal policy depended on the consent and direct cooperation of the powerful local chiefs. Chiefs embodied the collective authority of the people and derived their legitimacy from descent and by their monopoly of material and spiritual means of coercion. They wielded both economic and political power and the colonial state needed to bargain with them to pursue its fiscal goals.

At a meeting in April 1852, a fiscal contract was negotiated where the chiefs 'acting on behalf of themselves and their people' agreed to pay an annual sum of 1 shilling per head for every man, woman and child under British protection.[137] The agreement stated that revenue from the tax, after the payment of stipends for chiefs and collection expenses, was to be devoted to the public good through investments in education, health care, the judicial system, and development of internal communications. Contrary to earlier advice by the then Secretary of State, collection of the tax was not entrusted to the chiefs, who it was thought would use the authority conferred on them to extort large sums from their people.[138] Instead, the Governor with the support of the chiefs appointed independent tax officers, and the chiefs were to be informed on matters relating to the administration and expenditure of the tax revenues.

In this regard, the Gold Coast's experience departs from other British colonial territories in what is now Kenya, Uganda, Nigeria and Botswana. Given the structure of the economy and their poor monitoring capacity, colonial authorities in those territories rarely used centralized bureaucracies to collect taxes. Instead, they kept their tax collection and administration costs low by decentralizing the

[136] David Kimble, *A political history of Ghana: The rise of Gold Coast nationalism, 1850-1928* (Oxford University Press, Oxford, 1963).

[137] CO 96/25, Despatches, National Archives, Kew.

[138] CO 96/19, National Archives, Kew; CO 96/25.

collection of direct taxes to chiefs or tax farmers.[139] While such a system created opportunities for corruption and rent-seeking, which in turn could undermine compliance, it reduced the costs of monitoring and enforcement.[140]

In the Gold Coast, about 25 percent of the tax revenues covered collection expenses and an additional 60 percent was used to pay the salaries of colonial officials and stipends for chiefs, leaving little to be invested in public expenditures.[141] Out of the realized proceeds of £6,656 in the 1852-3 financial year, only £45 was spent on schools and £470 on roads. The government failed to keep its part of the fiscal contract and did not provide the expected public goods the chiefs had bargained for in exchange for the payment of the poll tax. Due to its inefficiency, the people became unwilling to comply with the tax. In April 1861, the collection of the tax ceased due to successive violent protests led by the chiefs against the payment of the tax.[142] The tax was expected to yield £20,000 annually, but during the eight years that it remained in force only £30,286 was collected.[143] The chiefs complained to the Special Commissioner who was appointed to enquire into the failure of the poll tax that none of the improvements which they had been promised had taken place.[144] Besides, the government had neglected to consult the chiefs with regard to the expenditure of the money collected. When the colonial administration began collecting the poll tax, it abandoned the principle of representation which it had adhered to when revenue was needed. The Legislative Assembly that had been

[139] Christian J. Makgala, 'Taxation in the tribal areas of the Bechuanaland protectorate, 1899-1957', *Journal of African History*, 45 (2004), pp. 279-303; Ben Naanen, '"You are demanding tax from the dead": The introduction of direct taxation and its aftermath in South-Eastern Nigeria, 1928-39', *African Economic History*, 34 (2006), pp. 69-102; Edgar Kiser and Audrey Sacks, 'Improving tax administration in contemporary African states: Lessons from history', in Martin *et al*. (eds), *The new fiscal sociology*, pp.183-200; Leigh H. Gardner, 'Decentralization and corruption in historical perspective: Evidence from tax collection in British Colonial Africa', *Economic History of Developing Regions* 25, 2 (2010), pp. 213-236.

[140] Pius N.C. Okigbo, *Nigerian public finance* (Northwestern University Press, Evanston IL, 1965); Atul Kohli, *State-directed development: political power and industrialization in the global periphery* (Cambridge University Press, Cambridge, 2004); Gardner, 'Decentralization and corruption'; Kiser and Sacks, 'Improving tax administration'.

[141] CO 96/33; Kimble, *Political history*, p. 177.

[142] Carl C. Reindorf, *The history of the Gold Coast and Asante* (Ghana Universities Press, Accra, 1966), pp. 324-331; CO 96/33.

[143] W. J. A Jones, 'Memorandum on the introduction of direct taxation in the Gold Coast colony' (Government Printing Office, Accra, 1931), LSE Library, Government Publications 667(156).

[144] CO 96/40; Jones, 'Memorandum'.

constituted for the passing of the Poll Tax Ordinance did not meet again after 1852.[145] The Assembly did not become a full representative body of all the chiefs of the protectorate as envisaged in the original poll tax agreement.[146] Further, suspicions of misappropriation by tax collectors and colonial officials did not help the course of the Gold Coast colonial administration. In 1865, Edward Conran, governor of the Gold Coast, told a parliamentary select committee that the main reason for the failure of the poll tax was malfeasance and that 'faith in the white man on the coast is very much shaken'.[147]

The colonial administration was reluctant to use coercion to enforce compliance and it preferred to preserve the 'voluntary character' of the poll tax.[148] Collisions with the native population could threaten trade and undermine the main objective for which the Gold Coast settlements were being retained. Natives were to be induced to continue paying the tax by making them feel that the 'continuance of the benefits accruing therefrom, is dependent on its payment'.[149] Nonetheless, there were some threats of coercion, and the Gold Coast natives resisted them with force.[150] In 1854, when the authorities sent a soldier to collect the tax in Accra, the chiefs and elders refused to pay. They extorted 100 heads of cowries from others who had paid the tax and intimidated them not to pay again. When further attempts were made to collect the poll tax, the people stoned the soldiers and attempted to cut off government supplies.[151] Where there was some degree of coerced compliance, sporadic violent protests continued until the collection of the poll tax ceased.

Later efforts by the administration to remedy the defects in the collection of the tax and to ensure consistent consultation with the chiefs on the expenditure of the tax proceeds failed to erase memories of the abuses of the poll tax system. There was no objection to the poll tax per se and if the colonial government had fulfilled its part of the fiscal contract, the tax would not have failed.[152] The Gold Coast

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[145] Martin Wight, *The Gold Coast Legislative Council* (Faber and Faber Limited, London, 1947), p.23. Kimble, *Political history, p.190.* 'The Legislative Assembly of Native Chiefs upon the Gold Coast' comprised the Governor, his Council and the chiefs and headmen of the coastal communities. It was to have 'full powers to enact such laws as it shall seem fit, for the better government of these countries'.

[146] G.E. Metcalfe, *Great Britain and Ghana: Documents of Ghana history, 1807-1957* (Thomas Nelson and Sons Ltd, London, 1964), pp. 230-231; Kimble, *Political history*, p. 190.

[147] 1865 Report, Evidence of Conran, in Kimble, *Political history*, p. 189.

[148] C.O.96/37; Kimble, *Political history,* p. 178.

[149] C.O.96/37.

[150] Reindorf, *The history,* pp.324-331; Kimble, *Political history,* p. 179.

[151] Kimble, *Political history,* p. 179.

[152] Ibid, p.190.

government was forced to give up on the idea of introducing direct taxation and between 1860 and 1900, it relied on custom duties for about 90 to 95 percent of its revenues to finance the colonial project.[153] The stage was set for a century of steady resistance to taxation in any shape or form. More notably, as Paul Nugent argues, the failure of the poll tax entrenched the principle that the state's power to tax was circumscribed and had to be negotiated rather than presumed.[154] Throughout the colonial period and thereafter, consent over taxation would be hammered out through bargaining over the reciprocal rights of the government and the governed and compliance would be based on the government's ability to keep its part of the fiscal contract.

Income tax, 1931-1944

After the failed poll tax, the colonial administration relied on import and export duties. The Gold Coast economy had developed into an export economy based largely on cocoa. Demand for imports increased as incomes from cocoa export production increased.[155] Public revenues generally increased in the late nineteenth and early twentieth centuries due to the growth of the cocoa export economy. In addition to import and export duties, there were a miscellany of licenses, fines, various fees, postal charges and railway freights and fares. Occasionally, there were also minor contributions from rents and sale of government lands and in the 1930s excise duties were introduced. [156] Mining royalties were collected on behalf of native administrations, and municipalities' rates on utilities were levied, but these were insignificant in the context of central government finances.

The collapse of the world cocoa market due to the Great Depression and a decline in the importation of spirits, which accounted for about 36 percent of government's largest source of government finance (import duties), weakened the colony's fiscal position and created the need for additional revenues.[157] Government revenue shrank by almost one half between 1927 and 1930-31. The colonial government recognized that its dependence on indirect taxation placed its finances at the mercy of world market prices, and that a broadening of the basis of taxation was necessary

[153] Gold Coast Blue Books, 1860-1900.

[154] Nugent, 'States', pp.45-46.

[155] Lindsay Whitfield, *Economies after colonialism: Ghana and the struggle for power* (Cambridge University Press, Cambridge, 2018), p.3.

[156] Cox-George, *Studies in finance and development*, Gold Coast Blue Books.

[157] Gold Coast Annual Report, 1931-32, Governor's address, 23 February 1931; Emmanuel Akyeampong, 'The state and alcohol revenues: promoting "economic development" in Gold Coast/Ghana, 1919 to the Present'. *Histoire sociale/Social History* 27, 54 (1994), pp. 393-411.

to secure the future of the colony.[158] Besides, while indirect taxation was regressive, burdening the producers of exports and consumers of imports, a modernized tax system could both optimize tax revenues and do so in a more equitable manner.[159] A final argument was that direct taxation would make indirect rule possible and enable native administrations to carry out local government functions appropriate to local needs and customs.[160]

In September 1931, the government announced in the Legislative Council its intention to impose a tax of 6 pence on the pound on all incomes of or over £40 per annum.[161] African members of the Legislative Council protested against the proposed Income Tax bill and pointed to the inefficiency of the government. They argued that the government's fiscal crisis was self-inflicted as it was spending its revenues on frivolous ventures, instead of being efficient and investing in public goods that met the needs of the subjects. Administrative expenditures constituted between 37 and 50 percent of total government expenditure between 1905 and 1935, while health and education expenditures were less than 10 percent throughout the period (see table 1). The bill also provoked violent demonstrations from the chiefs, commoners, some European merchants and the educated elitewho by virtue of their representation in political institutions now had political influence. [162]

[158] Legislative Council debates, 1931-2, pp.276-82.

[159] Cox-George, *Studies in finance and development*, p. 26; FlorenceMabel Bourret, *The Gold Coast: A survey of the Gold Coast and British Togoland, 1919-1951* (Oxford University Press, London, 1952), p. 29.

[160] Jones, 'Memorandum'; Stanley Shaloff, 'The income tax, indirect rule, and the depression: The Gold Coast riots of 1931', *Cahiers d'Études Africaines*, 14, 54 (1974), pp. 359-375.

[161] Legislative Council Debates, 1931-2, pp. 276-82, Income Tax Bill, Gold Coast Gazette, 25 September 1931, National Archives Kew. The Legislative Council consisted of 30 members: the Governor as President and 15 official members and 14 unofficial members. The official members comprised 13 members of the Executive Council (a non-representative advisory body to the Governor) and two others appointed by the Governor. There were five European unofficial members, three appointed by the Governor, one representative of the business community and one representative of the mining industry. There were nine African unofficial members comprising three provincial members for the Eastern Province, two for the Central Province and one for the Western Province of the Gold Coast, and three municipal members one for each of the towns of Accra, Cape Coast, and Secondee.

[162] Proposed income tax-protests, CO 96/699/13, National Archives Kew.

Table 2. **Colonial Government Expenditure (Percentage Shares), 1905-1935**

	1905	1910	1915	1920	1925	1930	1935
Administration	49	42	46	39	37	37	37
Public Debt	12	25	18	9	28	4	23
Military	14	8	4	4	3	3	3
Domestic Security	6	5	5	5	4	6	7
Education	2	2	2	2	3	8	7
Health Care	6	6	7	7	7	10	10
Public Works	11	12	18	34	19	32	13
Total	100	100	100	100	100	100	100

Source: Government of the Gold Coast, Report upon the Treasury Department, 1905-1935

The African members of the Legislative Council argued that government had been 'gallivanting with the finances of the country', 'building palatial bungalows at the rate of £130,000 a year and bringing out officials in large numbers' in spite of the protests of the people. The people therefore did not sympathize with government's steps to remedy its fiscal predicament and were unwilling to comply.[163] Instead of resorting to fresh taxation, the African members of the Council insisted that government should retrench its staff and cut official salaries by 10 percent. Outside the Legislative Council, some European merchants shared similar sentiments arguing that 'in England the people who paid income tax knew what the money was used for, and that monies gathered for income tax in the Gold Coast would not be used for their benefit, but for the benefit of the European government officials'.[164]

The bargaining for the fiscal contract was about more than government spending; it was about state legitimacy, as opposition to the income tax extended to demands for constitutional changes for equal representation in the colonial administration. The educated elite and chiefs in the Legislative Council argued that in every country where direct taxation was imposed, there must be equal representation.[165] In the Gold Coast, however, there was no African representation on the Executive Council; the 30-member Legislative Council had only nine African unofficial members; and

[163] Legislative Council Debates, 1931-2, pp. 380-5.

[164] CO 96/699/13.

[165] Legislative Council Debates, 1931-2, p. 367, pp. 380-5; p. 396.

Ashanti and the Northern Territories were not represented at all.[166] While Martin Wight argues that the views of the unofficial members were 'carefully weighed and scrutinized' and they were consulted at every stage of the legislative process, this was not enough for the African members.[167] They insisted that government had failed to accede to earlier calls for changes in its fiscal policy and 'everything [was] nothing so long as it [was] not government's proposition'.[168] Since the government was not prepared to give the people full representation and full control of their finances, it should find other means to balance its budget.[169]

Protest meetings, street demonstrations, riots, work stoppages and boycotts took place in several towns across the Gold Coast.[170] As was the case during the protests against the Poll Tax Ordinance, the colonial government was hesitant to use coercion to ensure compliance in order to avert further riots and damage to property.[171] In the face of public uproar, the colonial state abandoned the Income Tax bill. External factors had constrained its ability to raise additional revenues through indirect taxation and perhaps it was imprudent to attempt to impose an income tax at a time of severe economic distress. But the failure of the 1931 Income Tax Bill was due more to the colonial government's inability to acquire legitimacy 'by way of rewards and the accommodation of society's demands'.[172] When an Income Tax Ordinance was finally passed in 1943, its introduction had been 'sweetened' in advance by the appointment of Africans to the Executive Council and as Ghanaian district commissioners.[173] The Income Tax was accepted in the belief that these appointments presaged substantial constitutional changes that would allow for elective representative government.[174] True to its word, the government announced constitutional reforms towards the end of 1944. Ashanti was

[166] . The Governor alone legislated for Ashanti and the Northern Territories, see Wight, *Legislative Council,* p.53.

[167] Ibid, p. 87; 115; 140; see also, Legislative Council Debates, 1942, ii, pp.2-4. Matters proposed for debate in the Council were decided by the majority of votes. The Governor had an original and casting vote, see Gold Coast Colony (Legislative Council) Order in Council, 1925, in Wight, *Legislative Council*, p. 236.

[168] Legislative Council Debates, 1931-2, pp. 380-5.

[169] Ibid.

[170] CO 96/699/13, Proposed income tax-protests.

[171] CO 96/699/13; Shaloff, 'The income tax', pp. 368-369.

[172] Gallarotti, 'Legitimacy as a capital asset of the state', p. 45.

[173] Legislative Council Debates, 1943, I, pp. 5-8; pp. 29-36; Wight, *Legislative Council*, pp.190-191.

[174] Legislative Council Debates, 1943, pp. 49-53; Metcalfe, *Great Britain and Ghana*.

to be included for the first time in the Legislative Council, which was to have a majority of elected unofficial members.[175]

In the sense that legitimacy due to representation formed the bedrock of the fiscal contract and led to the introduction of direct taxation, the Gold Coast Colony's experience 1931-1944 is not different from that of pre-modern states where monarchs exchanged political representation for consent to taxation.[176] This also confirms the notion that taxation, through revenue bargaining, makes governments more representative, responsive and accountable.[177]

Cocoa taxation, compulsory savings and sales tax, 1951–1966

Ghana became self-governing in 1951 and achieved full independence in 1957. Kwame Nkrumah, the new nationalist leader, and his Convention People's Party (CPP) had promised to transform the Gold Coast 'into a paradise in ten years'.[178] The party argued that taxation had been unpopular under colonial rule because people did not get returns commensurate with the taxes they paid. Under self-government, taxes would still be levied, but government would ensure that taxation brought with it social education, cultural and economic rewards for the whole community. Government would ensure the progressive mechanization of agriculture, embark on an energetic programme of industrialization, and create avenues of employment for all with better conditions.[179]

With political independence now achieved, Nkrumah needed to satisfy appetites whetted by a successful anti-colonial campaign.[180] In particular, it was necessary to

[175] Metcalfe, *Great Britain and Ghana*, p.661.

[176] Bates and Lien, 'A note on taxation'; Douglass C. North, John J. Wallis and Barry R. Weingast. *Violence and social orders: A conceptual framework for interpreting recorded human history* (Cambridge University Press, Cambridge, 2009).

[177] Moore, 'Between coercion and contract'; Prichard, *Taxation*. For a contrasting view, see Deborah Boucoyannis, 'No taxation of elites, no representation: State capacity and the origins of representation', *Politics & Society* 43, 3 (2015), pp.303-332.

[178] Ashanti Pioneer (Kumasi), 5 March 1949, cited by Bob Fitch and Mary Oppenheimer, *Ghana: End of an illusion*, (Monthly Review Press, New York, 1966), p. 25.

[179] CPP, General Election Manifesto, 1951 'Toward a goal' in Metcalfe, *Great Britain and Ghana*, pp.704-706.

[180] Tony Killick, *Development Economics in action: A study of economic policies in Ghana* (Routledge, London and New York, 2010), p. 38.

repay the economically deprived commoners from whom the CPP garnered support.[181] As Nkrumah himself observed,

> We cannot tell our peoples that material benefits and growth and modern progress are not for them. If we do they will throw us out and seek other leaders who promise more. And they will abandon us too, if we do not in reasonable measure respond to their hopes.[182]

Political pressures for development meant increased government expenditure on infrastructure and social services. The first independent government expanded public administration and set up parastatal enterprises to create jobs for political clients.[183] The growing expenditures initially were financed by external reserves, cocoa revenues and loans from domestic banks. But by 1960, these balances were exhausted, and an uninterrupted series of budget deficits began.[184] Government therefore needed more revenues to finance its increasing expenditure. The country, however, had a revenue structure that proved to be a constraint on the developmental role government was increasingly assuming.[185] Cocoa was the mainstay of its revenues. Export duties, which were mainly from cocoa, accounted for 29.5 percent and 48.8 percent of government tax revenue between 1955/6 and 1960/1.[186] By contrast, income tax (company and personal) accounted for 10.8 to 13.8 percent of the total throughout the period.

In 1960, a fall in world market cocoa prices led to a decline in the contribution of export duties to total tax revenue, from 42.7 percent in 1959/60 to 19 percent in 1961/62. Unrelenting in its pursuit of rapid development, Nkrumah's government

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[181] Commoners or 'young men' referred to citizens who were not councilors or elders. See Kofi Abrefa Busia, *The position of the chief in the modern system of Ashanti: A study of the influence of contemporary social changes on Ashanti political institutions* (Oxford University Press, Oxford, 1951), p. 9; George M. Bob-Milliar, 'Verandah boys versus reactionary lawyers: Nationalist activism in Ghana, 1946-1956, *The International Journal of African Historical Studies* 47, 2 (2014), pp. 287-318.

[182] Kwame Nkrumah, *I speak of freedom* (Heinemann, London, 1961), p.145; see also Kwame Nkrumah, 'African prospect', *Foreign Affairs* 37, 1(1958), pp. 45-53.

[183] Douglas Rimmer, 'The crisis in the Ghana economy', *Journal of Modern African Studies* 4, 1 (1966), pp.17-32; M.M. Huq, *The economy of Ghana: The first 25 years since independence* (St. Martin's Press, New York, 1989); Jonathan H. Frimpong-Ansah, *The vampire state in Africa: The political economy of decline in Ghana* (James Curry, London, 1991); Douglas Rimmer, *Staying poor: Ghana's political economy*, *1950-1990* (Pergamon Press, Oxford, 1992).

[184] Naseem Ahmad, *Deficit financing, inflation and capital formation: The Ghanaian experience 1960-65* (Weltforum Verlag, 1970).

[185] Dudley Seers and C.R. Ross, *Report on financial and physical problems of development in the Gold Coast* (Government Printer, Accra, 1952), LSE Library Government Publications 667 (79).

[186] Fuat Andic and Süphan Andic, *A Survey of Ghana's Tax System and Finances* (London School of Economics and Political Science, 1963), LSE Library Archives special HJ/D594, p.21.

reformed the country's tax system to raise more revenues. In July 1961, an austerity budget was introduced in parliament that contained several fiscal reforms. The budget introduced a single uniform schedule of income tax that was applicable to all individuals receiving an income of more than £480 per annum, without any differentiation according to family circumstances and nature of income.[187] Further, government introduced a property tax and a purchase tax on imported luxury goods.[188]

Another important feature of the 1961 budget was the compulsory savings scheme. A compulsory deduction was to be made in exchange for National Development Bonds that were redeemable after ten years. For wages or salary earners, 5 percent was to be deducted from their emoluments and 10 percent on all other types of incomes. Cocoa farmers were required to take up 10 percent of the prices they received for the sale of cocoa in these bonds, or 6 shillings per load.[189] As government expenditures kept soaring, it introduced a number of reforms and tax increases in the 1962-63 budget. The minimum exemption limit for personal income tax was reduced to £240. A tax was imposed on football matches, cinema shows, night clubs and other entertainments where admissions charges were collected.[190] A Hotel Customers Tax was introduced in 1963, which imposed a 10 percent levy on bills for accommodation and food. In 1965, a Foreign Travel Tax Act imposed a 10 percent tax on the cost of tickets of all Ghanaian residents travelling by air or by sea. Additionally, a Sales Tax was introduced to cover all imported articles and locally produced goods other than food items at the wholesale level, and an Estate Duty Act was enacted to impose a duty on the estates of deceased persons bequeathed to their surviving relatives.[191] As a result of these tax initiatives, the tax-to-GDP ratio rose from less than 11 percent in 1960 to about 16 percent in 1965.[192] The ratio of domestic tax revenues (revenues from taxes other than those on external trade) to GDP increased from 3.8 percent in 1963 to 7.9 percent in 1965.

Nkrumah's government ensured continuous growth in its tax capacity by using the state's instruments of coercion to repress and prevent political opposition to its fiscal goals. Chiefs and the intelligentsia had challenged the tax capacity of the colonial government, and they, together with other politically influential interest groups that

[187] President's Sessional Address July 4th, 1961; Budget Statement, July 7th, 1961, LSE Library Government Publications 667(164).

[188] These included items such as bicycles, sewing machines, radio sets and wall clocks.

[189] Budget Statement, 1961.

[190] President's Sessional Address, 2 October 1962; Budget Statement, 1962-63.

[191] The Budget, 1965.

[192] E.N. Omaboe, *Developments in the Ghanaian Economy between 1960 and 1968*, LSE Library Government Publications 667(261).

emerged during the nationalistic struggles, were potential threats to the government's tax capacity. In line with the ruling CPP's quest to consolidate its power and centralize the machinery of state control, it reformed local government institutions and stripped chiefs of the political and economic power they had under colonial rule.[193] Furthermore, it passed repressive laws to demobilize the 'intelligentsia opposition' that challenged its actions in parliament.[194] In 1964, a referendum confirmed Ghana as a one-party state, and the minority group in parliament and the coalition of opposition parties were finally extinguished.

Moreover, Nkrumah demobilized social groups by bringing them under the CPP's control or established new organizations to represent certain social groups.[195] Women's associations and youth movements, farmer associations, and the workers' union were knit into the main structures of the CPP.[196] In 1961, when some railway and harbor workers initiated strikes and protests against the new purchase tax and the compulsory savings scheme, the coercive powers of the state were marshalled to stop them.[197] Nkrumah succeeded in making the interest groups dependent on him instead of himself on them. By monopolizing all forms of economic and political representation, the state increased its economic and political powers. Although it was inefficient, it secured a continuous growth in its extractive and accumulative capacity through force.

In the long run, however, the use of force to legitimize the government's increased extraction proved unsustainable. Legitimacy was distinctly a function of performance, and as government proved incapable of devising and implementing economic and social policies that met the needs of the people, its support base narrowed.[198] In February 1966, against the background of a record of economic failure, administrative corruption and poor planning performance, rising costs of

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[193] David E. Apter, *Ghana in transition* (Princeton University Press, Princeton, 1972); Richard Rathbone, *Nkrumah and the chiefs: The politics of chieftaincy in Ghana, 1951-60* (Ohio University Press, Athens, 2000); Catherine Boone, *Political topographies of the African state: Territorial authority and institutional choice* (Cambridge University Press, Cambridge, 2003).

[194] Parliamentary Debates, First Series, Volume 24, Session 1961-62, pp. 55-56; 64; 76-84; 139-150; 199; See Dennis Austin, *Politics in Ghana, 1946-1960* (Oxford University Press, London, 1964), pp. 377-381.

[195] Whitfield, 'Civil society', pp. 385, 387.

[196] Björn Beckman, *Organising the farmers: Cocoa politics and national development in Ghana* (Scandinavian Institute of African Studies, Uppsala, 1976); Piet Konings, *The state and rural class formation in Ghana: A comparative analysis* (KPI, London, 1986).

[197] See Richard Jeffries, *Class, power, and ideology in Ghana: The railwaymen of Sekondi* (Cambridge: Cambridge University Press, 1978); Jon Kraus, 'Strikes and labour power in Ghana', *Development and Change* 10, 2 (1979), pp. 259-286.

[198] Naomi Chazan, *An anatomy of Ghanaian politics: Managing political recession, 1969-1982* (Westview Press, Colorado, 1983), p. 81.

living and falling real wage earnings, Nkrumah's government was ousted in Ghana's first military coup.

Value added tax (VAT), 1995–1998

By the end of 1995, Value Added Tax (VAT) had earned the global reputation of being governments' 'money machine' and was implemented in over a hundred countries. [199] In Ghana, VAT was introduced as part of a broader programme of tax reforms initiated under the IMF and World Bank-backed Economic Recovery Programme to widen the scope of indirect taxation, make the incidence of taxation less burdensome, and inject greater efficiency and equity into the indirect tax system.[200] Decades of political instability followed Ghana's first military coup and by 1981, its economy neared collapse. In April 1983, Jerry J. Rawlings' military government launched the structural adjustment programme to halt economic decline. Structural reforms led to the reduction of both direct and indirect tax rates in order to enhance productivity and improve the general performance of the economy.[201] Further reduction of taxes was however impeded by then narrow-based and multiple rate structured sales tax regime.[202] The government introduced VAT to correct the deficiencies of the sales tax.[203]

In its introductory year, government projected that domestic VAT would yield an increase of almost 50 percent over the outturn of previous year's sales tax, while import VAT would generate 60 percent more than import sales tax collection.[204] In the long-term, it was expected to become the mainstay of government finances, as it would diversify government's revenue sources, provide a stable revenue base and ensure that government finances were not at the mercy of volatile commodity prices. Moreover, by bringing all economic sectors under the same tax net, VAT sought to eliminate distortions in investment incentives and create a level playing field for investors.

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[199] Malcom Gillis, Carl S. Shoup and Gerardo P. Sicat (eds) *Value added taxation in developing countries* (The World Bank, Washington, DC, 1990), pp. 220-1.

[200] The Budget statements, 1994, p. 32 and 1995, pp. 24-25, LSE Library Government Publications 667(R79).

[201] Whitfield, *Economies after colonialism*.

[202] The Budget Statement, 1994, p.32

[203] Ibid.

[204] The Budget statement, 1995, p.25.

VAT was introduced in March 1995, but only three months later it was withdrawn following public outcry and street demonstrations resulting in 16 casualties.[205] Ghana thereby became only the second country to have repealed a VAT. Government had not assessed the political risks associated with the introduction of VAT. Also, it was insensitive to the new social and political institutional arrangements stimulated by the country's return to constitutional rule.[206] The ruling National Democratic Congress (NDC) metamorphosed from the erstwhile Provisional National Defense Council (PNDC), a group of army officers and civilians who had governed the country since Rawlings' coup in December 1981. Though the PNDC promised that 'nothing will be done from the Council, whether by God or the Devil, without the consent and the authority of the people', participation in policy-making by interest groups was not actively encouraged during its rule.[207] Dissenting voices and potential sources of opposition were either ignored or neutralized by co-optation or intimidation into silence. Channels for voicing dissent, such as the print media, were suppressed through stricter licensing regulations, and state-owned newspapers censored themselves in fear of the regime.[208] Tax compliance was ensured by the use of the coercive powers of the state. A Citizens Vetting Committee investigated cases of alleged tax evasion and default and penalized those who breached the law. The PNDC also set up a parallel judicial system of public tribunals to expedite the trial of such cases.[209] Most taxable Ghanaians who hitherto ignored their social obligation to pay tax began to do so, and public resistance to government's tax reforms were very minimal.[210]

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[205] Nana Akufo-Addo, 'The birth of a united opposition: Aims and objectives of the alliance for change', in Napoleon Abdulai (ed), *Ghana: The kume preko demonstrations, poverty, corruption and the Rawlings dictatorship* (Africa Research and Information Bureau, London, 1995), pp.16-20.

[206] Philip D. Osei, 'Political liberalisation and the implementation of value added tax in Ghana', *Journal of Modern African Studies* 38, 2 (2000), pp. 255-278.

[207] Rawlings' Radio broadcast of 31 December 1981, cited by Paul Nugent, *Big men, small boys and politics in Ghana: Power, ideology and the burden of history, 1982-1994* (Pinter Publishing Limited, London and New York, 1995).

[208] E. Gyimah-Boadi and Donald Rothchild, 'Rawlings, populism, and the civil liberties tradition in Ghana', *A Journal of Opinion* 12, ¾ (1982), pp.64-69; Baffour Agyeman-Duah, 'Ghana, 1982-6: The politics of the P.N.D.C.', *Journal of Modern African Studies* 25, 4 (1987), pp. 613-642; Mike Oquaye, 'Human rights and the transition to democracy under the PNDC in Ghana', *Human Rights Quarterly* 17, 3 (1995), pp. 556-573.

[209] Agyeman-Duah, 'Ghana, 1982-6'.

[210] Robert Darko Osei and Peter Quartey, 'Tax reforms in Ghana' (UNU-WIDER Research Paper No.2005/66, UNU-WIDER, 2005).

Coercion was successful in the sense that tax-to-GDP ratio increased from less than 4 percent in 1982 to more than 10 percent in 1986.[211] Income and property taxes as a share of government revenue increased from 16.9 percent in 1983 to 21.1 percent in 1987, jumping to an all-time record of 25.8 percent in 1988.[212] The return of the country to democratic rule in 1992 meant, however, that government could no longer force citizens to acquiesce to unpopular fiscal policies. Previously demobilized groups and new groups emerged and became channels for opposition to government policies.[213] These included interest groups such as professional associations, trade unions, civil society groups and think tanks who brought new intellectual resources to bear on policy analysis.[214] The lifting of the ban on political parties in 1992 also led to the emergence of various parties and political activities, but the government with its inherited authoritarian mindset did not encourage participation in the decision-making process by interest groups. As one observer noted, there appeared to be 'no evidence that Ghana had moved from authoritarian rule to a democratic regime'.[215]

Consequently, discussions on VAT were limited to Parliament, where there were no opposition parties.[216] They had boycotted the 1992 parliamentary elections in protest against the alleged rigging of the presidential elections by Rawlings and the NDC.[217] The NDC-dominated parliament passed the VAT legislation under a certificate of emergency and the lack of consultation with interest groups and the non-participation of opposition parties undermined the legitimacy of the VAT policy. Many interest groups were not interested in complying with the policy, as they did not view the processes to have been right and proper.

Outside parliament, the opposition parties criticized government for introducing VAT at a time when Ghanaians were already enduring economic hardships caused by the PNDC's Economic Recovery and Structural Adjustment Programme. The social costs of the programme had been high, as evidenced by mass unemployment,

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[211] Prichard, *Taxation*, p.85. He argues that, the improvement in revenue production was in part due to broader economic reforms by the IMF backed Economic Recovery Programme, but the most dramatic increases in revenue were achieved prior to these reforms in 1985-86. See, also Newman K. Kusi, 'Tax reform and revenue productivity in Ghana' (African Economic Research Consortium, Nairobi, Research Paper 74, 1998), pp. 21-23.

[212] Kusi, 'Tax reform'.

[213] Nugent, *Big men,* pp.183-198; Whitfield, 'Civil society'.

[214] Osei, 'Political liberalisation'

[215] Paul Ansah, *Going to town* (Ghana Universities Press, Accra, 1996) cited by Osei 'Political liberalisation', p. 263.

[216] The ruling NDC controlled almost all seats in Parliament, 189 out of 200.

[217] Richard Jeffries and Clare Thomas, 'The Ghanaian elections of 1992', *African Affairs* 92, 368 (1993), pp. 331-366.

erosion of real incomes, high costs of education, medical care, housing and other basic services.[218] In the midst of domestic crisis, the government seemed more concerned to placate the IMF and the World Bank than to promote the welfare of Ghanaians.[219] While poor urban households bore much of the costs of adjustment, there was widespread disillusionment and anger throughout the country. [220] Although there were slight increases in health and education expenditures during this period, their importance relative to other expenditure items declined. For example, the share of public health spending in total government expenditure declined from an average of 9 percent between 1984 and 1991 to 4.9 percent in 1994.[221] Education expenditures as a share of total government expenditures also decreased from 25.5 percent in 1990 to 18.7 percent in 1994.[222] Government expenditures on health and education were also urban-biased and favoured the non-poor.[223] In addition, allegations of inefficiency, corruption and wastefulness in government expenditure created suspicions in the minds of the general public about government's intention to introduce VAT. Opposition parties insisted that until the NDC government 'learns to put a stop to its profligacy, and individual state officials learn to live in a style and manner commensurate with the immense sacrifices of our people, there can be no justification for any new tax burden on the people'.[224]

Amid public antagonism towards fiscal policies and at the risk of losing the impending 1996 presidential and parliamentary elections, government was compelled to withdraw the VAT policy in 1995 and reinstated the flawed sales tax of 1965. As Seth Terkper observes, the decision to repeal the VAT law 'had more to do with political expediency than any insurmountable flaws in the technical aspects of the program'. [225] However, two years later, the government declared its

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[218] Kwadwo Konadu-Agyemang, 'The best of times and the worst of times: Structural adjustment programs and uneven development in Africa, the case of Ghana', *The Professional Geographer* 52, 3 (2000), pp. 469-483.

[219] Jeffries and Thomas, 'The Ghanaian elections', p.366.

[220] Mahamudu Bawumia, 'Understanding the rural-urban voting patterns in the 1992 presidential election: A closer look at the distributional impact of Ghana's Structural Adjustment Programme', *Journal of Modern African Studies* 36, 1 (1998), pp. 47-70.

[221] Edward Nketiah-Amponsah, 'Public spending and economic growth: evidence from Ghana (1970-2004)', *Development Southern Africa* 26, 3 (2009), pp.477-497.

[222] Ibid, see also Sudharshan Canagarajah and Xiao Ye, 'Public health and education spending in Ghana in 1992-98: Issues of equity and efficiency' (The World Bank Policy Research Working Paper 2579, The World Bank, Washington, DC, 2001).

[223] Ibid.

[224] Charles Y. Wereko-Brobby, 'VAT and the kume/sieme preko demonstrations', in Abdulai (ed), *Ghana: The kume preko demonstrations*, p. 34.

[225] Seth Terkper, 'VAT in Ghana: why it failed', *Tax Notes International* 12, 23 (1996), pp. 1801-16.

intention to reintroduce VAT, this time having taken cognizance of the need for careful preparation and public engagement.[226] The government conceded that the earlier VAT policy had failed because 'a lot of people…felt left out of being part of the processes that led to the introduction of tax and that there was a general feeling that there were not enough discussions and consultations on all aspects of the economy'.[227] Government therefore intensified efforts at building consensus, bargaining for a legitimate fiscal contract on which to base the new tax policy. Several meetings were held with members on both sides of the political divide and civil society bodies. With opposition members now in Parliament after the 1996 elections, they took part in shaping the VAT policy, erasing any legitimacy doubts about the process of tax formulation. [228] In March 1998, parliament enacted the new VAT law.

Conclusion

It is increasingly argued that politics matters for successful tax reforms and tax bargaining: reciprocity and fiscal contracts between citizens and governments are the foundation for effective taxation. Yet, while widely accepted, not much research has probed the precise mechanisms through which politics, tax bargaining and the extent of state reciprocity affect the state's ability to tax. Using a conceptual framework inspired by Margaret Levi's work on the development of states' fiscal capacity, we have examined the complex and arduous processes of tax bargaining and how the development and enforcement of fiscal contracts play out in practice in Ghana.

Far from being a recent phenomenon, our analysis shows that successful tax reforms in Ghana have long depended on the state's ability to demonstrate its efficiency, by using tax revenues for the public benefit. The study establishes a consistent historical pattern of the state's inability to keep its part of the fiscal contract, thus undermining its ability to tax. Misappropriation of tax revenues, corruption and wasteful government expenditure consistently undermined perceptions of the legitimacy of the state, by colonial subjects and then citizens of independent Ghana. The colonial administration's inefficiency led to the failure of the poll tax in 1852 and its inability to introduce direct taxation in the 1930s. Africans opposed the tax mainly because the administration did not provide public goods in exchange for the

[226] The Budget Statement, 1997,LSE Library Government Publications, 667 (R79), pp.34-36.

[227] Parliamentary Debates, Official Report, Wednesday, 7 January 1998, p. 836.

[228] Parliamentary Debates, Official Report, Friday, 6 February, 1998, pp.1450-1598; Thursday, 12 February 1998, pp.1763-1890.

payment of the poll tax and did not consult the chiefs in spending the money collected. The income tax was opposed in the 1930s because Africans suspected that taxes paid to the state were wasted and spent in ways that did not meet their expectations. The administration had failed to keep its part of the fiscal contract. Further, Africans were underrepresented in the Legislative Council and did not have control over the colony's finances. The successful introduction of direct taxation in the 1940s and the VAT in 1995 owed more to the legitimacy of the tax bargaining process. The attempt by Nkrumah government to extract tax revenues by acts of coercion proved unsustainable in the long run, for citizens' willingness to defer to government's actions had always been a function of performance in office. Our conclusions have implications on popular views on the causes of the weak fiscal capacity of African states. Whereas existing research has stressed that the low fiscal capacity of African states is a product of weak infrastructural and institutional colonial legacies, this article shows that historically, the inability of states to fulfill their part of the fiscal contract undermine their fiscal capacity. Governments are more likely to increase their fiscal capacity and transform taxpayers' compliance attitude by providing benefits in exchange for the payment of taxes. Further, it has been argued that the ability of African states to collect taxes is constrained by weak administrative capacity as demonstrated by ill-equipped and inadequate tax collectors, ambiguous tax laws and the lack of reliable data that makes it difficult to identify taxpayers. This view abstracts from the more complex social and political interactions between state and society which as we have shown are also important determinants of fiscal capacity. As Nicholas Kaldor pointed out long ago, lack of knowledge or administrative competence alone cannot explain ineffective tax systems. Ineffective tax systems are also the result of resistance from citizens who block the way to tax reforms.[229] Expert advice can point the way, but overcoming resistance to more effective policies for raising revenues requires an understanding of how tax bargaining works in practice and of people's perceptions of their governments over the long term.

[229] Nicholas Kaldor, 'Taxation for Economic Development', *Journal of Modern African Studies*, 1(1963), pp. 7-23.

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